DEBT, FINANCIAL STABILITY, AND ECONOMIC GROWTH

HEARING

BEFORE THE

SUBCOMMITTEE ON TELECOMMUNICATIONS, CONSUMER PROTECTION, AND FINANCE

OF THE

COMMITTEE ON ENERGY AND COMMERCE
HOUSE OF REPRESENTATIVES

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DEBT, FINANCIAL STABILITY, AND ECONOMIC GROWTH

WEDNESDAY, APRIL 23, 1986

HOUSE OF REPRESENTATIVES,
COMMITTEE ON ENERGY AND COMMERCE,
SUBCOMMITTEE ON TELECOMMUNICATIONS,
CONSUMER PROTECTION, AND FINANCE,
Washington, DC.

The subcommittee met, pursuant to notice, at 10:05 a.m., in room 2123, Rayburn House Office Building, Hon. Timothy E. Wirth (chairman) presiding.

Mr. WIRTH. If the subcommittee would come to order. Procedurally, there is a little bit of a brouhaha going on on the floor related to the approval of the journal. So we expect that there will be a vote sometime soon. Congressman Markey is on the floor and will come back here and chair as soon as that vote occurs.

Our hearing today will focus on a subject of much public debate, but little public understanding: the impact of the recent dramatic increase in public and private debt on financial stability and long term economic growth.

Over the course of the subcommittee's hearings on corporate takeovers and changes in financial structure and regulation, the broader issue of the rising level of overall corporate debt has been a continuing subject of discussion.

Two years ago, I wrote to the Chairman of the Federal Reserve to question the effect of then-large merger-related borrowing on interest rates and the economy. Since then, several witnesses at our hearings have called attention to the potential of the high level of debt-financed mergers and acquisitions, leveraged buyouts and stock retirements to increase dramatically the rate of bankruptcies in the event of a recession or rise in interest rates.

Last June, Dr. Henry Kaufman testified before the subcommittee that the erosion of credit quality resulting from the overall expansion of public and private debt indicated the need for changes in the structure and implementation of financial regulation. Of particular interest to this subcommittee is the issue of how an erosion of credit quality associated with rising levels of debt might affect the integrity of, and confidence in, the capital markets.

At the end of the January 1986 Federal Reserve Board meeting, at which the Board adopted its proposed interpretation of regulation G—applying margin lending restrictions to the issuance of debt securities—Chairman Volcker commented that the broader issues of the growth of debt and increased leveraging could not be addressed through margin requirements. At that time he noted that these issues needed to be considered in an appropriate forum, and that it would be healthy if they were debated in Congress and elsewhere.

I concur in that view and asked Chairman Volcker to appear before the subcommittee to expound on the statement that he had made at that time, and to help us better understand and discuss these issues. His testimony will be followed by that of other expert witnesses who have also explored the implications of expanding debt.

The rapid expansion of U.S. public and private debt raises a number of issues of interest to this subcommittee and to the Congress. Will the level of debt that now burdens almost every sector of our economy act as a brake on future economic growth? What are the implications of the debt burden for the quality of credit and the soundness of our financial institutions? How might current and potential problems in the financial system affect the stability of the economy? And what, if any, legislative or regulatory responses are in order?

This is an ambitious set of questions, and not entirety new to the subcommittee. We have addressed these issues in past hearings. I hope that the discussion we have today will help to cast light on some very, very complicated economic questions, which cannot be swept under the rug and certainly ought to be looked at with great care.

[Mr. Wirth's opening statement follows:]

Statement of
The Honorable Timothy E. Wirth, Chairman
Subcommittee on Telecommunications,
Consumer Protection and Finance
"Debt, Financial Stability and Economic Growth"
April 23, 1986

Our hearing today will focus on a subject of much public debate, but little public understanding: the impact of the recent dramatic increase in public and private debt on financial stability and long term economic growth in this country.

Over the course of the Subcommittee's hearings on corporate takeovers and changes in financial structure and regulation, the broader issue of the rising level of overall corporate debt has been a continuing subject of discussion. Two years ago, I wrote to Chairman Volcker to question the effect of the then-large merger-related borrowing on interest rates and the economy. Since then, several witnesses at our hearings have called attention to the potential of the high level of debt-financed mergers and acquisitions, leveraged buyouts and stock retirements to increase dramatically the rate of bankruptcies in the event of a recession or rise in interest rates.

Last June, Dr. Henry Kaufman testified that the erosion of credit quality resulting from the overall expansion of public and private debt indicated the need for changes in the structure and implementation of financial regulation. Of particular interest to this Subcommittee is the issue of how an erosion of credit quality associated with rising levels of debt might affect the integrity of, and confidence in, the capital markets.

And at the end of the January 1986 Federal Reserve Board meeting at which the Board adopted its proposed interpretation of Regulation G -- applying margin lending restrictions to the issuance of debt securities by shell corporations to finance corporate takeovers -- Chairman Volcker commented that the broader issues of the growth of debt and increased leveraging could not be addressed through margin requirements. He noted that these issues needed to be considered in an appropriate forum, and that it would be healthy if they were debated in Congress and elsewhere.

I concur in that view and asked Chairman Volcker to appear before the Subcommittee to discuss these issues. His testimony will be followed by that of other expert witnesses who have also explored the implications of expanding debt.

An analysis provided to the Subcommittee by Dr. James O'Leary -- one of our witnesses today -- shows that total U.S. debt, public and private, increased by a record $1.1 trillion in 1985. The unprecedented 15 percent annual rate of increase in debt last year was more than 9 percent higher than the growth in current dollar GNP.

But the 1985 debt explosion comes at the end of a six year period during which total outstanding debt nearly doubled -- from $4.3 trillion in 1979 to $8.2 trillion in 1985. Moreover, the United States has been borrowing more than the increases in its output and income since 1983.

Almost all major sectors of the economy participated in the 1985 debt explosion, as Dr. O'Leary's analysis shows:

- o federal government debt rose by $224 billion, or 16 percent, to $1.6 trillion;
- o state and federal government debt rose by $173 billion, or 31 percent, to $536 billion;
- o household debt (consumer and mortgage) rose by $297 billion, or 14 percent, to $2.4 trillion;
- o non-financial business debt rose by $234 billion, or 11 percent, to $2.3 trillion; and
- o debt raised by financial institutions rose by $187 billion, or 20 percent, to $1.1 trillion.

It is widely believed that the rise in total U.S. public and private debt was sparked by the growth in federal budget deficits. Because the U.S. savings rate is comparatively low -- and the personal saving rate fell to a record low of 4.8 percent in 1985 -- the fact that the U.S. government absorbs about two-thirds of total domestic savings acts as a fulcrum for leverage on the credit markets. Government borrowing at such high levels exerted upward pressure on interest rates, raised the value of the dollar and attracted a huge volume of foreign savings. By drawing in savings from the rest of the world, higher federal deficits may have helped to increase the total amount of credit available to the private sector.

At the same time that foreign lending to the United States was rising, there was a dramatic decline in lending to Third World countries. Since the expansion of U.S. private debt financed a rising U.S. trade deficit, it may have helped avoid a major financial crisis and global economic collapse.

But the Third World debt crisis has also had a major impact on the U.S. economy by significantly reducing our exports to developing countries, adding to our trade deficit, and producing higher unemployment. The Overseas Development Council estimates that nearly 1.4 million U.S. jobs may have been lost last year because of the drop in exports to Third World countries.

The rapid expansion of U.S. public and private debt raises a number of issues of interest to this Subcommittee and to the Congress:

- o Will the level of debt that now burdens almost every sector of our economy act as a brake on future economic growth?

- o What are the implications of the debt burden for the quality of credit and the soundness of our financial institutions?

- o How might current and potential problems in the financial system affect the stability of the economy?

- o What, if any, legislative or regulatory responses are in order?

In addition, there are any number of other questions that need to be addressed about the ramifications of the debt problems that are being experienced by many specific sectors of the economy -- farmers, energy producers, consumers and homebuyers. Other issues that should be explored are the impact of Third World debt on U.S. trade, and how the use of debt to retire equity will affect the financial stability, productivity and competitiveness of U.S. businesses.

This is a highly ambitious agenda for a single hearing. But what we lack in time, we'll make up in quality. Our witnesses this morning are a remarkably distinguished group, and we will begin with the man whose handling of his job has made him the most important and most highly esteemed participant in the financial field around the world: Chairman Volcker.

Mr. WIRTH. Mr. Chairman, we thank you very much for being here. Before asking you to begin, let me ask my colleagues if they have any questions or opening statements they might like to make.
Mr. Scheuer.

Mr. SCHEUER. A very brief one, Mr. Chairman. I am delighted to welcome Mr. Volcker to this committee. He has come to the Joint Economic Committee, on which I have the honor to serve, many times. And he has always left us wiser and more enriched than we were when he came.

We are all concerned with the explosion of debt in our country. A Federal debt, along with municipal and state debt, that has doubled in 5 years. The accumulated Government debt of almost 200 years of Government has doubled in the last 5 years. Our personal saving rate at the present time is at a record low. And the household debt, consumer debt, is at a record high. Our income growth is modest. And we have to be deeply concerned at the implications of all this.

It is perfectly clear to us—and I hope that Mr. Volcker will aver to this—that we are saving far too little. We are investing far too little in our productive sector, in the industrial sector that is in desperate competition with global competitors. We are spending far too much and we are consuming far too much.

Reaganomics—this may represent Reaganomics. And if it does, we are truly mortgaging our future. We have truly sacrificed and abandoned the pay as you go principle that has been the hallmark of both Democratic and Republican administrations as far back as the memory of man runneth.

And now, we have got to think of the consequences of what I consider not only an unsound economic policy, but an essentially immoral policy of financing this explosion of military expenditures by borrowing abroad, and saddling future generations of Americans with a vast flow of foreign claims, continuing foreign claims on our assets, on our income.

This is no longer a question of domestic debt where we simply distribute the mix a little differently; redistribute income between classes of Americans. That in itself can be very unfair. That in itself can be very regressive. But when we start creating long-term claims on our assets and on the income of the American economy to debtholders abroad for the sake of financing military expenditures, abandoning any concept of paying as we go, or paying for what we want, then to my mind, we are not only creating an economic crisis, but creating a moral crisis, too, for America.

And I welcome the chairman. I look forward to his views. Thank you very much, Mr. Chairman.

Mr. WIRTH. Thank you very much, Mr. Scheuer.

We have just heard the bells go off to signal a vote.

Mr. MARKEY. Mr. Chairman, would I be able to give my opening statement right now?

Mr. WIRTH. Sure.

And then shortly after as Mr. Markey's opening statement is made, we will all be back, Mr. Chairman.

Mr. MARKEY. Thank you, Mr. Chairman. I will make my opening statement and then we will suspend the hearing.

Today's hearing is intended to increase our understanding of the relative dangers of exploding debt on our economic well-being. There is widespread agreement that debt in the United States has been rising at an unusual pace. This is amply documented in the testimony we will hear today.

Outstanding debt doubled from 1977 through 1984, a period which included both very high and very low inflation rates. In 1985, debt rose over $1 billion in a single year, or 15 percent, triple the rate of the increase in GNP. This phenomenon is wide and deep, affecting the Federal, State, and local governments, corporations and individual consumers.

The unprecedented Federal deficit has its counterparts in the private sector. Consumer and mortgage debt rose 14 percent last year. Nonfinancial business debt rose 11 percent. And debt raised by financial institutions rose 20 percent. Despite the warnings of economists that Federal borrowing must inevitably crowd out private borrowing, the inevitable continues to elude us.

I look forward to the observations of Chairman Volcker and the other witnesses on the significance of this development. When the debt balloon deflates and falls back to Earth, how hard will we hit the ground? Is there a limit to how often we can restructure debt in the case of a debtor country like Mexico or a debtor industry like farming or energy before we end up hanging ourselves on our own rope? Are there regulatory failures implicit in the current rash of bank failures?

I am particularly interested in Mr. Volcker's comments on the use of debt as both a sword and a shield by gladiators in the corporate coliseum. The recent frenzy of takeovers, mergers and acquisitions has been characterized by tactics which rely heavily on more debt and less equity. When does the increased risk associated with rising corporate debt reach a point where it threatens our financial stability?

The Federal Reserve Board recently took steps to ensure that appropriate margin requirements are followed in situations where heavy borrowing is used by a shell corporation in an attempt to take over the assets of a target corporation. The administration fought this change from the SEC to the Treasury Department to OMB. The administration also continues to fight any practical compromise on the budget.

In fact, just yesterday OMB Director James Miller stated that if the administration is faced with a choice of compromising on the budget or no budget at all, it would be a hard choice. It is certainly disturbing to witness such a rapid runup in debt. It is even more disturbing to see such indifference to the phenomenon within the executive branch. To the extent this becomes a hindrance to the effective regulation of our financial system, we may all be in for a fall.

I commend Chairman Wirth for providing us all with an opportunity to explore the questions before, not after, they become unmanageable. But it is important also to remember that David Stockman sat on this committee for 4 years, from 1976 to 1980. And of course, all of us then watched his progress as the director of the budget.

And I think all of us that sat on this committee came to admire his remarkable ability to harness voluminous amounts of information to defend knowingly erroneous premises. And the central erroneous premise in this country over the past 5 years has been the canard that it is possible to cut taxes, increase defense spending, and balance the budget simultaneously. That is, to wind up with less debt rather than more. Well, in fact, we have found that to be erroneous.

We have not yet had to pay the piper for all of the profits which are being taken and the benefits which are accruing to those who are enjoying all these tax cuts without any of the commensurate sacrifice which has to be made in budget reductions. But we know that eventually this economy will have to pay the piper.

This committee, I think, is engaging in a very important process. And that is, beginning to examine now questions which relate to debt across the board, in a society, which I am afraid, has grown immune to the understanding of the necessity of having to pay for the things which you are, in fact, purchasing.

So we thank you, Mr. Chairman, for coming here today. I look forward to engaging you in a dialog.

And with that, we will suspend the hearing, and it will recommence in approximately 10 minutes.

[Brief recess.]

Mr. WIRTH. Mr. Chairman, we thank you very much for your patience. And without objection, the record will be left open for opening statements that any other members may have. Are there any other members that have opening statements at this point?

[No response.]

Mr. WIRTH. The Chair hears none, and, Mr. Chairman, thank you, again, very much for being here. You are recognized for whatever time you may wish to consume, and your statement will, of course, be included in full in the record.

STATEMENT OF PAUL VOLCKER, CHAIRMAN, FEDERAL RESERVE BOARD

Mr. VOLCKER. Thank you, Mr. Chairman. I thank you for your remarks and those of your colleagues. You noted that these hearings cover a very wide area of questions and problems. You emphasized the complexity, as well as the breadth of the subject.

I do not think any single bit of testimony or hearing can do much more than raise questions, point to areas for study, suggest some broad conclusions. There is a great deal that we know about this subject. But there is a great deal that remains to be explored as well.

One thing we do know is that the increase in indebtedness since the early 1980's has been extraordinary. Not only in absolute terms as some of you have mentioned, but extraordinary in terms of its relation to the growth of the economy. It has far outpaced the growth of income.

The only figure I think I will give you in these opening comments is that one broad measure of debt that we often use, debt of nonfinancial borrowers in the United States, which has run at about 1.4 percent of the GNP through almost all the postwar period has, in the last 4 or 5 years, moved from that rather steady ratio of 1.4 percent to about 1.7 percent. It is very unusual to have a change of that magnitude, except when you have such massive economic events as depression, war, great inflation. We have not had any of those during this period, so it is an unusual period in that respect in our economic history, certainly in our postwar economic history.

I think it is fair to say that, in a very general sense, the growth of the debt reflects some underlying imbalances in our national economy that have persisted through this expansion. The increase in Federal indebtedness, which is, of course, related to the string of budget deficits, accounts for a very sizable portion of the debt growth in recent years. It is unusual for a Federal deficit to be so high in the first place, but particularly unusual for it to be maintained at such a high level during a period of growth in the economy.

Now, ordinarily, we do not worry about the quality of Federal debt. And you would think that a large amount of Federal debt might, in some sense, solidify the debt structure, if it is substituted for private debt, because the Federal Government is the strongest borrower. But another unusual feature of this expansion has been that not only has the Federal debt persistently grown at high levels, but that persistent growth in the Federal debt has not been accompanied by any slower growth in private debt, as usually happens when the Federal debt is rising rapidly. Borrowing by private sectors has been strong, paralleling the growth in the Federal debt.

If one looks at the situation from an overall perspective, I think it is clear there has been a massive imbalance between the generation of loanable funds at home within the United States and the amount of borrowing in the United States. To put it another way, there is an imbalance of historically large proportions between our willingness to save and our desire to invest, to build houses and, on top of that, to finance the Federal Government.

That difference between our willingness to save and our propensity to invest and incur deficits has been made up by a capital inflow from abroad. You might think that in these circumstances the Federal deficit would, in a sense, squeeze out the private borrowers. That has not happened, certainly to the degree that might have been expected, although interest rates have, of course, been relatively high. What has disguised the problem is the ease with which we have raised funds from abroad. And that has eased the pressure on financial markets, and in part enabled this debt expansion to continue.

That is not free by any means. If we are borrowing large amounts from abroad, by definition we have to run a big trade deficit and a big current account deficit. And we are building up our external indebtedness very rapidly. We have moved with very great speed from being the world's largest creditor, to becoming the world's largest debtor. We are certainly well on our way, at least, toward becoming the world's largest debtor.

That raises questions. And one issue I put before you is how sustainable and how comfortable that process is in terms of reliance on savings from abroad. It is certainly an uncomfortable and unsatisfactory process to the extent it depresses our trade balance, pushes that into large deficit, and has effects on our manufacturing production.

In looking at the causes of this rise in debt, I certainly think that we have inherited a feeling from the earlier period of the 1970's, running into the early 1980's, of a lot of inflation. I think that perhaps contributed to a pattern where people thought that borrowing today, spending today, was to their advantage, given the tendency of prices to rise.

One would think that that attitude would have subsided in recent years, and I hope that it has. Nonetheless, I think that there has been a change in attitudes engendered by that long inflationary period; that is in the process of changing, but still leaves its residue.

I would also point out that there is an underlying structural situation here related to the tax system. We have long had a tax system which is structured to favor debt financing over equity financing. That has been true for many years. I think that has had more attention, perhaps because interest rates are so high in recent years. It is not a new factor, but it certainly is a basic bias in our system running toward the encouragement of debt financing.

Some of the specific incentives given for investment, I think, indirectly have contributed to a demand for debt financing, particularly in the real estate area, and probably those incentives arising out of the tax system have further increased in recent years.

More broadly, in looking at changes in attitudes on the part of borrowers and lenders alike, this has certainly been a period of tremendous innovation. It has been a period of deregulation in financial markets. And borrowers and lenders are faced with many more alternatives, many more techniques for lending money and borrowing money in ways that seem to suit their convenience relative to even a few years ago.

And I think some of these developments have made lenders more aggressive and borrowers more willing because they appear, in part, to reduce interest rate risks or other risks. So we have a diminution of regulatory constraints. I am talking about the elimination of interest rate ceilings in the institutional structure. But I am also talking about the explosion of techniques in the financial markets—interest rate swaps, exchange rate swaps, third-party guarantees of various kinds, futures markets, options markets, and all the rest.

Now a lot of those developments are designed and have the potential for reducing risks in lending operations for the individual parties involved. But to the extent they contribute to and stimulate growth in debt overall, one is left with the question as to whether the risks for the system as a whole are increasing. Certainly, these individual transactions are steadily becoming a lot more complex.

The chain of transactions between ultimate borrower and lender tends to get longer and longer. Who is making the credit judgment, since a lot of people are involved, is maybe less direct and less clear, and people rely upon each other more. And maybe that results in less concentration on the essential credit judgment than used to be the case. I raise those as questions rather than as facts.

But I think it is true that the greater leveraging of the economy, the continuing buildup of debt, does raise a broad question as to whether in less favorable external economic conditions, some borrowers—a significantly larger proportion of borrowers—might not be getting so extended that they would have considerable difficulty in dealing with unanticipated financial setbacks, such as a shortfall in income, adverse economic conditions or, conversely, an unanticipated rise in interest rates or some combination of events.

I think it would be shortsighted not to examine these problems or to assume that such possibilities do not exist.

At the same time, I do not want to suggest that the evidence is clear that there is an inexorable accumulation of debilitating financial difficulties. You have some very smart people in these markets who are trying to protect themselves. And some of these techniques are designed to provide more protection for individual participants.

I think it is also true right now that the decline in interest rates and the increases in stock prices certainly work in the direction of alleviating potential pressures on financial positions, to the extent that those trends last and can be maintained.

Indeed, if one looks at the overall financial position of the economy, you will note in recent years that the growth of assets, the other side of the balance sheet has been as fast or faster than the growth in debt. So if you look at overall magnitudes, you see an extraordinary rise in debt, but you also see the other side of the balance sheet, an extraordinary rise in assets. If one just takes the last year or so, with very rapidly rising stock prices, with holdings of equities as an important part of all the financial assets in the country, that has been particularly true.

Of course, again, the sustainability of that process is in question. And as long as the debt is growing so rapidly relative to the GNP, the questions remain. It does not appear that that kind of relative growth of debt is sustainable. And it does, if continued, have disturbing implications for the solidity of the financial system over time.

Now that leaves the general question of what to do about it. And I am not going to present anything like a finished or detailed menu this morning. There are many specific questions. But I think there are some obvious steps that can be taken to address the concerns.

The most obvious direct, and perhaps most important approach, is to decrease and eventually eliminate the Federal budget deficit. That not only reduces the debt burden in the economy very directly, but beyond those direct effects, by reducing actual and potential pressures elsewhere in the credit markets and by freeing domestic savings for domestic investment, it can encourage a healthier circumstance in private markets generally and, in particular, less dependence upon an inflow of funds from abroad to meet our domestic needs. I think that is perhaps one of the crucial aspects of reducing the Federal budget deficit.

I would strongly recommend to the Congress that it also look into those elements in our Tax Code that so strongly favor debt finance. If one casts one's mind back just a year or two, one can find tha^ in the original Treasury tax reform proposals, there were elements of some significance directed toward that problem specifically. But in the process of debate about tax reform, that is one element that has pretty much dropped by the wayside.

I think it is an element that does not have a strong particular constituency among interest groups. But that does not, in any sense, diminish its fundamental importance. I, for one, am sorry to see debate on that issue pretty much dropped out of the tax reform discussions, because as long as that basic bias in the Tax Code exists, I think some of the more specific things that can be done, and some of the more specific concerns in this area, pale into relative insignificance.

Meanwhile, I would call to your attention that we, and other banking regulators, have taken a number of actions in recent years to strengthen our oversight of banking markets, depository markets generally, so that they do not become a vehicle for the spread of problems through the economy.

These measures, which among other things, but importantly, include attention to capital ratios, are no substitute for what, I think, is also a glaring need for review of our banking statutes generally. We are operating with a set of archaic—I think there is no other word for it—banking laws relative to today's technology, today's institutional change, today's internationalization of markets and other factors.

And we have basically a chaotic legal structure surrounding our banking system. One that induces individual participants to seek out loopholes through and around and between existing laws, and to engage in activities that may or may not be sound and desirable, but get shunted into rather artificial directions because of our failure to modernize law. And it seems to me imperative that we work on clarifying and modernizing those laws.

We should not have a financial system that essentially develops through the exploitation of perceived loopholes, rather than through well-considered design of a financial structure. Among other factors, we are seeing an erosion of the distinction, which we have long paid attention to in this country, between banking and commerce. I think that, in itself, raises questions about stability as a whole.

Finally, it is obvious that the strength of our financial system, in the last analysis, has to rest upon the decisionmaking—and the prudent decisionmaking—of those in markets. And borrowers and lenders need to be able to recognize risks and act to manage them.

I would emphasize, in conclusion, that while there are trends at work here that rightly engage our attention, that are rightly of concern if they persist, I do think that with action in the directions that I have indicated, with less inflation, with movement toward price stability in the economy generally, with a reasonably well performing private economy, we ought to be able to deal with these threats, manage the situation effectively, and continue with progress toward growth and stability. But, as in so much else, that is not going to come about automatically. It will require some attention.

[Testimony resumes on p. 47.]

[The prepared statement of Mr. Volcker follows:]

Statement by

Paul A. Volcker

Chairman, Board of Governors of the Federal Reserve System

I appreciate this opportunity to discuss the rapid growth of debt in the United States and its possible implications for our financial markets and economy. As you know, this is a subject about which I have expressed some concern from time to time over the past few years, and I welcome an exploration of the many difficult and complex issues it raises. Given those difficulties and complexities, no single hearing can do more than identify tendencies, raise questions, and point to areas for further study. In that sense, this testimony is more descriptive than prescriptive, but I think it does suggest the importance of the subject.

The increase in indebtedness since the early 1980s certainly has been extraordinary.* The debt of domestic nonfinancial sectors -- the measure of credit monitored by the Federal Open Market Committee -- has increased at rates ranging from around 11 to 14 percent in each of the three years of the current economic expansion. This growth has been much faster than the nominal increase in GNP and income, breaking a pattern that had persisted through most of the postwar period.

*The attached charts and tables illustrate various aspects of recent debt growth.

Until the early 1980s debt and income expanded at roughly comparable rates over time, and the ratio of debt to income fluctuated at or just below 140 percent. Since then, however, as debt expansion far outpaced the growth of income, this ratio has risen sharply to almost 170 percent at the end of 1985. Historically, changes of that magnitude, up or down, are unusual except in highly disturbed economic circumstances -- depressions, wars, or major inflations -- not just in the U.S. but also, so far as comparable statistics are readily available, in other major countries. That itself raises questions as to what is different now.

In that connection, I should emphasize that there is nothing particularly significant or alarming, in itself, about one or another ratio of debt to income. Even if the statistics were fully comparable and accurate through time, there are a number of reasons why the ratios might change over time or between countries. One major influence, for instance, is the amount of financial intermediation characteristic of an economy. The data I just cited nets out debt of defined financial intermediaries -- banks, thrifts, finance companies and other "financial" firms. But "non-financial" firms and governments both lend and borrow, more today than before, and, from one point of view, the related debt is double counted in the data. Stated another way, offsetting borrowings and loans on balance sheets of firms may not suggest the same risks and "leveraging" as borrowings not matched by comparable financial assets.

However, even after allowing for identified areas of double counting or greater intermediation -- for instance, the spate of advance refundings late last year by state and local governments -- the overall data do strongly suggest greater "leveraging" among borrowers; that is a larger burden of interest and principal payments relative to net worth and income streams. In the corporate sector, the same conclusion is implicit in the massive net retirement of equity recently, amounting to some $150 billion over the last two years, even though retained earnings have been rising.

The willingness to take on large volumes of additional debt certainly has not impeded the economic expansion. To some degree, the high levels of borrowing have helped support the spending needed to keep the economy growing. However, at some point a rising debt load is not sustainable. Debt cannot rise without limit relative to the income needed to service it, and increased leveraging implies smaller safety margins to deal with economic adversity. Consequently, continuing rapid growth of debt has disturbing implications for the fragility of the financial system over time, and the question is especially apropos at a time when certain important groups of borrowers are already under severe financial stress. The vulnerability of the economy to unanticipated increases in interest rates or a shortfall in income appears to be increasing, rather than the reverse. Surely we must be concerned about achieving a better balance in the sources of our economic expansion if we wish it to be sustained.

Sources of Credit Growth

The very structure of the growth of debt in the last few years reflects underlying imbalances in our national economy. To a considerable extent, the unusually rapid growth of debt in recent years directly reflects the borrowing by the Federal Government to finance an unprecedented string of budget deficits. Usually, budget deficits and federal borrowing decline as the economy recovers from recession, boosting tax receipts. In the last three years, by contrast, the budget deficit has remained extraordinarily high during the expansion, and federal debt held by the public has grown by more than 15 percent each year.

The Federal Government is our strongest borrower, and an increase in the federal debt ordinarily would not connote greater weakness in our credit structure. Even then, however, the need to service that debt requires higher taxation than would otherwise be necessary -- with consequences for economic efficiency -- and pressures of government debt service have historically sometimes led to excess money creation and inflation.

Viewed from an economy-wide perspective, large borrowings by the Federal Government have typically been accompanied by small increases in private debt. In the current setting, however, borrowing by non-federal sectors also has been unusually strong, with household, business, and state and local government indebtedness all rising relative to GNP.

In that sense, it's hard to see direct evidence of "crowding out" of private borrowing. In substantial part, the simultaneous rapid expansion of both federal and private debt has been a reflection of the relative ease with which this country has attracted savings and capital from other countries in recent years.

In effect, there has been a massive imbalance between the generation of loanable funds at home and the amount of borrowings. The resulting pressures on interest rates have been moderated by the capital inflow from abroad. But that inflow exacts a price. The net transfer of financial resources has been accompanied by a similar transfer of real resources to the U.S. -- or to put it in more comprehensible language, record trade deficits. And we have, in the space of a few years, reversed our position as the largest world creditor (net) and are in the process of becoming the largest world debtor.

We don't want those developments to continue indefinitely -- ultimately they are both politically and economically unsustainable. The willingness of foreigners to advance credit to the U.S. is not inexhaustible, and the capital inflow and related trade deficit has been maintained at the expense of our own manufacturing industry.

Moreover, for a country as well as an individual or business, rising debt levels imply greater obligations to make interest payments out of future income. This would be less of a concern if the foreign savings could be seen as being used to build up our domestic productive capacity, improving our prospects for growth and giving us a stronger base from which to make interest or dividend payments abroad. But with domestic investment spending relatively modest in recent quarters, it seems evident that in large measure the foreign lending is going, directly or indirectly, to fill the deficiency in domestic saving created by federal deficits. In a real sense, the rapid growth of federal debt and imbalance in foreign transactions has placed a mortgage on our future.

Perhaps the most striking evidence of greater willingness to incur debt can be found in the substitution of debt for equity associated with the wave of mergers, leveraged buyouts, and stock repurchase programs over the last few years. These activities resulted in the gross retirement of around $100 billion in outstanding equity of nonfinancial corporations in 1984 and again in 1985, funded in the initial stages primarily by new debt issues, amounts not nearly offset by new sales of equity.

The unusual volume of equity retirements may have accounted for roughly one percentage point of debt growth each of the last two years. While some of this debt may subsequently be paid down through sales of assets, or with equity obtained by sales of stock or internally generated cash flow, it seems clear that at least for some time a significant number of businesses will be carrying more debt, and therefore greater financial exposure, than if these corporate restructurings had not occurred.

These concerns are mitigated by the substantial profits and cash flow of many businesses, so that equity and cash cushions have been better maintained than debt data alone might suggest. Moreover, the recent surge in stock prices has greatly bolstered the market value of corporate equity -- ratios of market valuations of corporate debt to equity have actually declined in the past year. Declining interest rates also moderate the debt burden. Nonetheless, the trend in debt creation, if extended, would imply some increase in financial risk for the economic system.

In the household sector, savings rates have been unusually low and both consumer and mortgage indebtedness has risen much more rapidly than disposable income. Some part of the rise in the ratio of debt to income for households -- which stands at a postwar high -- undoubtedly reflects lengthening debt maturities, shifting demographics, and greater convenience use of credit, rather than an underlying increase in debt burdens. Even so, it appears that households, like businesses, have become more willing to take on debt, at the expense of more vulnerable financial positions.

Shifting Attitudes Toward Debt

The reasons for the apparent shift in attitudes are not easily identified and quantifiable. It is evident that the tax system favors debt over equity sources of funds for businesses through its differential treatment of interest and dividend payments. It also encourages household borrowing by allowing unlimited deductions for interest expenses. However, these provisions and their incentives have not substantially changed in the 1980s, and lower marginal tax rates tend to reduce the incentives.

The inflation experience of the 1970s probably had a profound effect on attitudes toward debt. During much of that period, inflation rates outstripped interest rates, making leveraged buying a seemingly attractive economic strategy. Some borrowers may have expected inflation to pick up again as the economy expanded after 1982, inducing them to buy in advance of price increases and in anticipation of repaying debts in dollars of lower real value. Perhaps they looked to some degree to the borrowing patterns of the Federal Government as justification of a view that debt creation is benign.

This tactic might have seemed quite risky and unattractive if borrowing had to be done at the high long-term rates prevailing over this period. But the greater availability of short- and floating-rate instruments reduced the risk considerably, since if inflation did not rebound, short-term rates would be expected to move lower.

The shift to floating rate instruments is but one example of innovations in financial markets that have played a role in supporting, if not encouraging, the growth of debt. The proliferation of techniques such as interest rate swaps, securitization of loan portfolios, and third-party guarantees may have given borrowers access to sources of funds that might otherwise have been closed to them, and reduced perceptions of risk. Many smaller or growing companies have long used low or unrated bonds as an important financing technique, and those securities clearly have a legitimate role in finance. But recent innovations, relying on the use of such bonds to finance large takeovers of well-established companies, seem to have opened new channels from lenders to borrowers, increasing the flow of credit for particular uses.

For intermediaries, the rapid development of secondary markets at home and abroad for loans of various types has enabled them to originate a far larger volume of credit than would be consistent with their own command over resources. In addition, concerns over exposure to interest rate fluctuations probably do not constrain asset growth at banks or thrifts to the degree they once did, given the greater opportunities to structure both assets and liabilities to manage the degree of interest rate risk.

At the same time, elimination of most deposit rate ceilings allows depository institutions to compete for funds for lending under a variety of circumstances, even if interest rates were to rise sharply. And the lifting of many usury ceilings has meant that lenders would continue to be willing to make credit available under such conditions. Thus, deregulation has substantially diminished the threat of constraints on credit availability as credit markets tighten, though it may also imply a wider swing in interest rates over the cycle.

From one perspective, these developments have increased the efficiency of our credit markets and improved the distribution of saving among competing uses. The greater variety of instruments available enables borrowers to tailor the maturity and other characteristics of debt to their specific needs or expectations. And with deregulation, borrowers probably feel a greater sense of assurance that funds will be available to roll over existing debt, even if interest rates should rise. On the supply side of the credit market, the ability of intermediaries to reduce interest rate risk, to compete for funds without regulatory constraint, and to replenish lendable funds through sales of assets probably has encouraged a more aggressive pursuit of lending opportunities and an eager embrace of innovative techniques to appeal to borrowers.

Consequences and Concerns

On balance, the net effect of shifting attitudes and financial innovation appears to have been to increase the expansion of private debt. Many of the particular techniques developed are designed to reduce risks for one or more of the parties directly involved. The larger question remains as to whether risks have, in fact, been reduced on balance for the financial system and the economy as a whole. The increase in total debt burdens, the longer and larger chain of transactions between ultimate borrowers and lenders with a diffusion and possible widening of credit judgment, the greater internationalization of the system all raise questions.

One thing seems reasonably clear. More of the risk of unexpected movements in interest rates has been shifted onto borrowers. Most recently, borrowers have benefitted from this shift, as declining interest rates have reduced their interest costs and enabled them to extend debt maturities at considerably lower rates than if they had been using long-term credit all along. But the strategy can, and does, carry considerable risk that an unanticipated rise in interest rates could sap the financial strength and creditworthiness of a substantial number of borrowers.

My general concern relates primarily to the degree to which the continuing buildup of debt may, as a by-product of eroding financial positions, leave a substantial number of borrowers so extended that they would have great difficulty dealing with unanticipated financial setbacks. Of course, borrowers ordinarily do not take on debt they expect, with any high degree of probability, will cause them problems ahead (although even that assumption may not be valid with respect to a relatively few depository institutions in hard-pressed financial circumstances that have been willing, in effect, to make highstake gambles with insured depositors' money). Nonetheless, the larger the share of income devoted to debt servicing in relatively prosperous times or the smaller the equity cushion -- and that has been the trend over rather a long period of time -- the more likely is it that an unexpected shortfall in income or rise in interest rates will lead to problems in meeting obligations.

For individual borrowers, income could weaken owing to factors beyond their control, reflecting conditions in a particular region or industry as well as a general downturn in the economy. A substantial rise in interest rates could prove especially troublesome, given the still heavy reliance on short-term or floating-rate debt. Many borrowers may minimize such possibilities -- and economic policy typically works to limit the risk. But all of history suggests it would be short-sighted to behave as if such possibilities did not exist.

The agricultural sector of our economy provides ample evidence of the effect of unexpected developments on highly leveraged borrowers. Those farmers who went deeply into debt in the late 1970s in anticipation of maintenance of higher land and crop prices are experiencing the most agonizing difficulties as these expectations are not fulfilled. Their problems in turn have severely weakened a number of agricultural lenders.

Potential vulnerabilities are suggested not only by elevated debt-to-income ratios throughout the economy, but also by the deterioration or disappointing performance of certain more direct indicators of financial distress at a time of rising economic activity generally. Corporate bond downgradings, for example, have trended sharply higher over the past two years, reflecting in part concerns about the effects of additional leveraging on the financial strength of certain corporations. In addition, problems in the household sector are indicated by some upward tendency in delinquency rates on consumer and mortgage loans or other measures of financial distress during the expansion period.

In another vein, I addressed earlier some of the implications of our growing dependence on capital and credit from abroad. That is hardly a dependable source of financing for years to come, and indeed will shrink as our trade balance improves, as we hope.

I do <u>not</u> suggest that these developments point to some inexorable accumulation of debilitating financial difficulty. Indeed, there are a number of developments currently working in the opposite direction. Recent substantial declines in interest rates and increases in stock prices have helped to alleviate pressures on financial positions. The fall in rates by itself will reduce debt servicing burdens, and both firms and households have taken advantage of the considerable downward movement in long-term rates to lengthen the maturities of their liabilities, locking in lower rates and reducing exposure to an unanticipated rise in short-term rates. The higher stock prices are currently strengthening the financial positions of many individuals and companies. New stock issues have picked up. And recent regulatory and supervisory initiatives can help.

At the same time, enough has gone on, and continues to go on, to raise clear warning signals, to justify further analytic effort, and to support action in areas where such action is plainly warranted.

Addressing the Concerns

We know enough to understand that disproportionate increases in debt extended over years do not constitute a solid, sustainable base for satisfactory economic growth and stability indefinitely into the future. Ultimately, debt can only be serviced from income. If that relationship is strained, financial pressures will jeopardize further growth in income itself, aggravating the difficulties. The time to act is before the strains become oppressive, not after.

The most direct step that can be taken by the government itself to address concerns about the growth of debt is to decrease, and eventually eliminate, the federal budget deficit. Such a course will reduce pressures on domestic credit markets, freeing domestic savings to be channelled into domestic investment and encouraging further restructuring of balance sheets through greater reliance on long-term debt and equity. By promoting better balance between spending and income domestically, it will also work to reducing dependence on foreign capital.

Some of these effects already were discernible as the Gramm-Rudman-Hollings legislation moved toward passage late last year; the improved outlook for budget balance appeared to contribute materially to the decline in rates on bonds and fixed-rate mortgages, in an environment in which the dollar was also depreciating toward levels more consistent with restoring the international competitive position of U. S. products. Concrete actions to implement the law will provide a constructive background for financial markets over coming years, partly by its direct effects and partly by reducing the chances of a resurgence in inflationary pressures.

Beyond that step, I believe the time has come for Congress to also address those elements of our tax code that so strongly favor debt finance. While that "bias" has long existed, other changes in the economic and financial environment seem to have had the effect of making it more important in decision-making.

The original Treasury tax reform proposal had some limited elements that moved in the right direction; they have subsequently been dropped or sharply diluted. One lesson, I suppose, is that no strong constituency has emerged for a reform with such diffuse and seemingly indirect benefits. But I also believe that other efforts to reduce excessive reliance on debt in the private sector pale into relative insignificance so long as that basic bias imbedded in the tax system exists.

I noted that deregulation and innovation may encourage growth of debt. Those changes respond to basic technological and competitive forces that cannot be denied. We can, however, respond in constructive ways, strengthening when necessary oversight of key markets and intermediaries so that they do not become the unwitting vehicles for the spread of problems through the economy.

To this end, the Federal Reserve, working in concert with other regulators of depository institutions, has stepped up its examination of banks and bank holding companies, tightened capital standards, and proposed keying those standards to the risk profile of the banks. We and the other bank regulators are also acting to deal with present points of strain, particularly in the agricultural and energy areas, through a variety of techniques. We have also joined with the other regulators in requesting that Congress extend and liberalize legislative authorization for interstate acquisition of troubled institutions.

These are essentially defensive measures, designed to keep immediate problems from infecting the financial system more generally by easing adjustments by individual institutions and local areas. They are not, and cannot be, a substitute for forward-looking structural change.

In that connection, it seems to me imperative to clarify and modernize the laws governing the structure of our depository and financial systems. Too often in recent years, old legislation has clashed with new market facts. Accommodation is achieved more by the exploitation of perceived loopholes in existing law than by a well-considered design of how we want the financial system to evolve. Distinctions among banking, other financial institutions, and commercial firms are fast eroding with little considered debate -- and less action -- to guide the process.

For a long time, as the result of the lessons of past financial crises, the unique role of banking and the payments system in our economy has, in concept, been recognized through provision of a federal "safety net," backed up by special oversight and supervision. Today, the distinctions underlying that approach are rapidly eroding, raising new questions about our ability to maintain the stability of the whole. The situation cries out for review and for new laws, adapted to the problems of today and tomorrow.

Nor can we evade a review of the basic safeguards and trading practices in other key sectors of financial markets, given the complex interdependencies that exist. One specific example came to your attention last year, and the Committee responded by providing a legislative framework for limited surveillance and regulation of the government securities market. As you know, action has not yet been completed on that matter.

Conclusion

In one sense, the extraordinary volume of credit flows in recent years is a tribute to the efficiency and innovative instincts of financial intermediaries, borrowers, and lenders alike. There has been rapid and effective response to new technological possibilities.

Those same developments also highlight the complex interactions involved and the new interdependencies created. And, in the end, credit creation is constructive only to the extent the obligations _are_ manageable in relation to income.

It is in those areas that questions arise.

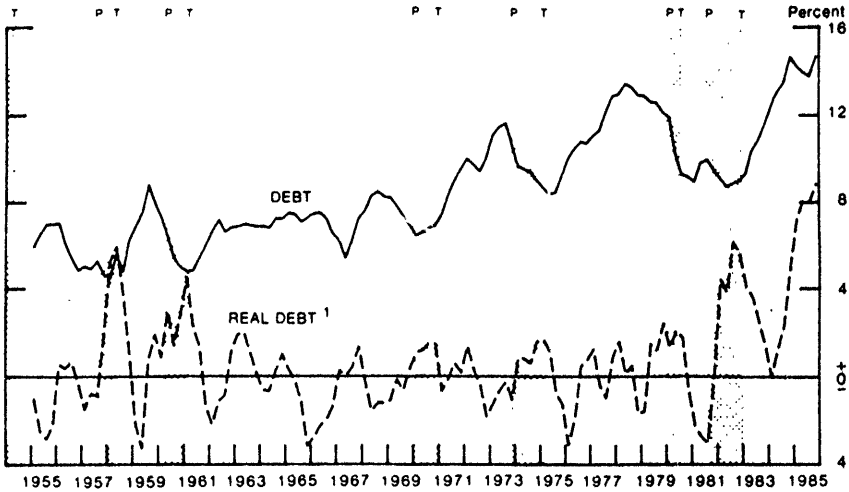
I must emphasize that the government can take a number of basic steps to address concerns about the rapid growth of debt. These include, most importantly, a balanced approach to economic policy, including cutting excessive budget deficits and a fresh look at some important provisions of the tax code. Government must also provide a supervisory and regulatory structure to promote a sound financial system.

Ultimately, and quite properly in our free market economy, the strength of our financial system must also ultimately rest on the prudent decisions of private parties. Borrowers and lenders must recognize risks and act to manage them. In such a context, the growth of debt would hold no concerns for us, but rather would be seen as an integral part of a healthy and active economy.

* * * * * * *

Growth of Domestic Nonfinancial Debt, Nominal and Real

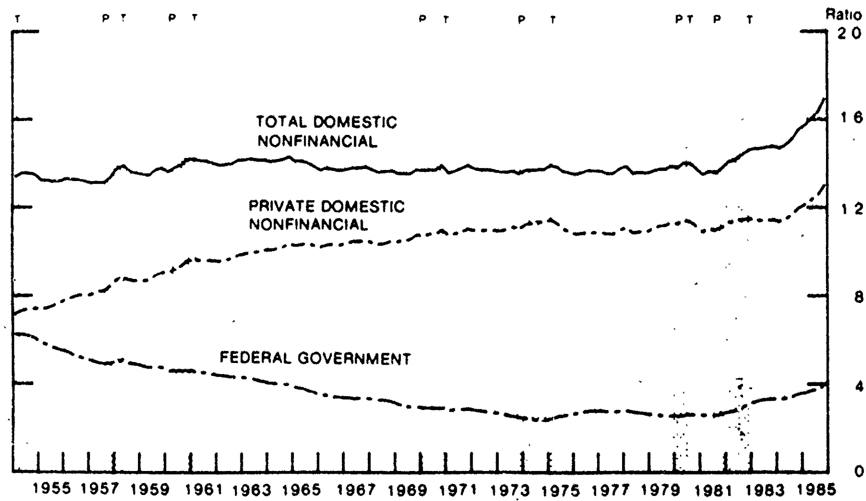
Four Quarter Growth Rates



[1] Nominal debt deflated by GNP deflator

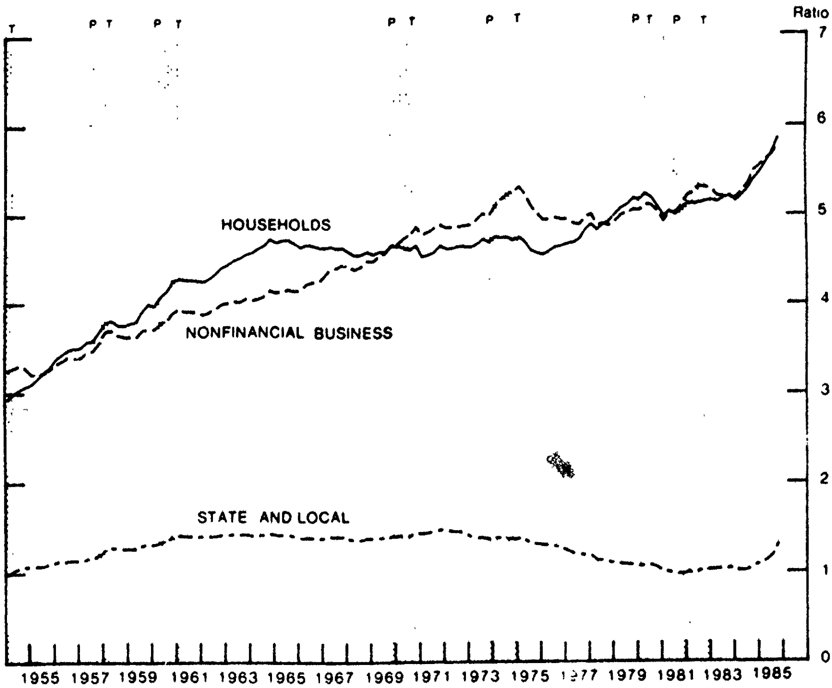
Domestic Nonfinancial Debt

Relative to Nominal GNP



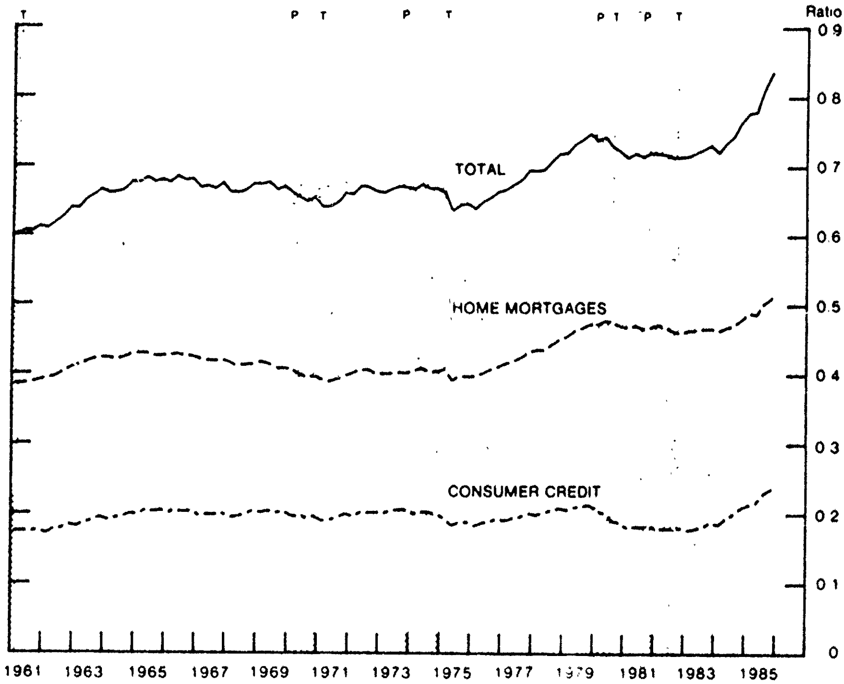
Private Domestic Nonfinancial Debt by Sector

Relative to Nominal GNP

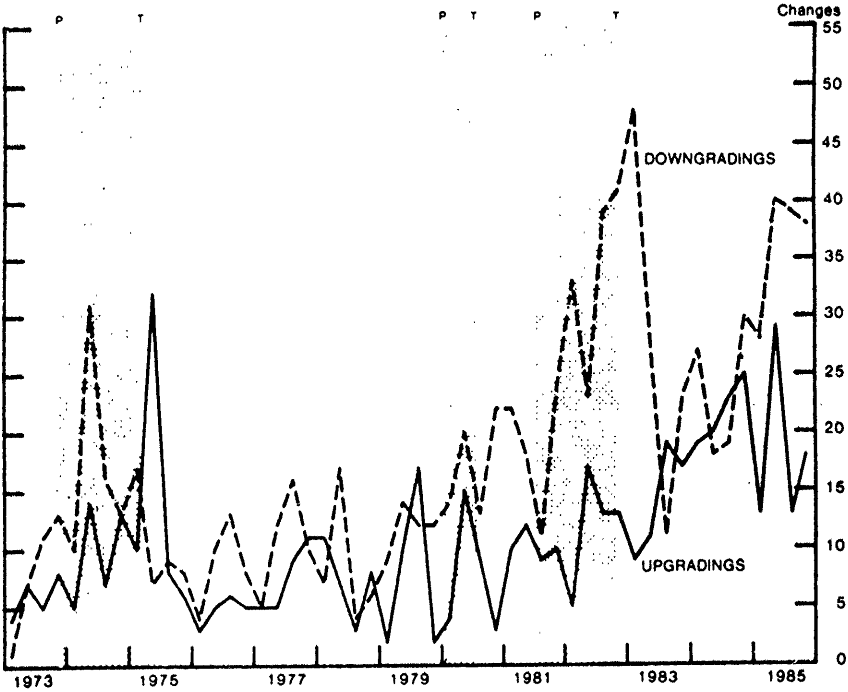


Household Debt and Principal Components

Relative to Disposable Personal Income

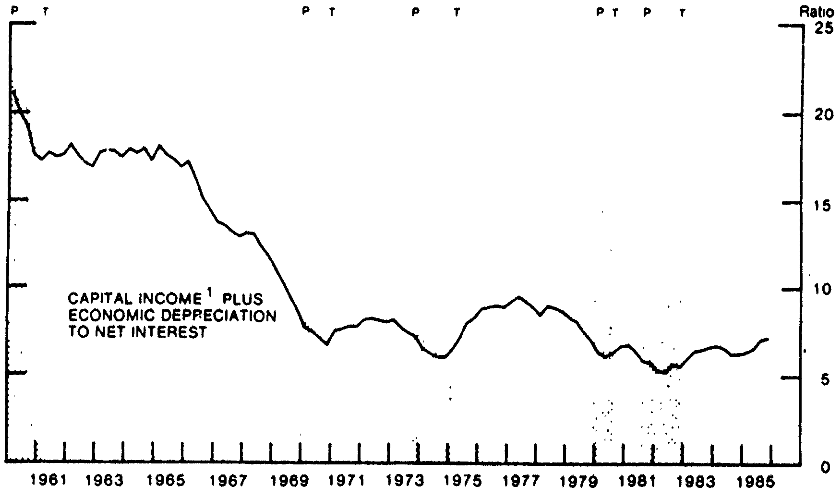


Changes in Ratings of Corporate Bonds [1]



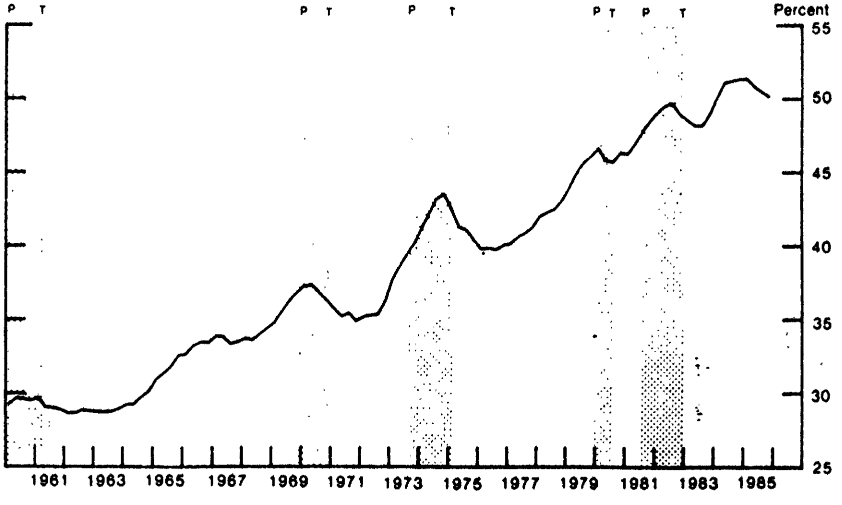
[1] As determined by Moody's Investors Service

Net Interest Coverage
Nonfinancial Corporations

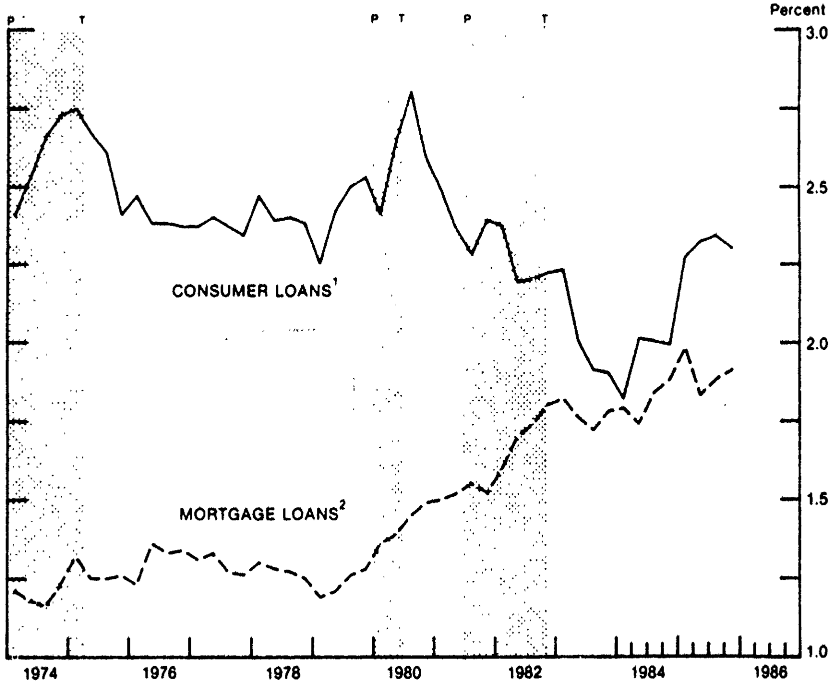


[1] Capital income equals net interest plus before tax profits plus capital consumption adjustment and inventory valuation adjustment. Commerce Department data

Short-Term Debt as a Percent of Total Debt Outstanding
Nonfinancial Corporations



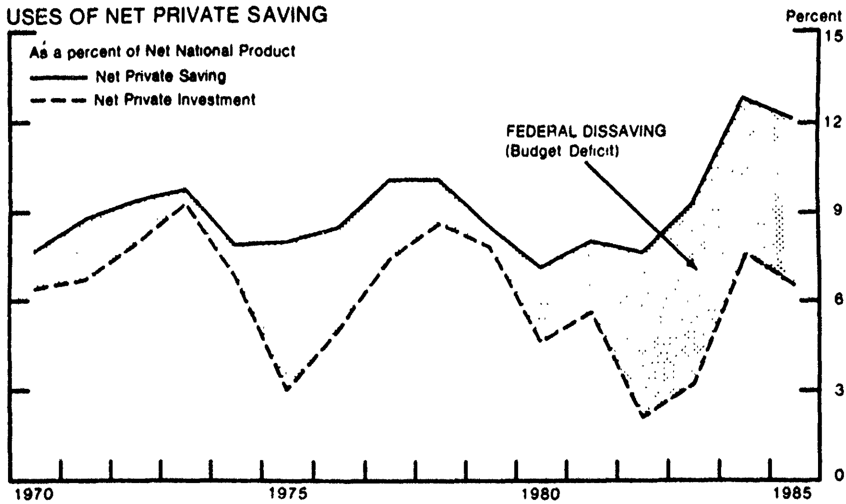
Household Delinquency Rates [1]



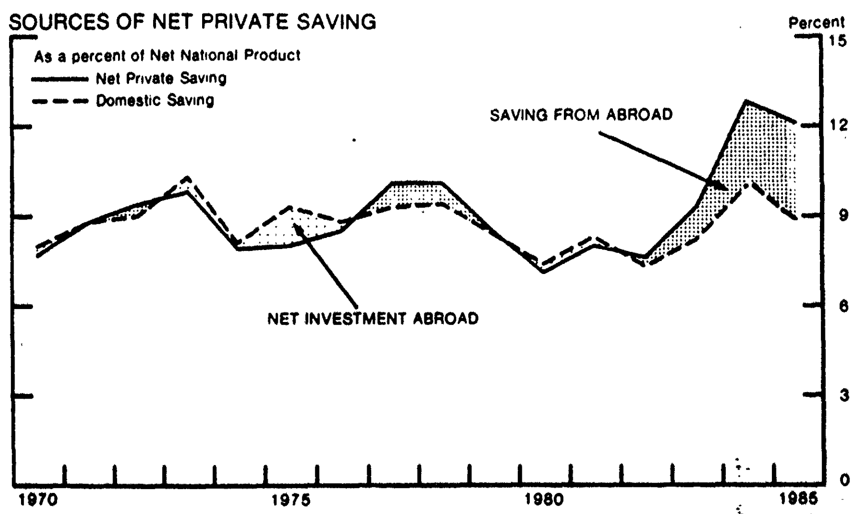
1. Consumer loans delinquent 30 days or more (data from American Bankers Association).
2. Mortgage loans delinquent 60 days or more (data from Mortgage Bankers Association).

Uses and Sources of Net Private Saving [1]

(a)



(b)



[1] Includes net savings from abroad and by domestic households, businesses and state and local governments. Commerce Department data.

ESTIMATES OF NET EQUITY ISSUES OF NONFINANCIAL CORPORATIONS

	New issues (including direct sales)	Retirements	Net Change
	----------billions of dollars, annual rate----------		
1981	21.5	33.0	-11.5
1982	28.9	17.5	11.4
1983	40.0	11.7	28.3
1984	18.0	92.5	-74.5
1985	24.9	106.5	-81.6
1985-Q1	19.7	104.0	-84.3
Q2	27.9	95.0	-67.1
Q3	25.0	100.0	-75.0
Q4	27.0	127.0	-100.0

DEBT-TO-EQUITY RATIOS
NONFINANCIAL CORPORATIONS

End of period	Debt (par)[1] / Equity (current)	Debt (market)[2] / Equity (market)
	percent	
1962	38.4	42.4
1964	40.8	37.7
1966	45.1	43.4
1968	45.6	35.6
1970	46.5	48.0
1971	45.6	46.7
1972	45.4	45.4
1973	45.0	61.9
1974	40.7	91.1
1975	38.1	72.0
1976	37.4	72.9
1977	38.0	84.0
1978	37.0	87.5
1979	36.8	79.0
1980	35.2	60.4
1981	35.2	70.3
1982	36.3	71.5
1983	36.6	63.4
1984	41.8	75.0
1985	46.5	72.8

1. Debt is valued at par, and equity is balance sheet net worth with tangible assets valued at replacement cost.
2. The market value of debt is an estimate based on par value and ratios of market to par values of NYSE bonds; equity value is based on market prices of outstanding shares.

Mr. WIRTH. Thank you very much, Mr. Chairman. Let me go right to your final point about, in your words, the glaring need for review of our banking statutes.

We have talked about this before. In 1982, I introduced, with almost 100 cosponsors in the House, legislation to create a commission to review the structure and regulation of our financial system, and to make recommendations for its reform. The subcommittee held a number of hearings on this issue and, in fact, reported out legislation late in the last Congress. It was not as sweeping as I would have liked, but at least a step in the right direction.

We got caught in a very significant buzzsaw in the process of reporting the legislation out of subcommittee. There were a variety of entities out there that were, as you suggested, focusing on exploiting loopholes, rather than on any kind of comprehensive view. And they were very antagonistic toward that comprehensive view because it would have compromised their ability to exploit the loopholes. We heard that from just about every segment of the financial industry.

We also got hammered by the administration who said that such a review would only get in the way of their progress toward deregulation—as if deregulation was the goal, rather than of a comprehensive review.

We remained, therefore, in exactly the quandary that you are suggesting. Here we have a patchwork of statutes with no well-considered design. The question is, How do we break into this morass? It is extremely difficult to do when we have fragmented jurisdiction in Congress. We have an industry that, for the most part, does not want to undertake such a review because they may want to protect certain advantages. And we have an administration that appears to be more dedicated to deregulation than to well-considered design, again, using your words.

What do we do? If you were sitting where the speaker is sitting, or where the President is sitting, or where Paul Volcker is sitting, what would you recommend that we do to break into this?

Mr. VOLCKER. I puzzle over that question almost continuously. And if I had a certain answer I would not have kept that light under a bushel this long. I think you do have fragmented jurisdiction on the House side of the Congress. But I think it is also true that the basic leadership here has to be found in the Banking Committees that have the primary jurisdiction over this area.

Many of these issues have been thrashed over. The question is how to put them together in a reasonably comprehensive and intelligent package. I think we, as one of the interested bodies, can play a part in that. And we are puzzling within the Federal Reserve as to whether it is useful to develop, once again, a more comprehensive approach that we could put before the Congress for its consideration, or whether that could better come out of the congressional committees directly or through some other process.

But I think the major variables are well known. I think the essential problem, as you suggest, is that there are a lot of competing particular and private interests here, including some who feel that they benefit from inaction, because they are in a position to take advantage of the existing loopholes and lack of a redesigned structure.

How to overcome that kind of resistance—and it comes from various directions—is the heart of the problem. And it is basically, I suppose, a political problem. I do not think that is going to be done without some coherent vision from the Congress in a reasonably comprehensive way that can be debated and decided upon, up or down. And I would like to see that happen by one device or another as soon as possible.

I do not think at this stage it takes a commission. I think these issues have been debated enough so that some more expeditious procedure than that ought to be available.

Mr. WIRTH. We are here today because during our debate, our discussion, last winter about regulation G you made the statement that the whole issue of debt ought to be more broadly considered.

This morning you outlined three roots to our debt expansion. One is the Federal deficit, and we are all familiar with that.

Mr. VOLCKER. That is easy enough to analyze, but very difficult to do something about.

Mr. WIRTH. That is right. Well, we know that problem, and as we sit here this morning, Gramm-Rudman's constitutionality is being debated in the Supreme Court.

The second issue is tax reform. We have seen the problems that issue has faced over the last 1½ years, but the specifics you recommended—and which I happen to agree with—were not part of the reform package. I would think that might be done quite discretely.

And the third, is the institutional problems we talked about. If we cannot move right now to update our statutes, at least we can put into place various safeguards, such as the legislation which we worked on last year, or the Government Securities Act—which at least is a step in the right direction of providing some kind of buffer or safeguard. I would hope that we could see a broad understanding of the importance of that kind of legislation.

Mr. VOLCKER. That is right. That is one small piece.

We talked about the institutional structure surrounding depository institutions. There is a lot going on in financial markets generally it does not necessarily center around depository institutions—where the changes have been so rapid and profound that I am not sure anybody understands all the implications very well.

One thing that we can do is to simply try to get more understanding of those changes. And if I may put in a little plug for central banking, a document crossed my desk today—which I think is now a public document—sponsored by the BIS in Basle, the Bank for International Settlement. It is basically on analytic and descriptive study to which several central banks contributed, describing these new techniques in financial markets, updating our thinking about those and what some of their implications are for regulatory policy and for monetary policy.

So at least we have a kind of source document available to try to alert people to what is going on, some of which, I am sure, is constructive. Much of what is going on is constructive.

But it does have implications. It has implications for the way we supervise financial institutions, for how those financial institutions are designed, and even for monetary policy.

Mr. WIRTH. Without objection, could we include the summary of those recommendations from the BIS study in the record?

Mr. VOLCKER. It is more description than recommendations at this point. But that is the first step toward change. [See p. 66.]

Mr. WIRTH. Thank you, Mr. Chairman.

Mr. Scheuer.

Mr. WIRTH. Mr. Luken.

Mr. LUKEN. Thank you, Mr. Chairman, and thank you, Mr. Volcker, for your insights on these issues which you have correctly described as being rather general, but I think to your credit, you have gotten to some very specific points here.

I was interested in your colloquy with the chairman on the subject of what we can do about the financial markets and the fact that you and we agreed on the Government securities legislation, and that is bogged down in the Senate, apparently, and apparently because of the administration quibbling over who should be the regulator.

Apparently the administration thinks it should be Treasury. Now, we sweated over that. We came up with what appeared to be a reasonable kind of a regulation using the Fed, and——

Mr. VOLCKER. You had a self-regulatory body in there, as I recall.

Mr. LUKEN. I would just hope that the administration would drop its objections and see the advantages. As you described, this is a small enough step in moving toward the safeguard of our financial markets, and I hope we can move in that area.

Mr. VOLCKER. If I may interject, Mr. Luken, just to clarify our position, we would like to see legislation. There has been debate upon who is the regulator, and I would like to say that we are perfectly happy to see the Treasury as regulator if they feel strongly about that, and we have said so. We think they can be an appropriate regulator of that market, and I hope that bill doesn't founder on that particular issue.

Mr. LUKEN. I am not sure I agree with that, but we are not the ones who are stopping the progress on the matter; it is the administration. The Senate should decide who they think should be the regulators and pass some legislation. If it is different, they can send it back and then we can iron it out.

Mr. VOLCKER. I agree, and you may know that I sent a letter up, together with the Secretary of the Treasury, a few weeks ago supporting that legislation and supporting, if that is the way it comes out, the Treasury as the regulator. That is satisfactory with us, provided there is close consultation with the Federal Reserve.

Mr. WIRTH. Will the gentleman yield?

Mr. LUKEN. I yield.

Mr. WIRTH. You will remember that initially the administration had said that there was no need for any legislation at all. They have now agreed to the need for legislation, and maybe they will eventually come around to our view as to what the proper regulatory mechanism is. Let's hope that they do evolve and mature in the appropriate fashion as it relates to this issue.

I thank the gentleman for yielding.

Mr. LUKEN. I think that is true, and we certainly recognize the part that Chairman Volcker and the Fed have played in moving it along, and we hope that the Senate will get the message and that the administration will also get the message that some action is needed.

Switching subjects here a little bit, there are estimates that from the period of 1984 through 1986, corporations will raise as much to finance mergers, leverage buyouts, and stock repurchases as they will for physical and financial assets. Now, I know you are concerned about expenditures that are used to reshuffle assets, but are we simply reshuffling assets or are we gaining greater efficiencies from the restructuring? Do you have an opinion?

Mr. VOLCKER. In what area? Is this in the Federal budget or in the private sector?

Mr. LUKEN. On the finance, on the private buyouts, mergers. On the merger issue.

Mr. VOLCKER. There is no doubt that in the private sector, an enormous amount of reshuffling of assets and debts is going on.

Mr. LUKEN. Well, do you agree with the assumption that some have argued that activities such as leverage buyouts are a nonproductive use of funds?

Mr. VOLCKER. You can call them nonproductive in the immediate sense. Whether they are nonproductive in an ultimate sense, I think, depends upon analysis of a particular deal. One can see some of these leveraged buyouts, I suspect, that will give operating control of what used to be a unit of a larger company to hands-on managers of that unit, and perhaps they will manage it more effectively than before.

I don't know how you make a judgment on that except on a case-by-case basis. I suspect it is true of some of them and not true of others.

Mr. LUKEN. The trend, though, has resulted in drastically increased debt, and that is what we have been discussing and you have been discussing.

Mr. VOLCKER. By definition, a leveraged buyout is going to retire equity and increase debt, and from that standpoint, increases the vulnerability of the financial system.

Mr. LUKEN. This is something that the Fed is involved in.

Mr. VOLCKER. Yes. We are involved in it directly to the extent there is bank financing of leveraged buyouts, and this is an area to which we have given some attention in our supervisory practices.

Mr. LUKEN. Would you say that your attention has been rather timid in the results? And I say that somewhat provocatively—not really meaning to criticize but to bring up the issue because you did grapple with the junk bond issue—and there was a roaring and a mouse was produced, apparently. Would you agree that the Fed regulation on junk bond restrictions really didn't amount to very much?

Mr. VOLCKER. I think that was rather a narrow ruling and got blown up to a kind of cause celebre beyond the technical significance of the ruling itself. But you asked whether we have been timid on leveraged buyouts. Let me return to that question, and perhaps as in any other swiftly changing area of finance or banking, the regulators are always a step behind and the supervisors are a step behind.

I don't think we have been timid in the last couple of years, but by the nature of that situation, I don't think it is adaptable to general rules or regulations. What we do is make sure in our normal supervisory and examination processes that this area of lending gets specific attention and that the risks and dangers are brought quite clearly to the attention of bank management.

We certainly do that now, and I think there are some signs that a greater degree of caution in that area has developed over the last couple of years, although I am sure you could find some exceptions.

Mr. LUKEN. Since we have been talking about the debt issue, and admittedly we are in a very general area, as you acknowledged, and as I say, you have been good enough to wade into it anyway, let me as you in this very general area: Haven't we been in a recovery, which has been generally recognized as such, but in looking at the debt situation, haven't we been financing that recovery with deficit spending?

Mr. VOLCKER. In considerable part, yes. Deficit spending in the private sector as well as in the public sector.

Mr. LUKEN. That recovery may be illusory or we may be vulnerable in this area. We can't continue deficit spending forever, mounting this debt. You have indicated the problems of the cumulative kind of debt that we are building, and you have said that we can't point to that debt as having caused any cataclysms up to now, but there is a question as to the sustainability of building debt.

Mr. VOLCKER. I think that is correct. The clearest aspect of that, where I think your comment on deficit financing applies quite obviously, is that when one looks at the country as a whole we have been borrowing abroad in increasing amounts. The country as a whole is in deficit, and that raises very clear questions about sustainability.

Mr. LUKEN. One more question. Are we going to continue to be able to borrow abroad with interest rates—well, let me ask this question, a factual question. Have interest rates throughout the world been going down at the same rate as in this country? Do you have anything on that?

Mr. VOLCKER. They have been going down generally. I don't know offhand of any country where long-term rates have come down as fast and as far as our long-term rates have in the last 6 or 8 months, but the general tendency in industrialized countries has been for interest rates to go down.

Mr. LUKEN. Are you concerned that we may not be able to continue to cause that inflow of foreign capital with our interest rates going down?

Mr. VOLCKER. I think that is only one factor in the equation, particularly when interest rates in other countries are going down.

Mr. LUKEN. That is what I wanted your thoughts on.

Mr. VOLCKER. I think, more generally, will we be able to maintain the confidence in our prospects? One aspect of that is confidence in our currency that continues to justify and promote a rather free inward flow of capital. Now there is another aspect of that that is entirely outside our control and, indeed, we would like to see it go in a way that is adverse to capital inflows to the United States in a fundamental sense. That is more rapid growth abroad. As they grow more rapidly, as we would like to see, they presumably will want to use more of their savings at home, and that in itself would potentially make it more difficult for us to borrow abroad.

The lesson from all that is let's get our house in order so that we are not so dependent upon foreign borrowings.

Mr. LUKEN. Amen. Thank you, Mr. Chairman.

Mr. WIRTH. Mr. Tauzin.

Mr. TAUZIN. Thank you, Mr. Chairman.

Mr. Chairman, I represent a State that is, of course deeply in trouble economically because of the plunge in oil prices, and it has affected the financial institutions of our State. I would like to touch briefly upon what I understand is a movement by your agency in the control of the currency as well as the FDIC to assist in some of those problems.

Bankers tell me that as the inspectors descend upon their banks faced with loan problems, they need and are requesting more room in which to facilitate renegotiations of those loans and better reporting regulations so that they might sustain themselves during this period of low price until the price of oil does come back up and their assets become more valuable in terms of security for those loans.

What exactly is your agency doing in that regard?

Mr. VOLCKER. All regulatory agencies have a specifically common position in that area that is not a sharp break from past practice but has been codified, so to speak, rather directly in recent months. It deals with the questions that you raise; that restructuring of loans in itself should be looked at as a matter that might, depending upon the specific circumstances, be in the interest of both borrower and lender and would not be criticized or require a write-off under certain conditions.

There is also room in some cases when an agricultural bank, for instance, or perhaps an energy bank running into adverse circumstances for a while may have to dip into their capital cushion, so to speak, and go even below the guidelines or rules that are ordinarily applied. Those banks would be asked to have a plan for restoring capital over a period of time, but given that their overall prospects for improvement over a period of time are reasonable, there would be some allowance made for that situation in the application of the existing guidelines.

Mr. TAUZIN. What reporting rule changes are you recommending? Many of the banks indicate to me that the 90-day provision on bad loans, particularly the manner in which they have to report them, the inspectors insisting that in many cases their assets be downgraded in value during this period of time, are hurting their ability.

Mr. VOLCKER. The only specific change in reporting rules that I recall we made recently is with respect to some of these restructured loans. When the loan as restructured is adequate to repay the principal that was originally involved, there is no required write-down, and that is in accordance with generally accepted accounting practice. But there would be reporting of that category of loans that had been restructured but not written down, in the interest of disclosure.

Mr. TAUZIN. Is it accurate to say that the new restructuring regulations do permit a bank to forgive or write off a part of the debt and restructure the rest of the debt without actually writing it down?

Mr. VOLCKER. What the so-called FASB-15, the accounting rule that is at issue here, provides is that if the loan is restructured and the restructured payments are equal to the original amount of principle, under in existing accounting rules, that loan does not have to be written down, provided there is a reasonable prospect that the restructured terms can be met.

That is not a new rule. That is a rule that we have applied in suitable circumstances in the past, but we have, in effect, in these areas generalized the rule and transmitted to our examiners—I'm talking about all the regulatory agencies now—instructions to make sure that they follow that rule.

Mr. TAUZIN. If I can put in a plug for the condition they find themselves in, in Louisiana right now the legislature is meeting to adapt its laws on plug and abandonment and its laws on royalty and severance collections in order to keep prospective fields alive that otherwise might die and be worthless on many banks' books. If they are successful, I think they are going to give the owners of those resources some breathing room, and what the banks are asking us to impress upon you and other agencies is that while the State and regulators in that energy area are attempting to give the owners of those resources breathing room, if the Fed and other agencies can likewise accommodate the banks' desires to do the same thing where the prospects are good——

Mr. VOLCKER. That is the key. I think that is all right so long as we are not just kidding people and that a restructured loan is really a good loan and not a bad loan. If it is a bad loan, then I think the reserves have to be put up or the loan written down or whatever.

Mr. TAUZIN. I don't think anybody disagrees with that, Mr. Chairman.

On a broader scale, you have indicated that you were disappointed that the tax reform bill did not deal with the problem of debt financing, the problem by which in the Tax Code we encourage so much debt financing.

Mr. VOLCKER. Right.

Mr. TAUZIN. I tend to agree with you. There is another side of that coin, however, and that is the provisions in the Tax Code which discourage the accumulation of personal savings in America, the part of the Tax Code that penalizes Americans for saving money, in effect.

Mr. VOLCKER. That is the other side of it.

Mr. TAUZIN. That is the other side; 120 cosponsors joined me last session, and we have got another bill filed this session, in a bill that suggested a new approach in that area, an approach that said that America would take a position most of the industrialized nations have already taken that would encourage in tax policy the accumulation of personal savings so that we wouldn't have to rely upon foreign funds to finance our debt here in America. And so that in fact, the amount of personal savings, percentage of disposable income would rise above the dismal 1.9 figure I saw for last quarter into something more reasonable.

I understand in France the personal disposable income savings rate is about 10, in Germany 15, and in Japan 19, and in Taiwan it is 34. We are hovering around 2 percent.

Mr. VOLCKER. We are at the bottom of the league.

Mr. TAUZIN. At the bottom of the league. Shouldn't we have a tax policy something like a bill like I suggested or something like it that says to savers in America that if you are willing to begin building up savings accounts again in America, broad savings accounts, not just specialized Keoghs or IRA's, that indeed that would be useful for our economy, useful for pushing back the problem of accumulated foreign debt, and perhaps building capital accounts in this country sufficient to meet our debt financing needs?

Mr. VOLCKER. I do think there is a basic bias, as I said, in our tax structure against savings and in favor of debt. At the same time, when one focuses on the savings side of the equation, I want to give you perhaps a little discouraging view of the situation.

Mr. TAUZIN. Sure.

Mr. VOLCKER. I think the savings patterns are pretty deeply embedded in the American psyche just as they are deeply embedded in the Japanese psyche or in some of those European countries in different ways. If you look at savings patterns through history, the one thing that stands out is they don't change very much. I don't think that means they are impervious to public policy, but I also don't think you should expect too much in terms of rapid and profound responses in savings patterns that have been established over a long period of time through tinkering with the Tax Code.

Some of the more obvious things in the Tax Code affect debt financing as compared to equity financing, where I think there is a very direct and strong financial incentive provided to borrow rather than to sell stock. I have no doubt that changing that would change financial patterns. The savings pattern is much harder to change.

Mr. TAUZIN. I think my time has run. I just want to point out that there has been a swing, as much as 6 to 7 percent, in savings rates.

Mr. VOLCKER. You quoted some very low savings figures that aren't familiar to me. My recollection is the savings rate got down into the neighborhood of 4 percent or so over the past year, which is at the lower end of the historical range. When we do well, it goes up to 6 or so for personal savings.

If you look at savings for the economy as a whole, generated domestically by businesses and by individuals, it has run on a net basis in a channel between 6 and 9 percent of the GNP pretty much throughout the postwar period. It fluctuates between 6 and 9 percent, largely depending upon what stage of the economic cycle we are in. It tends to get high during periods of prosperity when profits are high, and it falls during periods of recession when profits are low. That is about all you see in the overall pattern.

Mr. TAUZIN. Again, my time is up. I just want to point out that during all of that historical perspective, we have never had on the books a program by which America said to savers that you can earn tax-free ~~income,~~ and I wonder, if we had such a broad program, if we could change dramatically those savings incentives. It works in every industrialized nation.

Mr. VOLCKER. The tax situation in other countries varies. We are relatively bad on this.

Mr. TAUZIN. We are terrible.

Mr. VOLCKER. If you really wanted to change the tax structure, what you would do is tax the income when you earn it but don't tax it again after you have saved and earned on the savings; but that would be a pretty profound change in the tax structure. That is perhaps even more ambitious than I had in mind.

Mr. TAUZIN. Thank you, Mr. Chairman.

Mr. WIRTH. Thank you.

Mr. Fields.

Mr. FIELDS. Thank you, Mr. Chairman.

Chairman Volcker, to continue along the lines of Mr. Tauzin of Louisiana, I represent a producing State also, Texas, and we are very concerned about the financial health of some of our institutions in Texas.

Let me begin by asking a rather broad question. In your mind, what constitutes a crisis level for financial institutions in the Southwest, and are we at that crisis level or are we rapidly approaching a crisis level?

Mr. VOLCKER. I am not going to give you a statistical definition of a crisis. It is obvious that due to the economic conditions in Texas in the energy area, and with some other complications, that some financial institutions in Texas and in that area of the country have experienced and are reporting substantial earnings pressures. Those earnings pressures are directly related to the need to write off some loans or to provide substantially larger reserves.

We are also, fortunately, in the situation that, by and large, banks in that area of the country have been relatively profitable in the past and have built up substantial capital cushions. Capital is basically there for a rainy day, and it is helpful to have that capital available for this particular rainy day, but there are pressures and strains in that area that obviously have our attention.

I would point out in that connection that the regulators together have proposed modifying the legislation that the Congress just repassed for a brief period of time for emergency acquisitions of troubled banks to facilitate that process in case it becomes necessary in that area of the country or elsewhere under existing conditions. That legislation will be before you shortly, and I hope that you will give it your favorable and prompt attention.

Mr. FIELDS. Other than that piece of action and what you mentioned to Mr. Tauzin, are there any other specific actions that you could recommend?

Mr. VOLCKER. We took these supervisory actions that I discussed with Mr. Tauzin. I don't have any other recommendations beyond the ones incorporated in that legislation that will be before you. The reason I do not is that we have in being a very, I think, effective and rather comprehensive apparatus in the Federal Reserve System and in the Federal Deposit Insurance Corporation designed to deal with contingencies in this area.

Mr. FIELDS. Thank you, Mr. Chairman.

Mr. WIRTH. Mr. Oxley.

Mr. OXLEY. Thank you, Mr. Chairman.

Mr. Volcker, if I am paraphrasing you correctly, I think you said that we can't encourage a change in the savings pattern through "tinkering" with the Tax Code. If that is a correct paraphrasing, how do we, in fact, encourage the increase in savings in this country?

Mr. VOLCKER. I suppose my answer would be not to get too hopeful on that score, because I think it is a very deep-seated behavior pattern. When you begin talking about changing the savings rate in a very significant kind of way, you would have to look at things which you wouldn't want to do, I am sure.

We provide much more retirement security through the Social Security System and other programs than we used to provide. There have been a number of economic analyses that suggest that over a period of time that discourage private savings, for obvious reasons. That doesn't say you want to abandon those programs in the hopes that you get private savings up, although I suspect that might be one result.

I am just trying to illustrate the difficulty of this problem. You could change that whole tax structure in the way that was mentioned so that you don't tax income on savings at all. I think that might begin to have an effect on savings. But that would be a very sweeping change in the tax structure. I don't know how much effect it would have, but it certainly must move in the right direction; it is also a very profound change of the kind you may not want to consider.

I don't remember using the word "tinkering," but I will use it now. When you begin tinkering around the edges, I don't think you can expect to do too much.

Mr. OXLEY. Mr. Chairman, recently there has been some discussion in the public press about some so-called reforms in IRA's. I have been under the impression that the provision in the Tax Code for IRA's has been one of the most beneficial and substantial changes in the law in many, many years, and I think the figures would bear that out. In fact, the increase in IRA's year in and year out has been nothing short of fantastic. And yet there are those that feel that because of the tax loss and the perception that only a certain segment of the population has taken advantage of the IRA, that we ought to, indeed, revisit the whole IRA procedure.

Do you think that is a good idea or should we, in fact, look for other efforts in the Tax Code to encourage the kind of savings for retirement and other purposes, perhaps, that we have with the current IRA's?

Mr. VOLCKER. I think it is an example of what I am talking about. IRA's have been quite successful if measured by the number of IRA's created and the amount of money in them. At the same time, while all that development has been going on with a large influx of funds into IRA's, it is hard to see an impact on the overall savings rate. In fact, the personal savings rate has gone down during this period.

Now, it presumably did not go down because IRA's were created, but that particular incentive is not strong enough to offset other things that were happening, either temporarily or more profoundly. It is an illustration, I think, of just the point I was trying to make, that it is difficult to change these patterns by changes around the edges.

Now, I would suspect the longer the IRA facility is in effect, the more effective it may be in increasing savings. What you clearly got and are still getting, to a large extent, is a movement of already existing funds from one type of account to another without adding to the overall savings rate. But as people use up their readily available resources to shift, then maybe they have an incentive to actually save some more.

But we can't measure that response in the overall rate yet. I don't report this happily, but I report that it is hard for me to see that it has had a very profound influence on the overall savings rate as opposed to the amount of money put into those particular kinds of accounts, which has some benefits in and of itself, that money is kind of put aside for the long run, it is a more stable source of funds, and it presumably provides for more individual security for the individual family that has accumulated that money.

But that is not quite the same as saying it has had a dramatic effect on the overall savings rate, which I cannot discern.

Mr. OXLEY. Mr. Chairman, just to shift gears quickly, the Fed recently lowered the discount rate from 7 to 6.5 percent, apparently in coordination with the Central Bank of Japan. Will that, in your estimation, continue to be a pattern; and if indeed it is, is that a good thing?

Mr. VOLCKER. We have had some coordination in precisely the same directions and even in the same amounts in some recent incidents. Whether that is appropriate in the future, I think, depends upon circumstances in the United States, in Japan, in Europe. It has happened to fit the book given the existing circumstances, but one could imagine quite different circumstances.

In particular, I see no reason why measures in either Europe or Japan to stimulate their economies, whether by monetary policy or otherwise, should necessarily await comparable action by the United States. The shortfall in growth over a period of time, and perhaps prospectively, is more apparent in those countries than here, and it may be that some differential effort to spur growth in those countries would be appropriate.

Mr. OXLEY. What countries particularly are you talking about? West Germany, for example?

Mr. VOLCKER. Germany is one case in point. Japan is certainly a case in point. Each of those countries is different. Some of the growth in Europe generally, while it is better than it was and I think we are all happy about that, is not particularly robust against the background of continuing high levels of unemployment. The level of unemployment in the Common Market countries, if I remember correctly, is over 11 percent. So it would appear that they have some considerable growth potential there which is not being fully utilized.

Mr. OXLEY. Thank you, Mr. Chairman.

Mr. WIRTH. Thank you, Mr. Oxley.

Mrs. Collins.

Mrs. COLLINS. Thank you, Mr. Chairman.

Mr. Volcker, I have been sitting here listening to your testimony, and reading a few articles I happen to have before me. One article by Thoreau, says the twenties and thirties can happen again. The other raises a question about the quality of credit.

In reading those two articles it seemed to me that we have an economy that is based almost on a house of cards. It is based on credit; it is based on deficit financing and so forth. I wonder how sound you think this approach is.

I heard you say a bit ago that we were doing a lot of borrowing and that we were also growing, but how sound is this practice and can it lead us to a downfall such as we had in the twenties and the thirties?

Mr. VOLCKER. The answer is clearly somewhat mixed, but given the overall trend in debt, I think it does raise questions about its sustainability and whether we have been relying too much on debt-financed growth, with the Federal Government being one major culprit. I come back to that very basic point that has been made by several Congressmen as well as myself this morning: one reflection of that is the amount that we are having to borrow from abroad to meet this demand for debt creation. I think that basically is unsustainable in the degree and at the speed with which it is happening now.

The tendency has been toward increasing numbers in that respect rather than the reverse, and when we look toward sustaining the economic advance and sustaining the balance of our economy and the stability of our economy, I think it is important that those figures begin to curve down rather than up.

Mrs. COLLINS. Are you able to take action to see to it or should the Congress be doing something to see that those figures begin to turn downward?

Mr. VOLCKER. Congress can do something very directly. The point that I would make is that you have within your hands the ability to deal with the Federal budget deficit, which is a sizable part of the debt creation.

Mrs. COLLINS. It is a sizable part of the debt creation, this is true, but don't Federal Reserve Board policies also have some impact on that?

Mr. VOLCKER. Yes; I think they do, but just in terms of Federal Reserve policies and our very general instruments of monetary control, the question arises as to what lesson you might draw from this increase in debt. What many people, I suppose, would say is that ordinarily if you are having a very rapid increase in debt, it is an indication the policy is too easy and we ought to be more restrictive, whatever risks that that implies in the short run.

The other argument, of course, is that given this amount of debt, there is something to be said for easing the burden by lower interest rates and helping to ameliorate at least the short-term problem that way. This is one factor that we have to take into account among many others, but the classic response would be, I suppose, that it is an indication that money is too easy.

Mrs. COLLINS. One of our witnesses today, Mr. Soros, states in his testimony—he hasn't had a chance to give it yet, but we have read the testimony—that "Looking ahead, I see the risk of excessive credit expansion shifting from the banking system to the financial markets. We are in the midst of what I consider the bull market of a lifetime, but if we do not control the credit involved, it may well end up in a crash, just as it did in 1929. We are very far from that point, but it is worth thinking about."

Should we, in fact, be concerned that much of the expansion in trading activity has occurred in markets that are not centralized or subject to monitoring and surveillance—for example, markets for Government securities, mortgage-backed securities, foreign exchange, certificates of deposit, and commercial paper—and that those markets are not regulated by self-regulatory organizations with oversight by the SEC?

Mr. VOLCKER. There has, no doubt, been an explosion of activity in markets outside the banking, depository institution system, and evaluation of all those developments is a very difficult matter. But I come back and share the concern that the overall result in terms of private debt creation as well as public debt creation does suggest very real questions about its sustainability. It suggests that this development ought to be looked at in terms of what is an appropriate public policy response.

We come back to the deficit as one point; I come back to the tax system as another very basic influence on these developments which is very much a matter of public policy. I think you do have these questions of appropriate surveillance of other markets. There was reference earlier by your chairman to that particular area of the Government securities market, and this committee did act in that particular area and, I think, acted responsibly in the light of the problems that time showed had developed in that area of the market.

Some of these new financing techniques, I believe, are not well understood. They may be understood by some very bright people who have developed them in terms of their particular needs. Sometimes you even wonder whether they thought through all of the possibilities. Whether the implications for the economy at large and for the financial system at large have been fully understood is the question, I think, before the House.

The sheer rapidity of the debt creation that has accompanied these innovations is what raises the question because every individual borrower or lender may feel reasonably well protected, but there is some question about the validity of that conclusion for everybody when you observe that the economy as a whole is getting more highly leveraged.

Mrs. COLLINS. Don't you think there should be more monitoring by SEC?

Mr. VOLCKER. I am not going to get into the SEC's business.

Mrs. COLLINS. Or some other regulatory body.

I have one more question.

Mr. VOLCKER. I think they have a very important role in the disclosure area, and I think many of these complicated financing techniques and the ever-longer chain of mutually interdependent transactions makes that job more difficult rather than easier, because it is hard sometimes to tell who the ultimate lenders and borrowers are in the midst of these transactions and how protected the whole thing is.

We have had a classic case—and this is a kind of sick aberration of the whole thing and I don't suggest it as typical at all—but the case for potential for abuse is illustrated in some of the things that went on in the State of Maryland, and particularly in the situation of the so-called EPIC Corp., where you had a kind of financial chain of many new innovations, spurred in the first place by particular tax incentives in the real estate area, accompanied by rather loose appraisals of the underlying properties, with the credits then securitized after a little lubrication through a presumably insured savings and loan—securitized, insured or third party guarantees obtained—and the obligations sold, in some cases to rather sophisticated investors, but nobody looked very hard at the value of the original credit, which turned out not to be very good, to say the least.

The ultimate lender apparently didn't pay much attention because he thought somebody else was paying attention, and in the end it was an abuse of the system. Now, as I say, that is a sick aberration, but I think those things should be warnings to anybody.

Mrs. COLLINS. Mr. Chairman, my time has expired, but just as a comment, I think that many Americans today are concerned about the economy. We see financial institutions, as has already been brought out today and before, that are on pretty shaky grounds. We see a nervous stock market. We have all kinds of debt financing. We are borrowing from all over the world. We have trouble collecting our debts from foreign countries, particularly those in the Third World and what have you.

And yet we have an economy that people claim is rising and so forth, but I think the whole economy is based on pretty shaky grounds. I also think the question should be raised by all Americans whether or not we are, in fact, putting ourselves on an economic skid in this country, because it just doesn't seem like a sound basis to me.

Mr. WIRTH. Thank you, Mrs. Collins.

Mr. Coats.

Mr. COATS. Thank you. Mr. Chairman, yesterday in this room the Commerce Subcommittee heard testimony on the insurance liability crisis. And a representative from the American Bankers Association as well as the Certified Public Accountants Association both suggested that one of the ways to alleviate that crisis in providing liability insurance was to allow banks to get into the business of offering insurance.

My question is, I would be interested in your response as to whether or not that is wise policy. And second, as to whether or not banks are currently in the financial position to be able to do that with any degree of success?

Mr. VOLCKER. Let me distinguish between two different sets of questions and developments. We have permitted recently, within the present banking statute—although a real question arose in terms of interpretation of the ability of banks to be in the insurance business—banks to get together collectively or cooperatively to offer certain types of insurance to each other. We felt the law could be interpreted in a way that permitted that and helps the banking system to deal with their own insurance problems, so to speak.

Now the question of dealing with this problem by putting banks, let us say, in the casualty insurance business has, it seems to me, rather peculiar implications. You do not ordinarily think of an industry that has had as much trouble as the casualty insurance business being a prime target for fresh investment by a depository institution that operates under special strictures with respect to safety and soundness in the national interest.

So I do not think I would follow the conclusion directly that because there are problems in a particular industry, it is a ripe area for bank participation.

Mr. COATS. Well, I raised some of those questions yesterday because it appeared that their entry into that business might not necessarily solve the problem. That we have a lot of groups coming before us saying that they are unable to obtain insurance coverage because of the degree of uncertainty and risk and liability. And it occurred to me that banks, given the requirements as to their reserve requirements and so forth, might just simply end up competing with insurance companies for this same pool, and still not solving the problem.

Mr. RITTER. Will the gentleman yield?

Mr. VOLCKER. Just to put this in perspective, I am not aware that casualty insurance, which is what is at issue here, has been felt to be a prime area for expansion by the banks themselves. That is not an area upon which they put a lot of emphasis. But it has been a very troubled area in the financial industry recently, which is why it is so difficult to get insurance and why the charges are so high.

But it is that process, of course, that will also make the industry more healthy financially over a period of time. And I think there is some evidence that it is moving in that direction.

Mr. COATS. Recently CBO lowered the new budget estimates, indicating, I think, that by 1990 the Federal deficit was projected to be $120 billion instead of $260 billion, which it predicted not too long ago.

That again raises the question or raises the prospect of—the concept, I guess, of growing out of our budget problems. That was pretty discounted not that long ago; probably prompted the passage of Gramm-Rudman. And now a lot of people who supported the passage of Gramm-Rudman are saying, well, we do not want to let this draconian law take place because we are going to grow out of the deficit and so it is really not necessary.

I would be interested in your reactions to that.

Mr. VOLCKER. Let me make one comment right away. Treat all 5-year budget projections with great care. They are dangerous to your health. Nobody can make that good a projection over that period of time.

Having said that, I think in some basic sense, the budgetary outlook has improved, not by magic, but reflecting the degree of restraint that there has been on expenditures in the recent past—although maybe not as much as one would like to see in terms of a decisive change in the budget picture in the short run.

But if you make the assumption—this is an assumption and not a reality when you are going out that period of time—if you make the assumption that that degree of expenditure restraint is maintained, I think it is reasonable to project a downward curve in the deficit on some kind of reasonable business outlook over that period of time.

Whether that is enough or fast enough without still greater action by the Congress is the question. And I would feel strongly that you should, in no way, relax your efforts now, but reinforce what you have been doing that produces that better medium-term

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outlook. But resting on your laurels, so to speak, which are limited relative to the size of the problem, if I may say so, would be the wrong approach.

Mr. Coats. Thank you, Mr. Chairman.

Mr. Wirth. Mr. Ritter.

Mr. Ritter. Thank you, Mr. Chairman.

Mr. Volcker, just as a postscript to my colleague's remarks, the banks are interested in the insurance business, but which lines they are interested in moving in, I think, is subject to question. This also came up at the hearings yesterday.

Mr. Volcker. No; there is no question they have been interested in going into some aspects of the insurance business. But I think the one they put the least emphasis on is casualty insurance.

Mr. Ritter. No one is exactly flocking to the property and casualty business these days, given some of the awards.

Mr. Volcker. Right.

Mr. Ritter. Mr. Volcker, one of the key concerns of the subcommittee has been the growing number of mergers and acquisitions and leveraged buyouts that are being financed by debt. You, yourself, I understand, have expressed some concern about this.

Do you think that this increase in private debt makes companies more vulnerable to potential economic changes, such as higher interest rates?

Mr. Volcker. In general, I think that is inevitable. The more debt and the less equity, the more vulnerable you are. Now much of this activity, of course, is justified in specific instances; the debt does not apply to that particular company or that particular company may have an excess of equity and can afford more debt. And that is the basic justification for many of these deals.

Overall, there is no question that the debt load has been tending to increase in industry generally. And you have had $150 billion of equity retired over the past couple of years. Now how that effects individual companies is another question. But I would have thought that our major problem in this country is not an excess of equity, yet we are retiring it.

Mr. Ritter. I guess the bottom line there is, do you believe that the tax system encourages——

Mr. Volcker. Yes. I do not think without any——

Mr. Ritter [continuing]. Encourages debt?

Mr. Volcker. There is no question that the tax system encourages this activity. And that is what I was calling to your attention once again in my testimony.

Mr. Ritter. Mr. Volcker, the Japanese yen has fallen precipitously recently. And I guess it is down to the lowest point since the end of World War II.

What are some of your impressions in this? How long do you think it will take before we begin to feel the lower yen to dollar value in our balance of trade? What does it mean to financing our own deficit? What are some of your views of the implications of this sharply falling yen?

Mr. Volcker. First of all, I do not think that there is any doubt that when we have had the yen change in value in a relatively brief period of time by something like 30 to 35 percent, the relative competitive position of American industry is improved. And they are in a better position, particularly for competing with Japanese producers in third markets. It is still going to be pretty tough to export directly to Japan. I do not think there is any question about that. But the battle is fought, in large part, in third markets.

That process takes time. And what I would emphasize very strongly is that as important as exchange rate changes are relative rates of growth. It is hard to compete with countries that are not growing very well in their own domestic markets and that have excess capacity and excess unemployment. That applies not just to Japan, but to other countries.

Mr. RITTER. Are you talking about Western European nations?

Mr. VOLCKER. Yes; as well. I think in very general terms that comment would apply to both.

So I think our emphasis now ought to be on a better balance in world expansion. Obviously, it is very important that we keep this expansion moving in a sustainable way on a worldwide basis.

And when one looks at the sustainability, you have to realize that over the past 3 years and more, the United States has really been carrying the load. Our own economy has not only tended to expand faster, as measured by GNP than other industrialized countries, but if you looked at our demand, it is expanding even faster. Our demand has been expanding faster than our GNP because a lot of that demand has been satisfied by imports. And that is adding to other countries' GNP. And if you subtract the direct contribution of our imports from their GNP, the contrast between growth rates would be even stronger.

Now it is that situation that has to be reversed over the next few years if our trade balance is going to improve.

Mr. RITTER. Do we have that kind of influence to——

Mr. VOLCKER. It is obviously limited. But one would think that it is in their own interest. And that is, of course, the hopeful sign.

Whether they are moving as fast, as aggressively, as one would like to see is what has been in question. This is not a new point. And I would have hoped that we would have seen more expansion by those countries over the past year.

Mr. RITTER. Should we be recommending Kemp-Roth type tax cuts to Germany?

Mr. VOLCKER. Without getting into Kemp-Roth types, and without attaching a label to it, one of the questions is whether they could not, on the fiscal side, and on the tax side specifically, move in ways adapted to their own circumstances that provide more solid and lasting impetus to their economy.

Mr. RITTER. The chairman has been very patient with me and I thank him.

Mr. VOLCKER. I think that that kind of question is a very relevant one.

Mr. RITTER. I would like to just ask one other question.

Mr. VOLCKER. I might add their budgetary situations, by and large, are much better than ours.

Mr. RITTER. In terms of deficits.

Mr. VOLCKER. Yes. And they have improved a lot.

Mr. RITTER. The amazing thing about it is, their deficits are much smaller than ours, yet their unemployment rate is higher. Our inflation rate is as good as anybody's.

Mr. VOLCKER. Their inflation rate is generally better, despite the improvement that we have made. That is another factor that runs strongly in the direction, I think, of supporting some expansionary policies on their side, particularly in Germany and Japan, which have an exceptional degree of price stability.

Mr. RITTER. Particularly also, would you not agree with the fallen oil prices, the German economies and the Japanese economies are going to have excess cash basically.

Mr. VOLCKER. Yes.

Mr. RITTER. I have one last question. I thank the chairman for being patient.

Why has not the Canadian dollar increased in value against the American dollar?

Mr. VOLCKER. The Canadian situation always seems to be a special case. They have a large trade surplus, but they do not have a large current account surplus. They have a lot of external indebtedness that they have to service. So they do not have the same surpluses that Germany and Japan have, for instance, overall, even though they are very competitive in the trade area. They have to be competitive in the trade area because of their large nontrade deficit.

Canada has also been growing quite rapidly. They started with a very high level of unemployment, but they have had relatively rapid growth during this period of time. They have been trying, I think, to spur growth. Their interest rates are generally higher than ours, but they always have a difficult problem in kind of judging their interest rate level.

Mr. RITTER. But that would argue for a higher value of the Canadian dollar.

Mr. VOLCKER. That is right. But against these other factors, they started out with a higher inflation rate. They have made remarkable improvement on inflation. If you look at the remarkable improvement, you would say that that is another factor that should strengthen their currency.

Mr. RITTER. Because our trade deficit is actually in—in dollars terms is actually—or is it in percentage terms? It is very large.

Mr. VOLCKER. I do not remember what the numbers are.

Mr. RITTER. Something like $22 billion.

Mr. VOLCKER. I just do not remember the numbers, but we certainly have a large trade deficit currently vis-a-vis Canada.

Mr. RITTER. It is puzzling me as to why the Canadian dollar is not stronger.

Mr. VOLCKER. Their overall external position is not as good as their trade position alone looks. But I think it might be said they have not had as high a degree of confidence in their own currency as one would like to see. And some of these movements take on a life of their own, which is an object lesson for us.

They ran into a situation not so long ago where the Canadian dollar was declining relative to the United States dollar from an already somewhat depressed level historically. They were not happy about that at all because it has, among other things, inflationary implications. They felt that they had to defend the Canadian dollar, and they raised interest rates by something like 3 percent, if I remember correctly, in a relatively brief period of time, because of their concern about the problem that you cite.

Now, since then they have been able to come back down somewhat.

Mr. RITTER. I thank the chairman.

Mr. WIRTH. Thank you very much, Mr. Ritter.

Mr. Chairman, I thank you very much, again, for your helpful discussion at the beginning of what I expect is going to be a long and complete debate on the issue of debt and its economic and financial effects. I suspect that, as with other issues, this subcommittee is moving into an area that is going to be of significant interest in the future. We thank you very much, Mr. Chairman.

Mr. VOLCKER. Thank you very much. I appreciate it.

[Testimony resumes on p. 81.]

[The summary referred to earlier follows:]

RECENT INNOVATIONS IN INTERNATIONAL BANKING

APRIL 1986

Part I

Recent Innovations in International Banking
Summary of Study Group Report

A sharp acceleration in the pace of innovation, deregulation and structural change in recent years has transformed the international financial system in important ways. Major new financial instruments - mostly taking the form of off-balance-sheet commitments - have either been created or have dramatically increased their rôle in the financial structure; international credit flows have shifted away from loans through large international banks into direct credit markets; the volume of daily transactions has multiplied; financial markets have become far more closely integrated worldwide; capital has become much more mobile.

In many respects, innovation has improved the efficiency of international financial markets, mainly by offering a broader and more flexible range of instruments both for borrowing and for hedging interest and exchange rate exposures. These changes have clearly aided banks and their customers to cope with stresses associated with the greater volatility of exchange and interest rates in recent years. These beneficial effects are noted in the Report which follows and have been widely discussed elsewhere.

The Study Group sought to examine in detail whether these trends at the same time either increase risks within the financial structure or alter the functioning of the financial system over the longer term, in ways which suggest the need for central banks to adjust their approaches to monetary or macro-prudential policy. The group also considered whether these developments alter the usefulness or content of statistical data.

To varying degrees both the banks and their customers from all industrial countries are active in innovative business in the international markets. Although the new instruments are traded to some degree in most financial centres, the international market-places are principally located in the United States and the United Kingdom. In the United States particularly there has been active cross-fertilisation of domestic and international financial markets. The domestic markets of other countries are also increasingly affected by these international developments, and these influences are likely to strengthen as present trends, especially deregulation, continue and their effects spread.

The stimulus for financial innovation is strong, arising from the interaction of a changing regulatory environment, expanding technology, volatile markets, shifting current-account balances, and growing competition among financial institutions. We cannot predict whether the momentum of this process will advance further or wane. But it is clear that a number of the forces supporting it are unlikely to recede soon. Moreover, even if the pace of innovation were to slow substantially, the cumulative effect of changes already introduced will impinge on the broad categories of policy for which central banks are responsible.

Innovation is changing both the specific problems central banks face and affecting the tools they customarily employ. The policy responses required under present circumstances may need to be more rapid than in the past and may call for closer co-operation between banking authorities and those responsible for capital-market regulation at national and international levels. Because of the market's ability to innovate rapidly and flexibly, it can be more difficult than in the past to design policy changes and be confident that those changes will for long achieve desired results, without unwanted side effects.

The Basle Supervisors' Committee has recently examined one aspect of these trends, the rapid growth in off-balance-sheet activity of banks, and concluded that it poses urgent challenges to supervisory authorities. The study presented here concludes that central banks must in addition be concerned with other far-reaching policy issues that arise from the process of innovation and structural change. Issues in the fields of macro-prudential policy (that is, the safety and soundness of the broad financial system and payments mechanism), monetary policy, and financial reporting and statistics are examined in Part V of the Report and summarised in the paragraphs below.

A. Macro-prudential policy

For a variety of reasons, the large international banks appear to have lost comparative advantage to international securities markets as a channel for credit intermediation with respect to large high-grade borrowers, and in response have themselves moved heavily into certain capital-market (largely off-balance-sheet) activities.

These developments have had their main impact on international credit flows and in markets used by large corporations. If these trends continue - and have a more pervasive influence on domestic markets - there could be important consequences for the banking and financial systems:

- with the highest quality borrowers increasingly turning to direct credit markets, the average quality of banks' loan assets may gradually decline by comparison;

- in view of its narrower base, the international banking system might become less responsive to sudden liquidity needs or other shocks in the corporate or other borrowing sectors;

- a greater share of credit is likely to flow through capital-market (rather than bank) channels, which may be characterised by less supervision, by less complete information on which to base credit decisions, and by more distant business relationships between debtor and creditor, perhaps complicating the task of arranging rescheduling or financing packages for those with debt servicing problems;

- both bank and non-bank financial institutions are relying more on income from off-balance-sheet business;

- the distinctions between banks and other financial institutions are becoming progressively blurred.

These trends, taken together, may require the authorities to consider substantial adjustments and adaptations with respect to financial regulation and other policies.

The above considerations all, to a greater or lesser extent, reflect concern that innovation may heighten vulnerabilities in various ways, even as certain benefits clearly accrue to financial and non-financial users of the new instruments. The rapid innovation currently taking place in international banking and financial markets - and also in some nations' domestic markets - enables consumers to choose among many new products and to benefit from the reduced costs and enhanced protection those products bring. From the perspective of the individual buyer there are improvements in efficiency. But, in a world financial system with many imperfections, there can be no guarantee that increased efficiency of financial intermediation at the individual firm level will necessarily improve economic welfare overall. Many innovations have been designed to exploit existing imperfections in the financial system. Some of the "imperfections" around which innovations are manoeuvering their way represent official measures, such as capital adequacy requirements imposed in the interest of safety and soundness of the financial structure, or measures to deal with liquidity problems or to promote market stability. Others constitute regulations designed to meet the needs of domestic monetary and credit policy objectives; and still others are meant to serve investor protection needs.

A major source of concern derives from the difficulties in pricing new instruments and the possibility that many new instruments appear to be, at least to some degree, underpriced, that is, that gross income from the transactions is insufficient, on average, to compensate fully for their inherent risks. Since it may be necessary to accumulate experience over a variety of circumstances and cyclical conditions in order for market participants fully to understand and assess all elements of risk, this problem may appear especially before the market for a new product has reached maturity. Underpricing may also be resulting from intense competitive pressures, as individual institutions struggle to hold market share in changing markets, or from inability to predict longer-run swings in economic circumstances.

There are several other ways in which innovation may contribute to systemic vulnerabilities. The presumed superior liquidity of securitised assets over conventional bank loans may turn out to be a mirage if a substantial number of the creditors of a single debtor attempt to liquidate their holdings simultaneously, or nearly so. That is, the risk that the liquidity of these assets will disappear is likely to be greatest when it is most needed. At such times, banks may be exposed to liquidity pressure from drawdowns on commitments which backstop many securitised assets. Moreover, the general trend toward increased off-balance-sheet activity and "unbundling" (which involves separating market risk from credit risk), as well as the complexity of multiple linked transactions, can mask the interlocking of risks, for bank management, regulators and market participants alike. Indeed, in any corporation using the new instruments there is an important need for all levels of management to acquire knowledge and understanding of the risks inherent in them, and to adapt internal accounting systems sufficiently to ensure adequate control. Because of the pace of innovation, use of the new instruments may be running ahead of these necessary changes. A further point is that the new instruments transfer price or market risk from one economic agent to another, but do not eliminate that risk. And, in the process, they create new credit exposures, and thereby increase the ways in which the default of one borrower can adversely affect others. This problem may be exacerbated by the hitherto untested legal status of many of the new financial instruments. Moreover, since the growth of these transactions on the part of a relatively few large financial intermediaries has been very rapid, there is some possibility that, in the aggregate, credit risk is becoming more concentrated within the financial structure, even as exposure to price or market risk may be more widely distributed.

The rapid growth in the volume of transactions being settled through the payment system can also contribute to potential systemic risks. An important feature of innovation has been the huge reduction in transactions costs - some estimates are that costs of many transactions have fallen by more than 90 per cent. in the past two decades because of major technological improvements. As a result, financial institutions find it possible, and profitable, to undertake a much larger number of transactions. There is a risk of overloading or congestive interruption of the payment system.

An important question is whether innovation has added to, or subtracted from, the degree of volatility in financial markets. Theoretical reasoning alone cannot resolve the issues, and market participants are divided in their views. Where there are empirical studies examining the impact of futures and options markets on the underlying cash markets, those studies suggest that prices in cash markets were subject to no more, and often less, fluctuation after the introduction of futures markets. At the same time, there are particular day-to-day situations in which the hedging activities of market participants, especially in options, do seem to increase the volatility of the price of the underlying asset. It is possible that the new instruments tend to cause short-term volatility in certain circumstances but longer-term stability, particularly if the market is a broad one with a large number of participants.

A further question is whether financial innovation leads to growth in overall debt. All in all, there are indications that global integration and innovation have contributed at the margin to credit growth, particularly in the United States, whose markets and institutions have played a pioneering rôle in most of the innovations and where, because of the rôle of the dollar, the links with international markets are close. Nonetheless, looking at the record of the major Group of Ten nations, individually or on an aggregated basis, it is difficult to establish any clear causal nexus from financial innovation to aggregate credit flows in most countries.

B. Monetary policy

Monetary policy is being influenced - in some countries more than others - by the effects of innovation, deregulation and structural change:

- the scope for monetary policy to operate via changes in the availability of credit is being reduced relative to the rôle of prices (that is, interest rates and exchange rates);
- the rise in the international mobility of capital has resulted in some countries in the exchange rate increasing in importance as a channel of monetary policy;
- the many new instruments and hedging techniques available to market participants and the shift to variable rate financing can make the timing and incidence of monetary policy less certain; and

- innovation is changing and may erode the meaning and usefulness of the monetary and credit aggregates as indicators of monetary policy.

These developments may have several important implications for the conduct of monetary policy.

The external sector has become a relatively more important restraint on the conduct of an independent monetary policy in some countries, as the relative importance of the exchange rate as a channel through which monetary policy has its effect on the economy has risen along with the increasing degree of international capital mobility. For the smaller members of the EMS as well as other countries whose economies are particularly open, developments in the external sector have long been an important consideration when formulating policy. For some larger countries, the change has been more noticeable. It has become necessary in recent years in formulating policy to recognise the increasing degree of macro-economic interdependence among the industrial countries.

Moreover, the developments noted above have combined in the larger economies particularly to shift the sectoral incidence of the effects of a change in monetary policy. Although the situation varies from country to country, the rising importance of the price channel accompanied by the declining significance of credit allocation techniques means that it is no longer true that the incidence of monetary policy changes falls mainly on the housing and business fixed-investment sectors of the economy. In contrast, monetary policy increasingly has its effects on the competitive position of the export and import competing industries, with a potentially damaging effect on investment decisions in those sectors.

This is not to imply that the exchange rate has replaced interest rates as the principal channel of monetary policy in a significant number of countries or that there has been a widespread move towards exchange rate targeting. With respect to the effect of interest rates, the increased use of variable rate financing and interest rate hedging techniques can have an important influence on the working of monetary policy. Once the fear of being locked into higher interest rates is removed, the incentive to delay spending is reduced, particularly when tighter monetary policy is expected to be temporary. In addition, monetary authorities, when considering interest rate increases, must take account of the fact that under today's circumstances such increases can have more important cash-flow implications than before and may give rise to potential solvency problems over a broader component of the domestic and perhaps the international economy.

Finally, new instruments may shift the incidence of monetary policy among sectors of the economy in ways that are not easily predictable. The new instruments may concentrate risk in the financial sector, which can make it more vulnerable to large, unexpected changes in the macro-economic environment.

These various considerations will have to be taken into account and will certainly influence the way in which central banks make discretionary changes in monetary policy.

C. Financial reporting and statistics

The growth of off-balance-sheet transactions and the unbundling of different types of risks have rendered the analysis of financial statements more complex in several ways:

- for a bank's management, there are important questions about how best to account for, monitor and manage a bank's risk exposure, and how to fold in off-balance-sheet activities with its other exposure;

- counterparties and shareholders of banks and other institutions face similar problems of understanding the full scope of the institutions' activities since conventional financial statements are often not complete and are clouded by the growth of off-balance-sheet transactions;

- supervisory and regulatory measurement of risk exposure can also be significantly affected by off-balance-sheet transactions, and the authorities have taken major steps to determine how to treat them for measures of liquidity and capital adequacy, specific loan concentration limits, and for assessing the overall health of banks;

- in addition, the absence of accepted accounting techniques with respect to off-balance-sheet items allows leeway in the presentation of financial accounts that may have encouraged firms to assume more risks.

With respect to the monitoring of international capital flows, the usefulness of our international statistics has been impaired by financial innovation and structural change:

- "securitisation", that is, an increasing tendency for credit to take the form of negotiable instruments, and the expanding rôle of contingent commitments have reduced the content of available information on international exposures by taking a growing proportion of credit transactions off banks' balance sheets;

- institutions outside the present reporting systems have played an increasing rôle in credit intermediation;

- the negotiability of assets makes it more difficult to keep track of their ownership; in particular because of asset trading, changes in reporting banks' assets may not necessarily accurately reflect changes in borrowers' liabilities;

- since many off-balance-sheet transactions are of a complex nature, detailed data would be required to permit the kind of analysis that has been possible with conventional on-balance-sheet positions.

In view of these problems, consideration should be given to broadening the coverage of the data on international capital flows and, in particular, to obtaining:

- fuller and more detailed information on banks' involvement in the securities markets;

- information on the arrangements and use of NIFs and other back-up facilities;

- information from outside the banking sector on outstanding bond indebtedness and short-term securities, using where possible data from trade associations and other sources;

- information on banks' off-balance-sheet business, arranging when possible for data to be collected by supervisory authorities in a manner useful for macro-analysis.

* * *

The foregoing discussion summarises the Study Group's findings with respect to the policy implications of innovation and structural change in the international financial markets. The following paragraphs outline the factual material gathered with respect to the main new instruments actively traded in international markets, as well as the analysis of the driving forces behind the process of financial innovation and structural change generally.

* * *

Forces stimulating financial innovation

The stimulus behind financial innovation arises from the confluence of a series of disparate trends during the 1970s and 1980s. For one thing, macro-economic trends have helped to foster stuctural change and innovation. Most important are the sharp rise in inflation and the increased volatility of interest rates and exchange rates. Higher volatility has generated an increase in the risk exposure of those financial intermediaries which fail to maintain a strict match in the term structure of their assets and liabilities. There has been a need on the part of both financial intermediaries and non-financial institutions to develop effective hedging devices and strategies to deal with the increased risks related to volatility, and there has been an incentive to develop new financial instruments which can be used to transform and shift the burden of risk. We have seen a proliferation of new financial instruments and techniques with the capability of meeting these needs.

A sharp shift during the 1980s in the geographic pattern of net flows of international savings and investment, as reflected in the distribution of current-account imbalances, has also been a contributing factor. To the extent that this shift has interacted with the distinct preferences of investors and borrowers in different geographic areas for particular forms of financial assets and liabilities, it can be held at least partly accountable for the changes in the structure of international financial intermediation and the development of new financial instruments. Thus, the sharp fall in OPEC investible surpluses and the reduced access to credit by the major LDC borrowing countries after the onset of the international debt crisis are consistent with a reduced supply of bank deposits and a matching reduction in syndicated bank credits. Similarly the switch in the rôle of the United

States from large net provider to large net taker of funds, combined with the growth of current-account surpluses in Europe and Japan, is consistent with the increased use of marketable debt instruments in international financial markets.

Another important trend has been the changing regulatory environment affecting national financial markets. There have been two aspects to this. One has been the growing worldwide tendency to deregulate and to reduce structural rigidities and barriers to competition in domestic financial markets. The moves toward deregulation (as well as the extent of previous regulation) have varied substantially from country to country, and include such measures as the abolition of exchange controls, the phasing-out of interest rate ceilings on deposit and lending activities of key financial intermediaries, the opening of domestic markets to foreign financial institutions, tax reductions and the relaxation of certain traditional boundaries limiting the types of financial activity in which particular financial institutions may engage. The other aspect of the regulatory environment fostering innovation has been the increased attention which supervisory authorities have begun to pay to the adequacy of financial institutions' capital ratios, particularly as the quality of some international and domestic assets have come into question. The effect has been to create an incentive for banks to increase their activity in business subject to less stringent capital requirements - a powerful motivation to shift to off-balance-sheet products.

Another trend which has spurred innovation and structural change is the recent widespread application of new communications and computer technology to financial markets and financial transactions. This encompasses the expansion of worldwide information and new service companies, and improvements in accounting and information-processing systems in financial institutions. Similarly the application of advanced computer technology to the international payment systems and to transactions processing generally has acted as a stimulus to innovation and structural change. The lowering of transactions costs to a fraction of earlier levels has given a powerful impetus to innovation.

Finally, growing competition in international financial markets is a factor increasing the pressure for innovation and structural change. There are at least two sources of the rise in competition over and above the worldwide trend towards deregulation, and these sources have both a direct and an indirect effect in the process of innovation. Firstly, technological change appears to foster a rise in competition as the developers of new technology seek to exploit its advantage in as many markets as possible. Secondly, the shifting patterns of savings and investment may put pressure on financial institutions whose markets are shrinking to innovate and to compete more aggressively for a larger share of their traditional market or to expand into new areas of business, and for institutions resident in geographic areas with excess liquidity to seek new ways of deploying it.

The interaction of these forces has led to an explosion in the demand for innovative financial instruments - that is, to the desire of economic agents for new vehicles that perform the functions of transferring risk, enhancing liquidity, and generating debt and equity - that help to meet the requirements of the changing financial landscape. These forces have also fostered very rapid growth in the supply of new instruments - supply in the sense of an increased willingness and ability of financial institutions to provide, and to make markets in, these new instruments. The influence of demand and supply factors with respect to particular innovations is discussed in Part IV of the Report.

A look at four major new instruments

New financial instruments (or those that have newly re-emerged) have had a particularly prominent influence in international financial markets in the past two to three years. These newest entries to the financial arena represent the latest generation of innovative instruments. They are examined in depth in Part II of this Report on the basis of discussions with market participants, and our findings are summarised below. Each of the four instruments differs from the others in terms of form and purpose. Together they show not only the importance of the new instruments but their diversity and the pervasiveness of the spread of innovation to so many sectors and corners of the market.

1. Note issuance facilities (NIFs)

A NIF is a revolving facility which enables a borrower to issue a stream of short-term notes, generally known as "Euro-notes", over a medium-term period.

This technique separates the functions performed by a single institution in a traditional syndicated credit and allows them to be perfomed by different institutions. The function of funding the borrower's requirements is transformed from one of lending money into one of setting up a borrowing mechanism. The function of maturity transformation is turned into one of underwriting.

The credit risk is shared between the holders of the notes, who stand to lose if the borrower fails before the notes mature, and the underwriters, who face the prospect of having to take up the notes of a borrower in whom investors have lost confidence. For holders of Euro-notes, the notes are an asset and as such will appear on their balance sheets. The underwriting commitment, however, does not appear on the face of the balance sheet.

The popularity of NIFs benefits not only from the cost savings of unbundling but also from the market's current preference for lending to high-grade borrowers through securities rather than bank loans. The attractions of NIFs to a borrower are principally their low cost combined with great flexibility in the form of drawing. In a large number of cases NIFs have been arranged to replace existing, more expensive borrowings.

The market for NIFs is developing into a Euro-commercial-paper market which provides a mechanism for high-grade borrowers to raise funds cheaply without directly associated credit backing by banks. The popularity and continued future potential of NIFs is illustrated by the fact that the market has grown tenfold in the past two years to $75 billion, although outstandings lag behind at $10-15 billion. Corporate borrowers increased their share of the NIF market from around 45 per cent. in the early 1980s to more than 60 per cent. in 1985.

2. Currency swaps* and interest rate swaps

The swaps referred to in this Report are financial transactions in which two counterparties agree to exchange streams of payments over time according to a predetermined rule, which reflects interest payments and may also reflect amortisation of principal. Swap markets are utilised for several broad reasons: to obtain low-cost financing, to obtain high-yield assets, to hedge interest rate or currency exposure generated from the structure of normal business, to implement short-run asset/liability management strategies, to earn fees, and to speculate.

The currency swaps evolved as a successor to the traditional back-to-back loans, but are designed to avoid most of the drawbacks associated with that technique. Swaps do not usually increase assets or liabilities on the balance sheet, and they limit credit risk, since a performance failure by one counterparty should relieve the other party of his obligations.

Government regulations have stimulated currency swaps. Official restrictions limit access to some European capital markets, including Euro-bond sectors, and swaps can be used indirectly to access these markets. In addition, restrictions can make it more expensive for certain classes of borrowers in particular national markets. Moreover, swaps can be helpful to a borrower to gain access to a particular market where he has already borrowed heavily and investors are wary about taking on more of that borrower's debt.

The market in swaps accelerated sharply during the first part of this decade and from available evidence is most likely to continue to expand rapidly. The major step in the evolution of the swap market was the extension of the swap concept from the currency market to credit-market instruments denominated in the same currency in about 1982. At this time, the global market for swaps was estimated to be about $3 billion. By late 1982 and 1983 the swap market had evolved further and interest rate swaps began to be conducted between domestic counterparties such as regional banks and thrift institutions. Swap activity accelerated sharply in 1984 and 1985. Large commercial and investment banks developed the capacity to make markets in swaps and began to book swaps without an offsetting swap in hand. Variations on the standard "plain vanilla" swap multiplied in 1984 and 1985. Swaps became callable, extendable or deferred. Options on swaps and swaps on zero coupon bonds became common and there has been some discussion of fitting swaps to mortgage-backed securities. A market in secondary swaps has also developed, encompassing reverse swaps, swap sales and voluntary terminations. At the end of 1984 outstanding swaps were estimated to amount to $80 billion and by mid-1985 this figure had jumped to almost $150 billion. In their early stages, swaps were most often executed in conjunction with another capital-market transaction, such as the flotation of a Euro-bond. More recently, swaps have come to be traded mainly as completely independent transactions, often to transform the currency of denomination or the interest terms of assets or liabilities already on the books of a financial or non-financial firm.

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* The currency swaps under discussion here are not those traded for years in the foreign exchange markets involving simultaneous spot and forward transactions. Those under consideration in this Report in all cases involve streams of interest payments over the life of the contract, and may or may not involve exchange of principal either initially or at maturity. The same term is used by market participants to describe both types of transactions.

3. Foreign currency and interest rate options

An option is a contract conveying the right, but not the obligation, to buy or sell a specified financial instrument at a fixed price before or at a certain future date. Options differ from all other financial instruments in the patterns of risk which they produce. Both the market and credit risk patterns are asymmetrical between writers and buyers of options. With respect to market risk, the buyer has the possibility of unlimited profit if price moves in his favour but his loss is limited to the amount of premium paid (option price) if price moves adversely. Conversely, the writer is limited in his income to the amount of the premium earned, while in principle he is exposed to unlimited loss. With respect to credit risk, the writer of the option is exposed to the buyer for the amount of the premium between the transaction date and the payment of premium. Thereafter, and through the life of the contract, the buyer must take the risk that the writer will fail to meet his obligations, while the writer has no credit risk since the buyer has no obligations to perform.

Options involve a high degree of exposure to price risk, and for this reason most option traders pursue various hedging techniques. They may lay off some of their exposure by buying options from other banks or in the option exchanges - where standardised contracts of both currency and interest rate options are traded. Alternatively, they may establish and then manage cover by buying or selling appropriate amounts of the underlying asset (delta hedging), following various mathematical formulae (e.g. Black-Scholes). Such formulae cannot assure full protection, however, since they rely on estimates of future volatility, and also because transactions costs can quickly mount up in unsettled markets.

Options have existed for many decades on foreign currencies or interest rates. Active trading, however, surged in the early 1980s spurred by growth in customer demand, as both corporate customers and institutional investors began to express a wish that banks offer, for a fee, what amounted to insurance against the effect of rising interest rates as they reached unprecedented levels and as exchange rates became increasingly unpredictable.

Growth of this market, however, has been hindered relative to the markets for NIFs and swaps owing to the sheer complexity of options, and as a result there is a lack of uniform rules governing accounting regulations and procedures, such as the booking of premium income. In addition, the absence or ambiguity of regulations governing the trading and tax treatment of options has been a factor limiting the further expansion of the market in some countries.

4. Forward rate agreements (FRAs)

An FRA is an agreement between two counterparties, one wishing to protect itself against a future rise in interest rates and the other against a future fall. Without any commitment to lend or borrow the principal amount, the parties agree to an interest rate for, say, a three-month period beginning six months hence. At maturity, they settle by paying (receiving) only the difference between the interest rate agreed earlier and the then current interest rate.

FRAs are used mainly by banks and some non-bank customers for the sole purpose of hedging interest rate exposure. There is little use of FRAs as a source of arbitrage profits. The FRA is the least visible, least risky of the four new instruments discussed in this Report.

The FRA developed out of the forward/forward deposit market, where one party contracts to make a deposit with the other party on a date in the future at a predetermined rate. A forward/foward deposit or loan ensures the availability of a deposit or loan at a certain price in future but at the same time expands a bank's balance sheet. An FRA covers the interest rate exposure without expanding the balance sheet, but does not ensure the availability of a deposit or loan.

The main attraction of FRAs is the fact that they cover interest rate exposure without expanding the balance sheet and enable banks to reduce their interbank book (in some cases by as much as 40 per cent.) to the benefit of capital ratios and return on assets.

An FRA is in effect an over-the-counter cash-settled financial future. It offers some advantages over traditional financial futures in terms of simplicity, flexibility, absence of margin requirements, and the possibility of an instrument tailored to meet exactly an interest rate mismatch. But it is less attractive in other respects; most importantly, it lacks the advantages of a central market-place where instruments can be bought and sold. Differing accounting treatment in a number of countries and differences in some nations' gambling laws can alter the relative attractiveness of the two instruments. Also, the FRA may involve greater credit risk because of the absence of margin requirements or exchange backing.

FRAs or similar instruments have been offered for about two years, and the volume of business continues to grow rapidly. Towards the end of 1985, it was estimated that deals with notional principal of about $7 billion were being done each month.

<u>The broad process of financial innovation</u>

The scope of this study is not limited to these four new instruments - NIFS, swaps, options, FRAs - which represent the latest wave of innovation. Our interest also encompasses "innovation" in the form of other instruments introduced earlier which have grown enormously in use and importance - such items, for example, as floating rate notes, asset sales and financial futures. But the focus of this Report is not directed just toward individual instruments or techniques - we are looking more broadly at the process of financial innovation taken as a whole.

In that wider context, the evolution of international financial intermediation over recent years has shown three main strands: firstly, a trend towards securitisation and a related blurring of distinctions between bank credits and the capital markets; secondly, the increasing importance of off-balance-sheet business; and thirdly, the global integration of financial markets. These trends are discussed in Part III.

The first of these trends, the move towards <u>securitisation</u>, has been driven by the broad forces described earlier, but also by certain more specific influences. Firstly, the gradual decline of long-term interest rates from the abnormally high levels of several years ago and the restoration of positive-sloped yield curves have clearly enhanced the appeal of long-term marketable instruments and facilitated the recovery of bond markets. Secondly, the impact on banks' portfolios of the international debt problems has stimulated banks to improve the liquidity and marketability of their other assets and has encouraged them to strengthen their balance sheets by funding themselves through longer-term bond issues. Thirdly, the highly publicised problems of a few banks in various countries and the weakening of banks' balance sheets more generally because of exposure to problem debtors at home and abroad have impaired banks' comparative advantage as a channel for lending, at least to prime borrowers with recourse to securities markets.

Securitisation has shown up in a massive shift from international bank credit to international securities markets. Between 1981-82 and the first half of 1985, syndicated Euro-bank loans fell by a factor of four (from $100 billion to an annual rate of $25 billion), while international bond and note issues rose by a factor of almost four (from $44 billion to an annual rate of about $160 billion), and NIFs, also a securitised instrument, grew very rapidly as well.

The banks' balance sheets have reflected the trend towards securitisation in many ways other than the decline in international loan activity. On the liabilities side, banks have become far more important borrowers in the international bond markets, motivated by the need to strengthen their capital bases, by a desire for closer symmetry between their long-term lending and their funding, and by the new opportunities to benefit from participation in interest rate and long currency swaps.

On the assets side, banks' own holdings of long-term marketable securities have increased strongly in most if not all countries for which information is available. Also, innovative steps have been taken to increase the marketability of bank assets by such techniques as sales of participations, loan swaps and loan sales, and, mainly in the United States and the United Kingdom, by using assets such as mortgages, automobile loans and export credits as backing for marketable securities.

All of these changes have important ramifications for banks, not just in their balance sheets, but also in their sources of income, their modes of operation, their management strategies and indeed the very structure of the banking industry and the rôle of banks versus other financial institutions in the intermediation of international financial flows.

Closely related to the trend towards securitisation, and to some extent a by-product of it, is the increasing importance of off-balance-sheet items in international banking. Banks have become strongly attracted to off-balance-sheet business, in part because of the increased focus on and desire to improve return on assets, and in part because of constraints imposed on their balance sheets by the need to improve capital ratios. They have looked for ways to hedge their interest risks without having to inflate balance sheets by recourse to the interbank market.

All four of the most recent new instruments discussed above - NIFs, swaps, options, FRAs - and many additional ones feature off-balance-sheet business, and in some cases much of their attractiveness depends on that feature. The growth in off-balance-sheet items has been spectacular. The volume of international back-up facilities in the form of NIFs, one of the most successful off-balance-sheet items, has grown extremely rapidly. Euro-dollar futures, used by international banks to hedge interest risks without expanding balance sheets by interbank operations, have grown fourfold in the past two years, and have become by far the most important item traded in the financial futures exchanges.

The third main trend in international financial intermediation in recent years has been the sharp acceleration in global integration of financial markets. It is now possible to discern the outlines of what could be called truly global markets for individual financial instruments. This process of integration has been greatly helped by - and has itself greatly contributed to - the tide of deregulation and dismantling of domestic and international controls that most or all industrial nations have, to a greater or lesser degree, experienced in the past decade. Technology has made this high degree of integration possible by cutting transactions costs drastically, facilitating the prompt dissemination of information and linking different exchanges and markets. The borderlines between international and individual domestic markets are becoming increasingly blurred. Securities markets as well as the banking sector are becoming globally integrated, fostered in part by the growing international diversification of investment. The high degree of integration is leading to alternative sources and methods of finance becoming close substitutes, with the result that differences in the level of real returns between various financial markets tend to be rapidly offset by capital flows.

The future of innovation

To what extent will the dramatic growth of markets in new financial instruments continue and to what extent are the factors behind rapid change temporary?

Certainly, the exceptional economic circumstances of the early 1980s - high inflation, volatile interest and exchange rates and sharp changes in the creditworthiness of large economic sectors - were major spurs to innovation. Within that environment, the innovations themselves were, to some extent, an effort to restore the kind of world that existed before those events erupted. A more stable environment would therefore reduce many of these incentives for financial innovation.

There are, however, long-lasting forces that support the growth and development of innovations even in a stable environment. Technological advance, both in its "hardware" aspects - computer and communications systems - and in its "software" aspects - sophisticated financial models and financial product designs - is certainly going to continue. But even beyond technology, the momentum for two other broad forces - the global integration of financial markets and the institutionalisation of financial innovation - is likely to continue.

The global integration of national financial markets has many aspects: around-the-clock markets in many financial instruments with institutions based in different countries participating in many national markets; highly mobile international capital flows; expanded international asset diversification by institutional investors in different countries. These and other aspects of global financial integration create profit opportunities that might be described as the substructure of financial innovation. International integration is affecting the diffusion of new instruments as well as their development. As the new instruments developed, pressures arose for liberalisation in the domestic financial markets in Europe and Japan. The moves by the authorities in the national markets toward increased liberalisation can be seen as an aspect of the diffusion of innovations generated by the global integration of markets.

The integration of national financial markets is related to and supported by the broader forces of the global integration of overall economic structures. These linkages through increased trade, investment and travel are working not only among the industrial nations but between them and the rest of the world as well. So, closer economic integration leads to greater financial integration, which, in turn, creates opportunities for new instruments to emerge. These connections then provide a more permanent support for the process of financial innovation.

Moreover, the shift from banks to direct credit channels that has occurred in recent years has led to the development or revival of financial markets in some countries. Bond markets that were inactive in some countries have been restored. This has been viewed in the countries affected as a healthy result of innovation.

It should be acknowledged, however, that the current trend toward greater reliance on capital markets as channels of credit to the large prime borrowers reflects to a large extent the particular circumstances of the present, and the market's view about the relative credit-rating of banks versus the major corporations, as well as other reasons. Perceptions will change as conditions change, for both banks and large prime borrowers. For example, strengthened bank capital can improve the perceived attraction of bank intermediation, and a shift of credit flows back into the banking system is certainly possible and has occurred in the past.

A second important development affecting the character of financial innovations is the institutionalisation of the process at the level of the firm. A cornerstone of the economics of technological innovations - the research and development relation - holds that there is at least a statistical relationship between the "output" of the innovation process, however it is measured, and the amount of resources committed to the process, measured, say, as real research and development expenditures. In the past few years a number of the major international financial institutions, both investment and commercial banks, have established "new products" groups within their organisational structures.

If the institutionalisation of financial innovation endures, it may change the economics of innovation. Once a kind of R & D relation is established at the level of the firm as part of its organisational structure, the pace of future financial innovations may become in part a function of the quantity of resources committed to product development. In other words, future financial innovation may be generated by a dynamic that does not rely on the developments in the economy that generated innovations in the past. New instruments, or variations in existing ones, may be developed to exploit not just a few major profit opportunities but a large number of minor ones.

Mr. WIRTH. Our second panel this morning is Mr. James O'Leary, economic consultant with U.S. Trust Co.; Mr. Harvey Segal, a fellow with the Manhattan Institute for Policy Research; and Mr. George Soros, the president of Soros Fund Management Co., all from New York City.

Gentlemen, we thank you all very much for being here. Your statements will be included in full in the record. We also thank you for your patience this morning, in waiting for your panel to begin.

Mr. TAUZIN [presiding]. I understand that Mr. O'Leary has another engagement. We are going to ask you to proceed first, Mr. O'Leary.

STATEMENTS OF JAMES J. O'LEARY, ECONOMIC CONSULTANT, UNITED STATES TRUST CO.; HARVEY H. SEGAL, FELLOW, MANHATTAN INSTITUTE FOR POLICY RESEARCH; AND GEORGE SOROS, PRESIDENT, SOROS FUND MANAGEMENT CO., INC.

Mr. O'LEARY. I am going to read just a couple of paragraphs which I think go to the heart of my concern about what I would call the explosion of debt in the United States, and if you have copies of my testimony in front of you, I shall begin at the bottom of page 2.

What, then, is the basis for being concerned about the explosion of total debt which we have experienced and continue to experience? My concern is as follows. The massive expansion of debt which has occurred and which reached a feverish pitch in the final quarter of 1985, when it was expanding at a $1.46 trillion annual rate, makes the U.S. economy vulnerable to falling into a deflationary spiral.

If a general business recession should develop, the heavy overhang of debt would undoubtedly generate rising defaults on debt and would present the danger of a downward spiraling of general business activity that would be difficult to control.

We are now already seeing in specific sectors of our economy—agriculture, oil production, and regionally some of the real estate markets—how vulnerable our economy may be to a heavy debt burden in a recession and deflation. If the conditions in agriculture and in the oil sector became more general, the danger of the heavy debt burden leading to a general deflationary spiral would increase. But, it will be argued, Government policy would prevent a general deflationary spiral from developing.

My response to that is that as we look to the future, Government policy will be forced, because of this huge debt burden, to be geared to maintaining a strong real GNP growth and low unemployment rate even at the risk of touching off a serious acceleration of inflation. My guess is that the political pressures for strongly expansionary policies, even at the risk of reigniting serious inflation, will intensify.

It seems to me, then, that the bias of Government policy will tend to be inflationary in order to ward off the risk of even a small recession, spiraling into a serious deflation. We can see evidence of this already in steps to shore up the farm credit system and the deposit insurance systems as loan losses mount and financial institutions fail.

We can also see it in steps taken by the Federal Reserve System in concert with the IMF to avoid defaults on debt owed by the LDC's. Nearly all of these efforts involve putting new money into the systems.

As I view it, the Federal Reserve has already lost much of the freedom it had to pursue a flexible monetary policy, to seek to avoid inflation, as well as to encourage economic growth. We have only to think back to the rising tide of inflation during 1965 to 1981 and the devastating effect it had on economic growth in our financial system to appreciate how tragic it would be if we were to get back into that syndrome again.

The implications of the debt explosion for future economic growth and stability of our financial system may also be considered by raising the question of what will happen if the depreciation in the value of the dollar corrects our trade deficit and we enter a period of strong and sustained growth in real GNP. This will bring a decline in the supply of foreign funds into our money and capital markets.

This is not an unimportant development in view of the fact that last year foreign investors added nearly $73 billion to their holdings of U.S. public and private debt, nearly 7 percent of the total $1,071 million increase in U.S. debt. The increase in foreign holdings of U.S. Government securities was 9.7 percent of the total increase in Federal debt, and the increase in foreign holdings of U.S. corporate bonds was nearly 43 percent of the total increase.

In addition to the reduction of the flow of foreign funds into our market, a return to sustained, vigorous, real economic growth would mean that the Federal Reserve would be forced to maintain a less easy monetary policy. Under these conditions, if total debt should continue to expand at a 14- to 15-percent rate as it has in recent years, interest rates would be bound to rise sharply.

May I just say parenthetically that I listened to Mr. Volcker with great interest today. He did not make a point that I think needs to be made. Last year the Federal Reserve itself added $21.6 billion to its holdings of U.S. Government obligations. That provided reserves to the banking system on which the banks could expand their loans and investments about six times that amount.

The banks increased their holdings of tax-exempt bonds $40 billion last year, and $10 billion in their holdings of U.S. Government obligations. If the Fed were not supplying reserves liberally like that, you would not have had that large take of tax-exempt bonds and Government bonds by the banks, and if you had the sort of an economy that we hope to get to, the Japanese and others will not be adding $73 billion to the purchase of U.S. Government obligations and corporate bonds in these markets.

So the dilemma we have is that if we achieve what we hope—that is, eliminate our trade deficit—and get our economy growing in real terms more strongly, which it would if, in effect, our demands were for domestic goods rather than foreign goods, we could achieve a 4- to 5-percent growth rate in real terms.

Under those conditions we wouldn't have the foreign funds in our markets and we would not have easy Federal Reserve policy. If we persisted, then, in a 15-percent growth in total debt, interest rates would go through the roof again.

I shall stop there.
[Testimony resumes on p. 129.]
[The prepared statement of Mr. O'Leary follows:]

Testimony of James J. O'Leary, Economic Consultant, United States Trust Company, Before the Subcommittee on Telecommunications, Consumer Protection and Finance of the House of Representatives Committee on Energy and Commerce, April 23, 1986

I am James J. O'Leary, Economic Consultant to United States Trust Company, 45 Wall Street, New York City. The views I am presenting here today are entirely my own and should not in any way be construed as being those of United States Trust Company.

Mr. Chairman, the focus of this hearing, as I understand it, is the question of what are the implications of a sharply rising level of public and private debt for the economic growth of our country and the stability of our financial system. There is no need, therefore, to go into the facts of the recent explosion of total public and private debt, but I would like to submit for the record two papers which I have prepared which provide the essential facts. One is entitled "The Explosion of Debt in the United States," prepared last August. The other is "Total U.S. Public and Private Debt Continues to Explode," which was prepared early this month and brings the statistics through the end of 1985. For our hearing today, I am attaching to my testimony three charts which will provide a quick reading of the extent of the debt "explosion."

Turning then to the implications of a sharply rising level of public and private debt for economic growth and the stability of our financial system, one may fairly ask whether this "explosion" of total debt is a matter of serious public concern. I think that it is a matter of serious public concern but I know there are some economists who do not agree. As you will see from the charts, much of the explosion has occurred in the past four years. One might have expected that with the sharp rise of debt (or credit) inflation would have accelerated and interest rates would have risen substantially. Actually, during this period the inflation rate has fallen and so have interest rates. The underlying reason for this phenomenon has been the massive trade deficit which the U.S. has developed. Total domestic real final sales have expanded quite strongly but a substantial and rising proportion of our purchases have been imported goods and services. So the rate of growth of real GNP has not been strong, except in 1984, keeping unemployment high which was a major force toward lower inflation. Then came the recent plunge in the price of crude oil. In the climate of a sluggish economy and a dramatic decline in the inflation rate, the Federal Reserve could safely pursue an easy credit policy which, along with the sharp fall in inflation, finally brought a big drop in interest rates.

Those who think there is undue concern about the sharp increase in total debt also point out rightly that as interest rates have fallen the interest burden on much of the debt has fallen or will fall in the future if the lower rates hold. Moreover, the declining interest rates have produced a spectacular rise in the prices of equities and fixed-income obligations so that the wealth of the public at large has registered a quantum increase, thereby helping to offset the debt burden.

What then is the basis for being concerned about the explosion of total debt which we have experienced and continue to experience? My concern is as follows. The massive expansion of debt which has occurred, and which reached a feverish pace in the final quarter of 1985 when it was expanding at a $1.46 trillion annual rate, makes the

U.S. economy vulnerable to falling into a deflationary spiral. If a general business recession should develop, the heavy overhang of debt would undoubtedly generate rising defaults on debt and would present the danger of a downward spiralling of general business activity that would be difficult to control. We are now already seeing in specific sectors of our economy--agriculture, oil production, and regionally some of the real estate markets--how vulnerable our economy may be to a heavy debt burden in a recession and deflation. If the conditions in agriculture and in the oil sector become more general, the danger of the heavy debt burden leading to a general deflationary spiral would increase.

But, it will be argued, Government policy would prevent a general deflationary spiral from developing. My response to that is that as we look to the future, Government policy will be forced to be geared to maintaining a strong real GNP growth rate and low unemployment even at the risk of touching off a serious acceleration of inflation. My guess is that the political pressures for strongly expansionary policies even at the risk of reigniting serious inflation will intensify. It seems to me then that the bias of Government policy will tend to be inflationary in order to ward off the risk of even a small recession spiralling into a more serious deflation. We can see evidence of this already in steps to shore up the Farm Credit System and the deposit insurance systems as loan losses mount and financial institutions fail. We can also see it in steps taken by the Federal Reserve System in concert with the IMF to avoid defaults on debt owed by the LDCs. Nearly all of these efforts involve putting new money into the systems. As I view it, the Federal Reserve has already lost much of the freedom it has had to pursue a flexible monetary policy--to seek to avoid inflation as well as to encourage economic growth. We have only to think back to the rising tide of inflation during 1965-1981 and the devastating effect it had on economic growth and our financial system to appreciate how tragic it would be if we were to go back into that syndrome again.

The implications of the debt explosion for future economic growth and stability of our financial system may also be considered by raising the question: What will happen if the depreciation in the value of the dollar corrects our trade deficit and we enter a period of strong and sustained growth in real GNP? This will bring a decline in the supply of foreign funds into our money and capital markets. This is not an unimportant development in view of the fact that last year foreign investors added nearly $73 billion to their holdings of U.S. public and private debt, nearly 7 percent of the total $1,071 billion increase of U. S. debt. The increase in foreign holdings of U.S. Government securities was 9.7 percent of the total increase in Federal debt and the increase in foreign holdings of U.S. corporate bonds was nearly 43 percent of the total increase. In addition to the reduction in the flow of foreign funds into our markets, a return to sustained vigorous real economic growth would mean that the Federal Reserve would be forced to maintain a less easy monetary policy. Under these conditions, if total debt should continue to expand at a 14-15 percent annual rate, as it has in recent years, interest rates would be bound to rise sharply.

These, then, are some of the reasons why I am concerned about the longer-run consequences of the explosion of total debt in the U.S. In my view, Government policy must seek to bring the rate of debt expansion back into reasonable relationship with the rate of growth of the economy in current dollar terms. I would hope that this can be done with vigorous real GNP growth and a low inflation rate, but my fear is that it may be done with a low real growth rate and a rising and high inflation rate, and needless to say a very unstable financial system.

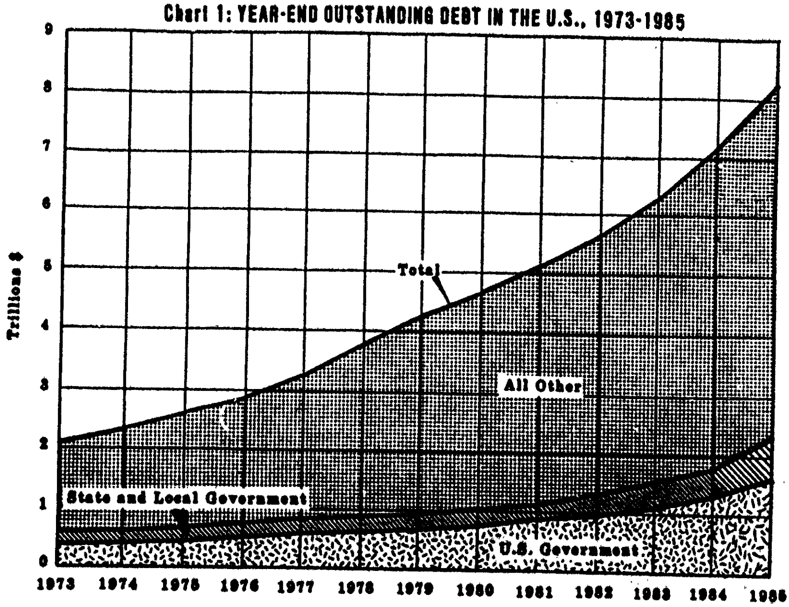


Chart 1: YEAR-END OUTSTANDING DEBT IN THE U.S., 1973-1985
Trillions $
0
1
2
3
4
5
6
7
8
9
Total
All Other
State and Local Government
U.S. Government
1973
1974
1975
1976
1977
1978
1979
1980
1981
1982
1983
1984
1985

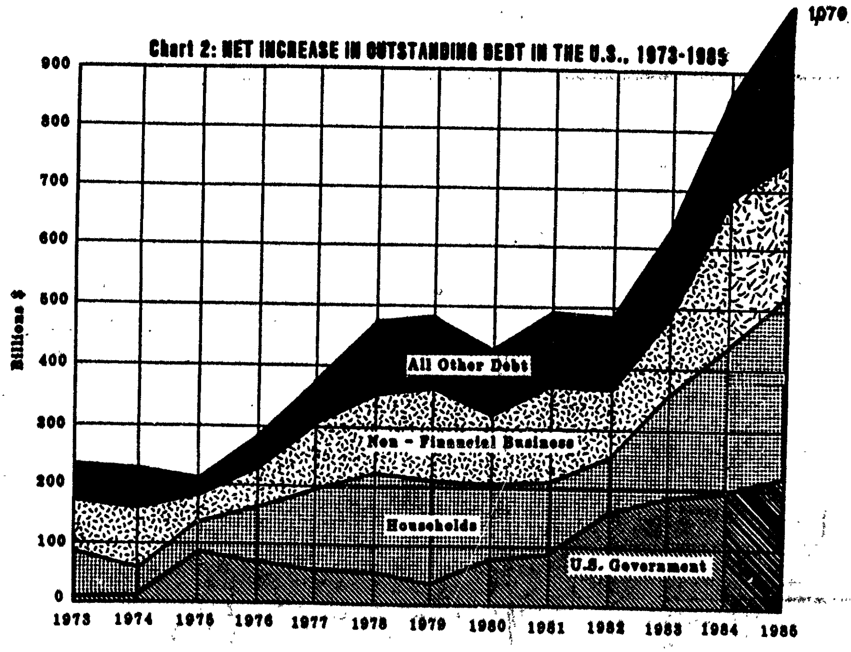
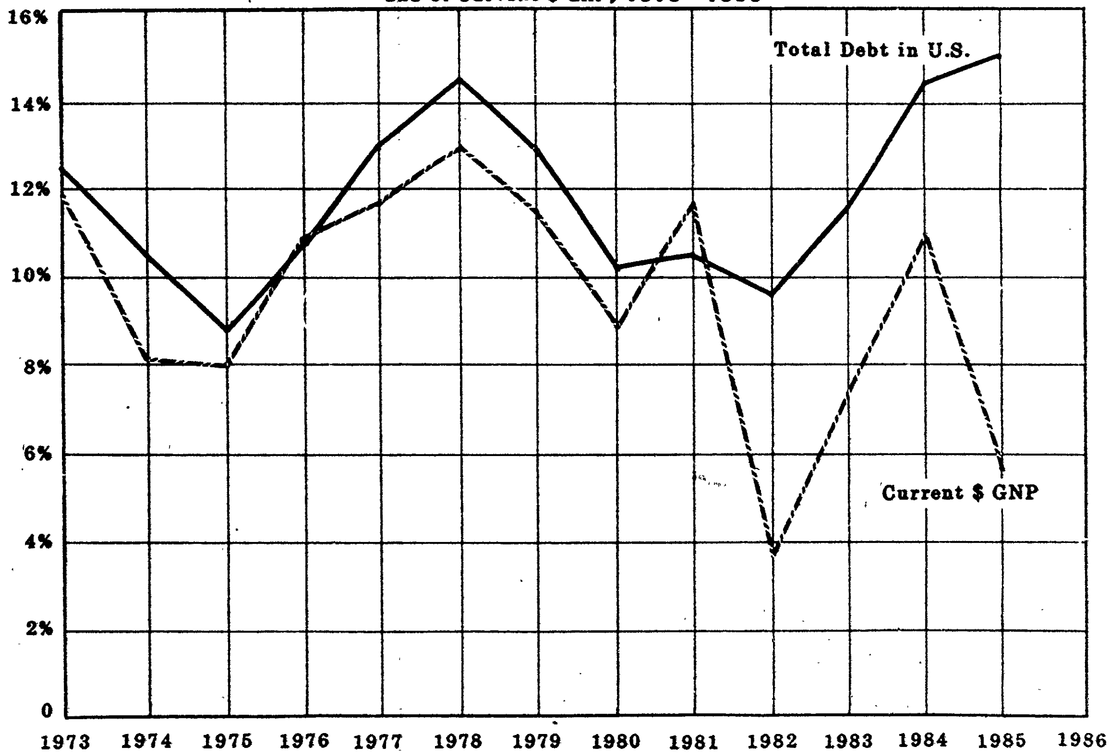


Chart 2: NET INCREASE IN OUTSTANDING DEBT IN THE U.S., 1973-1985
1070
Billions $
0
100
200
300
400
500
600
700
800
900
All Other Debt
Non - Financial Business
Households
U.S. Government
1973
1974
1975
1976
1977
1978
1979
1980
1981
1982
1983
1984
1985

Chart 3: Annual Rates of Increase of Total Debt in U.S. and of Current $ GNP, 1973 - 1985



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THE EXPLOSION OF DEBT IN THE UNITED STATES

by

James J. O'Leary, Economic Consultant

United States Trust Company

August 1985

During the past seven years total outstanding debt in the U.S. has more than doubled, rising from $3,285 billion at the close of 1977 to $7,131 billion at the end of 1984. The torrid rate of expansion is continuing, with total debt increasing by nearly $1.5 trillion, or 26 percent, in just the past two years. In the final quarter of 1984 the annual rate of increase exceeded $1.0 trillion for the first time in history. The huge Federal deficits of recent years have, of course, contributed much to this explosion, but the debt of households, business, and state and local governments has also expanded at very high rates.

It is timely to review and analyze this explosion of debt (or credit) and to consider the forces which underlie it and what its consequences may be. One intriguing question is whether the rising tide of delinquencies and foreclosures on both residential and non-residential mortgages, as well as losses on business loans and other credit, are the "chickens coming home to roost" as the result of much too fast an expansion of debt.

This paper outlines the following: (1) the expansion of total debt in the U.S., with its principal components, from 1973 to 1984; (2) the annual net increase in U.S. debt by major components during the same period; (3) the annual growth rates of major U.S. debt aggregates during the same period; (4) the annual growth rate of total debt and major components relative to total current dollar GNP; (5) net funds raised each year in U.S. credit (or debt) markets, by types of obligations, during 1973-1984; (6) net funds advanced each year in credit markets by specific lenders during 1973-1984; and (7) the forces behind the explosion of U.S. debt and the possible consequences.

The Expansion of Total U.S. Debt and Its Components 1973 - 1984

Table 1 presents annual data for 1973-1984 of the total year-end outstanding debt in the U.S. and the major components of that debt.* As will be seen, taking just the 5-year period from the end of 1979 through the end of 1984, the total outstanding U.S. Government debt increased from $663.7 billion to $1,376.8 billion, or by 107 percent. During the same period the total debt of all of the private non-financial sectors expanded by 56 percent, with the debt of households (residential mortgages, consumer credit, personal loans, etc.) rising also by 56 percent, non-financial business debt by 60 percent, and state and local government debt by 46 percent. Thus, although other components of debt have expanded at very high rates, the even greater rate of increase in U.S. Government debt has been a decisive force in the total debt explosion. Of the $2,880 billion increase in total U.S. debt from the end of 1979 through the end of 1984, expanding debt of the U.S. Government accounted for $713.2 billion, or 25 percent of the total.

Chart 1 shows the expansion during 1973-1984 in U.S. Government debt, state and local government debt, and the combined debt of all other sectors. As will be noted, all sectors of debt have expanded sharply. During the eight-year period from the end of 1973 to the end of 1981 the share of outstanding U.S. Government debt averaged 16.4 percent of the total U.S. debt. Since 1981 the share of outstanding U.S. Government debt has been rising and at the end of 1984 reached 19.3 percent of total outstanding debt in the U.S.

The Annual Net Increase in Total U.S. Debt During 1973-1984

Table 2 shows the net increase each year in total outstanding U.S. debt, as well as the net increase of the major components, during 1973-1984. As will be observed, the annual net increase in total U.S. debt ("all sectors") rose only quite modestly during the years 1973-1976, but in 1977-1978 the net increase moved up more strongly. Then, from 1978 through 1982, in spite of the escalation of inflation, the net increase each year held remarkably constant in a range from $434.7 billion in 1980 to $491.8 billion in 1981. This was the period we have come to know as "stagflation." In 1983 and 1984 we broke out of the remarkably stable pattern with the net increase in total debt soaring to $635.9 billion in 1983 and $865.9 billion in 1984. As noted earlier, by the fourth quarter of 1984 total U.S. debt was expanding at an annual rate in excess of $1.0 trillion, but in the first quarter of this year, with the slowing of the U.S. economic expansion, it had fallen back to an annual rate of $817 billion.

Looking at the major components of U.S. debt in Table 2, the net increase in U.S. Government debt has jumped from $87.4 billion in 1981 to $198.8 billion in 1984, or by 128 percent. The net increase in total household debt has in the same period risen from $127.5 billion to $241.7 billion, or by a hefty 90 percent, and the net increase in non-financial business debt has gone from $159.4 billion to $256.9 billion, an increase of 61 percent. Measured as

* The Tables and Charts, in order of their discussion, appear on pages 11 through 19.

a share of the net increase in total debt in the U.S., the share of the net increase in U.S. Government debt has risen from 17.8 percent in 1981 to 33 percent in 1982 and then has fallen gradually to 29.3 percent in 1983 and 23 percent in 1984.

Chart 2 shows the net increase in total U.S. debt and some of the major components during 1973-1984.

The Annual Growth Rates of Total
U.S. Debt and Its Major Components

Table 3 and Chart 3 show the annual growth rates of total outstanding U.S. debt and its major components during 1973-1984. Looking first at the growth rates for total debt (all sectors), it will be noted that in the years 1977-1979 growth was particularly strong, averaging 13.5 percent. This is understandable because the debt figures are in current dollars (not corrected for inflation) and the inflation rate was high and rising in this period, going from 5.8 percent in 1977 to 8.6 percent in 1979. Beyond this, 1977 and 1978 were years of vigorous growth with real GNP increasing 5.5 percent in 1977 and 5.0 percent in 1978 before falling to 2.8 percent in 1979. Turning briefly to the column showing the growth rates for U.S. Government debt, the years 1977-1979 experienced comparatively low growth rates for Federal debt, with the main thrust of high growth coming in the private sectors.

During the years 1980-1982 the growth rates for total debt were quite low. These were years of "stagflation," with the inflation rate at 9.2 percent in 1980, 9.4 percent in 1981, and 6.0 percent in 1982. But in 1980 real GNP declined 0.3 percent, rose only 2.6 percent in 1981, and declined again 1.9 percent in 1982. The high inflation rates in these years kept debt expanding but the stagnant economy in real terms, and the record-high interest rates, held down the rate of debt expansion. Moreover, in 1982 the high rate of increase in U.S. Government debt (19.4 percent) was a big factor in holding up the total debt increase, because as will be seen, the rates of increase in private debt sectors by 1982 had fallen to low levels.

The years 1983 and 1984 are marked by the fact that in an economy growing more vigorously (real GNP increased 3.3 percent in 1983 and 6.8 percent in 1984) and with a low inflation rate (averaging 4 percent), the growth rate for all private sectors of debt, as well as the growth rate for U.S. Government debt, contributed to the return to a near-record total debt growth rate of 13.8 percent in 1984.

The Growth of Total Debt and Major Components
Relative to Current Dollar GNP

As the total GNP in current dollars (not corrected for inflation) rises, one would expect total debt also in current dollars to expand. To appraise the degree to which the recent huge absolute amount of increase in total debt may pose dangers, it is necessary to relate the rate of growth in debt to the rate of growth in current dollar GNP. This is done in Table 4 and Chart 4.

As will be seen in these exhibits, during 1973-1981 the rate of increase in total debt tracked well with the rate of increase in current dollar GNP. The same can be said for the rate of increase in total private non-financial debt. In those years the rate of increase in U.S. Government debt behaved cyclically, rising sharply during business recessions and falling during recoveries.

Beginning in 1982, however, the relationship between the rate of increase in current dollar GNP and total debt became changed in some important ways. In 1982 the rate of increase in current dollar GNP dropped sharply to 3.8 percent (with real GNP falling 1.9 percent and the implicit price deflator rising 6 percent). The rate of growth in total private non-financial debt fell to 6.9 percent, but the rate of growth of total debt dropped only to 9.4 percent because of the 19.4 percent rate of increase in U.S. Government debt which was the result partly of the shortfall in Federal revenue caused by the recession, as well as the increase in Federal expenditures associated with the recession, but most importantly of the tax reductions enacted in 1981. Also significant, of course, were the inexorable rise of social security and health insurance expenditures and interest costs on the debt.

During the past two years, as shown in Table 4 and Chart 4, the rate of growth in current dollar GNP has come back more in line with the rate of growth in total debt, but the spread between the two rates remains high with total debt in 1984 growing at a 13.8 percent rate and current dollar GNP at a 10.8 percent rate. This large spread is a function of the high and rising growth rates for total private non-financial debt combined with the very high rates of increase of U.S. Government debt during the past two years. As we look to the foreseeable future, it seems that we are faced with a large, chronic, intractable increase in U.S. Government debt which will swell in recessions or periods of slow growth and reduce somewhat in periods of strong economic expansion. Along with this will probably be powerful increases in total private non-financial debt in periods in which current dollar GNP expands at high and rising rates.

It seems likely that the unusually large spread between the rate of increase of total debt and the growth rate for current dollar GNP will persist. This assumes, of course, no major breakthrough in Federal spending cuts or in new sources of revenues.

Net Funds Raised in U.S. Credit Markets, 1973-1984, by Types of Obligations

Table 5 presents the net funds raised in U.S. credit (or debt) markets during 1973-1984 by types of obligations issued. It provides more detail on the total debt figures presented earlier.

It is interesting to analyze each type of obligation in terms of its share of the total funds raised in U.S. debt (or credit) markets during 1973-1984. The shares are calculated from the table but not shown on it. Not surprisingly, the share of the total taken by U.S. Government securities has increased greatly in recent years. During 1980-1984, inclusive, the average annual share of Treasury issues was 24.3 percent, compared with an average of 15.3 percent

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in 1973-1979, inclusive. In just the last three years the average share for Treasury issues was 28.5 percent. In recent years the share of tax-exempt bonds has also risen markedly. During 1982-1984 the share of tax-exempts averaged 8.9 percent, compared with an average share of 6.2 percent during 1973-1981. Much of this rise has been the use of tax-exempt issues to finance private business projects. On the other hand, the share of taxable bonds of non-financial corporations has tended to decline. During 1974-1977 the share of such corporate bonds averaged 8.8 percent of the total, but during 1978-1984 it has averaged only 4.1 percent.

The share of total residential mortgages (single-family home mortgages plus multifamily residential mortgages) has also declined in recent years. During 1973-1980 the share of such mortgages averaged 23.6 percent of total funds raised. During 1981-1984 the average has fallen to 15.8 percent. The share of commercial mortgages shows no trend, averaging 5.6 percent in both 1973-1978 and 1979-1984.

The share of all of the types of obligations display cyclicality and this is especially true of consumer credit and "bank loans N.E.C." (largely the commercial and industrial loans of the banks). In the case of consumer credit, the share of the total averaged 9.7 percent during 1976-1979, then fell to an average of 3.7 percent in 1980-1982, and then rose again to 9.5 percent in 1983-1984. The share of "bank loans N.E.C." averaged a high of 14.9 percent in 1973-1974 and has never reached that level since, averaging 8.9 percent during 1981-1984.

Not surprisingly, the share of the government sponsored credit agencies (including most importantly "Fannie Mae") has also behaved quite cyclically. Their share averaged 7 percent in 1973-1974, only 1.2 percent in 1975-1977, 5.4 percent in 1978-1981, and only 2.2 percent in 1983-1984. On the other hand, the share of the mortgage pool securities ("Ginnie Maes," "Freddie Macs," "Fannie Maes," plus private issues) has trended steadily upward, going from 1.5 percent in 1973-1974 to an average of 8.5 percent in 1982-1984.

Net Funds Advanced in U.S. Credit Markets 1973 - 1984

Table 6 presents data on the net funds advanced in U.S. credit markets during 1973-1984. It provides detailed information on where the funds come from to invest in the net increase in debt issued each year. As will be noted, the net amount of funds advanced each year matches, of course, the net amount raised in U.S. credit markets each year in Table 5.

Here again it is interesting to consider any changes which have occurred in the share of the total advanced by the various investors and lenders. Households, which includes not only individual households but also personal trusts and non-profit organizations, provided 12.3 percent on average of the total funds advanced during 1973-1984. During 1973-1975 the household share averaged 17 percent and during 1982-1984 it averaged only 11.6 percent.

The largest share of the total advanced came from the commercial banks. Their net increase in loans and investments averaged 23.9 percent of total funds advanced during 1973-1984. The commercial banks' share was consistently in the 20-25 percent range. However, during 1980-1984 their average share was 21.6 percent, toward the low side of the range. During 1973-1974 the commercial bank share was unusually high, averaging 32.3 percent.

The share of total funds advanced by the savings and loan associations averaged 11.9 percent during 1973-1984. However, this average is held down by years like 1981-1982 in which the S&Ls were subject to "disintermediation," i.e., net outflows of funds caused by the fact that the regulated rates they could pay on their deposits were below competitive market rates. During 1975-1977 the S&Ls' share averaged 17.3 percent of the total, and after averaging only 1.4 percent of the total during 1981-1982 the S&Ls averaged 15 percent in 1983-1984. Freed of ceilings on the interest rates they can pay on deposits, the S&Ls are aggressively expanding their lending and investing.

The mutual savings banks' share of total funds advanced has averaged only 2 percent during 1973-1984. Here again the average has been dragged down by the long period in which the savings banks were subject to "disintermediation." The share of the total funds advanced by the life insurance companies during 1973-1984 was 7.1 percent. This has been an unusually stable share over the period. The share of total funds advanced by the private pension funds has averaged 3.9 percent during 1973-1984 and that of state and local retirement funds has averaged 3.6 percent. Since we are dealing only with the debt (or credit) markets, the large equity investments of the private pension funds and state and local retirement funds are not included. Prior to 1980 the money market funds had only a minute share of total funds advanced, but since then their share has averaged 4.3 percent of the total. In 1981 it burgeoned to 12.7 percent.

Finally, the share of total net funds advanced by foreign investors in U. S. debt markets has averaged 4.3 percent during 1973-1984. The peak was 1977 when the share of foreign investors reached 10.4 percent. Although the average share is comparatively small, the dollar amounts are large and a major proportion of the investments are in U.S. Government securities. In 1984, for example, foreign investors added $26.5 billion to their holdings of U.S. Government obligations and $15.9 billion to their holdings of corporate bonds. Moreover, in addition to net funds advanced in U. S. credit markets, as shown in Table 6, foreigners are also large investors in American equities and in direct investment in U. S. enterprises.

The Forces Behind the Explosion of Total U.S. Debt and the Possible Consequences

As we have seen, not only has the absolute amount of total debt in the U.S. exploded in recent years, but total debt has risen markedly relative to the rate of increase in the size of our economy as measured by current dollar GNP. What can be said about the forces behind this explosion and the possible consequences of it?

Some of the forces come from the side of the borrower. This is self-evident in the case of the huge increase in U.S. Government debt which is the product of the enormous, chronic deficit being run by the Federal Government. But there are powerful forces from the borrowers' side in virtually all of the private debt sectors. Certainly the high and rising inflation rate in 1977-1979, and the expectation that the inflation rate would remain high, encouraged the rapid growth of private debt in those and subsequent years. Theoretically, at least, the lower actual inflation rate and presumably the reduced expectation of inflation should be a lesser force today in borrowers' willingness to incur debt. In corporate fixed-income financing, both short and long-term, the burgeoning of mergers and acquisitions in the past few years had been a very important force for debt expansion. On the other hand, in recent years the sharp increase in the total proportion of loans made on a floating or adjustable rate basis has had the effect of shifting the "interest rate risk" (the risk of a sharp increase in market interest rates) onto the borrower and off the lender. This should have been a force toward reduced willingness of borrowers to incur debt but it has probably been outweighed by incentives provided to borrowers to incur debt as outlined below.

What are the forces which have come from the lender, or from other parties, which help to explain the recent explosion of private debt? The basic and fundamental force has been the pervasive move by virtually all lenders to match maturities of their deposit or other liabilities with the maturities of the assets they acquire. The widespread adoption of floating, adjustable, or variable rates on the traditionally long-term assets has greatly facilitated this matching process. Accordingly, virtually all lenders today--not just commercial banks--are engaged in "spread banking." Their profitability comes from a positive spread between what they can obtain on their new loans and investments and the interest cost on their deposits and other liabilities.

Along with the fact that the floating, variable, or adjustable rate loans and investments shift the interest rate risk from the lender to the borrower, the lenders have become much more aggressive in recent years in expanding their total loans and investments. This has been particularly true in the case of the thrifts which are new to "spread banking." Since many of the thrifts have been incurring losses in the past several years due to the fact that their portfolios of fixed-rate, long-term bonds and mortgages are yielding less than their cost of money plus administrative costs, the shift to spread banking has encouraged many thrifts to expand their new loans and investments vigorously to reduce their losses and improve profitability. Another way to put it is that many thrifts, saddled with losses on their holdings of long-term, fixed-rate bonds and mortgages acquired as long as twenty years ago, are now making new loans and investments on a positive spread between their current return and their current cost of money. The name of the game is to expand new loans and investments aggressively on a profitable spread and thus to reduce the overall loss position of the individual thrift and ultimately to restore profitability. The pursuit of "spread banking" by the thrifts has coincided with new lending powers which permit the thrifts to place substantial amounts of their funds into commercial and industrial loans and other new lending areas.

Some of the forces for rapid credit expansion have come from third parties such as home builders or automobile companies. To hold down the cost of carrying a home mortgage and to help home buyers to qualify for loans, many builders "buy down" the interest rate for the first few years and automobile companies "buy down" the interest rate on car loans to encourage purchases. Beyond that there are many home mortgage innovations such as "graduated payment mortgages" designed to make it easier for home borrowers to qualify for loans and to carry them.

The explosion of debt in the past several years has been based on the expectation of a continuing high inflation rate. This expectation not only encouraged the borrower to increase his indebtedness but it also encouraged the lender or investor to take considerable risks with confidence that inflation would "bail out" basically unsound loans and investments. The heavy losses in farm loans of today are based on the fact that many farmers greatly expanded their operations in the conviction that farmland prices would continue to rise sharply and so would prices of foodstuffs, and lending institutions increased their farm loans with the expectation that inflation minimized credit risks. Not surprisingly, the deflation in farming has led to massive losses. The same can be said about oil loans. The rash of losses in these loans stems to a great extent from the unexpected deflation in oil prices.

There is clear evidence that too rapid an expansion of home mortgage credit, much of it on a minimum down-payment basis, has brought on a large increase in delinquencies and foreclosures and actual losses. This is supported by surveys of the Mortgage Bankers Association and by the experience of the Federal National Mortgage Association (Fannie Mae). In fact, faced with mounting losses, Fannie Mae has just announced several ways in which it is tightening credit standards for the mortgages which it purchases. Delinquencies and foreclosures are also rising sharply in the case of commercial mortgages, the result of both deflation of the values of commercial real estate in many parts of the country and excessive risks taken in many loans. In March of this year the Home Loan Bank Board reported that outstanding foreclosed loans of S&Ls totaled $7 billion, with a 27 percent jump in just the first quarter, with most of the increase involving commercial mortgages.

As shown in the accompanying table, during 1973-1984 the annual rate of increase in household debt (home mortgages, consumer credit, and personal loans) followed fairly closely the annual rate of increase in total current dollar personal disposable income with the exception of 1977-1979 in which household debt increased at much higher rates than disposable personal income.

	Rate of Increase in Household Debt	Rate of Increase in Disposable Personal Income
1973	13.2%	12.9%
1974	8.2	9.2
1975	7.4	9.8
1976	11.4	9.0
1977	16.1	10.0
1978	17.0	12.2
1979	15.2	11.9
1980	9.0	10.9
1981	8.6	11.9
1982	5.8	6.3
1983	10.2	7.3
1984	12.8	10.3

The cost of carrying this debt has, of course, risen not only because of the large increase in outstanding household debt but also because of the large increase in interest charges in the past decade. During 1981-1984, inclusive, total consumer credit has increased by nearly $200 billion, or by 51 percent. In the same period total current dollar personal disposable income has increased by 40.8 percent. In just the past two years total consumer credit has increased by $147.8 billion, or by 33.5 percent, whereas total personal disposable income has increased by $396.3 billion, or by 18.2 percent. These figures suggest that consumer credit may be expanding at too high a rate and at an unsustainable rate. But, at the same time, total personal liquid assets are growing strongly and have increased by $483 billion, or by 24.3 percent in 1983-1984.

Concluding Comments

During the past several years the total debt in the U.S. has exploded not only in absolute amount but also in relation to the size of our economy as measured by total current dollar GNP. Much of the rapid increase in debt has been produced by the succession of huge Federal deficits, but nearly all sectors of private debt have also registered very large increases.

Behind the explosion of total private debt has been the willingness of borrowers to incur debt in a period in which the inflation rate was high and was expected to remain high. In recent years the main thrust of the private debt explosion came more from the intense competition of lenders and investors to put money to work. It appears that in doing so lenders and investors often took excessive risks.

The rising tide of delinquencies and foreclosures, as well as actual losses incurred by lenders in virtually all sectors of the private debt market, is undoubtedly in part the result of too fast an expansion of private debt. The pressure of lenders to expand their loans and investments seems too often to have been accompanied by the assumption of excessive risks. The transition from a high inflation rate to a low one, and actual deflation in sectors such as agriculture and energy, has undoubtedly contributed much to a worsening of the debt situation.

There is not only an urgent need to reduce the Federal deficit by a significant measure. There is also the need to reduce the rate of increase in total private debt so that it is closer to the rate of expansion of total current dollar GNP. Toward this end, more careful underwriting of credit risks and tighter credit standards by lending institutions should have the highest priority.

TABLE 1

Year-End Outstanding Debt in the United States, 1973-1984
($ billions)

	Domestic Nonfinancial									
	Total	U. S. Gov't.	Private Non-financial	House-holds	Non-financial Business	State & Local Gov'ts.	Foreign	Non-Financial	Financial	All Sectors
1973	1,919.1	[illegible]	1,570.1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1974	[illegible]	[illegible]	1,733.4	[illegible]	[illegible]	[illegible]	[illegible]	2,174.0	[illegible]	[illegible]
1975	[illegible]	[illegible]	[illegible]	774.8	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1976	2,532.6	515.8	[illegible]	[illegible]	[illegible]	[illegible]	110.6	[illegible]	261.1	[illegible]
1977	2,854.1	[illegible]	[illegible]	1,012.2	[illegible]	[illegible]	[illegible]	2,975.0	[illegible]	[illegible]
1978	[illegible]	[illegible]	2,591.9	1,182.5	[illegible]	[illegible]	[illegible]	[illegible]	361.1	[illegible]
1979	3,604.2	[illegible]	[illegible]	1,302.5	[illegible]	[illegible]	182.5	3,786.7	464.7	[illegible]
1980	3,948.3	742.9	[illegible]	1,457.6	1,421.7	[illegible]	209.6	4,157.9	527.6	4,685.5
1981	4,328.4	[illegible]	[illegible]	[illegible]	1,576.1	303.0	237.0	4,565.4	611.7	5,177.1
1982	4,728.9	991.4	3,737.5	1,712.1	[illegible]	[illegible]	[illegible]	4,955.3	653.4	5,638.7
1983	5,255.3	1,177.9	[illegible]	1,887.5	[illegible]	371.9	245.2	5,500.5	774.3	6,274.8
1984	5,977.5	1,376.8	4,600.7	2,120.7	[illegible]	407.8	[illegible]	6,223.5	907.3	7,131.0

Source: Federal Reserve Board, Flow of Funds

TABLE 2

Net Increase in Outstanding Debt in the United States, 1973-1984
($ billions)

	Domestic Nonfinancial									
	Total	U.S. Gov't.	Private Non-financial	House-holds	Non-financial Business	State & Local Gov'ts.	Foreign	Non-Financial	Financial	All Sectors
1973	187.7	8.3	179.4	78.1	88.5	12.8	6.3	194.0	45.8	239.8
1974	175.3	11.8	163.5	54.8	94.1	14.6	15.0	190.3	39.0	229.3
1975	193.0	85.4	107.6	53.5	41.8	12.3	11.3	204.4	7.3	211.6
1976	243.5	69.0	174.5	91.5	69.8	13.2	19.3	262.8	21.0	283.8
1977	319.4	56.8	262.6	140.7	110.0	12.0	13.5	332.9	45.8	378.7
1978	369.8	53.7	316.2	172.0	127.6	16.5	33.5	403.6	74.1	477.7
1979	386.0	37.4	348.6	179.3	151.7	17.6	20.2	406.2	82.4	488.7
1980	344.6	79.2	265.4	122.1	126.1	17.2	27.2	371.8	62.9	434.7
1981	380.4	87.4	293.1	127.5	159.4	6.2	27.2	407.6	84.1	491.8
1982	404.1	161.3	242.8	94.5	117.1	31.3	15.7	419.8	69.0	488.8
1983	526.4	186.6	339.8	175.4	127.7	36.7	18.9	545.3	90.7	635.9
1984	734.2	198.8	535.4	241.7	256.9	36.8	0.5	734.8	131.1	865.9

Source: Federal Reserve Board, Flow of Funds

Chart 1: YEAR-END OUTSTANDING DEBT IN THE U.S., 1973-1984

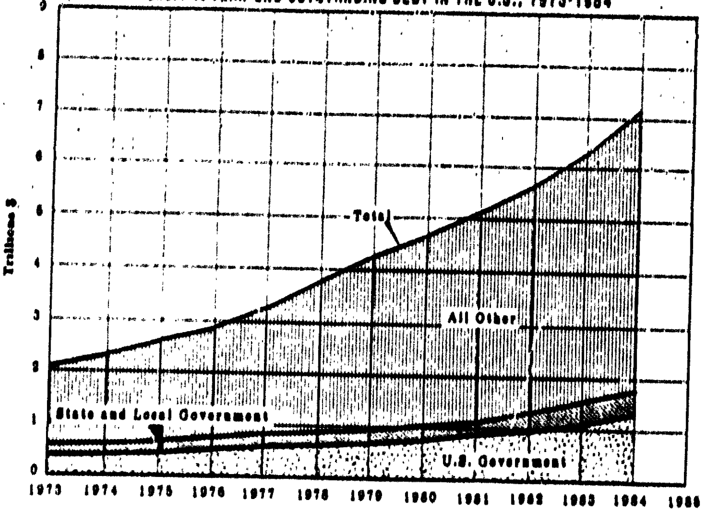

Chart 2: NET INCREASE IN OUTSTANDING DEBT IN THE U.S., 1973-1984

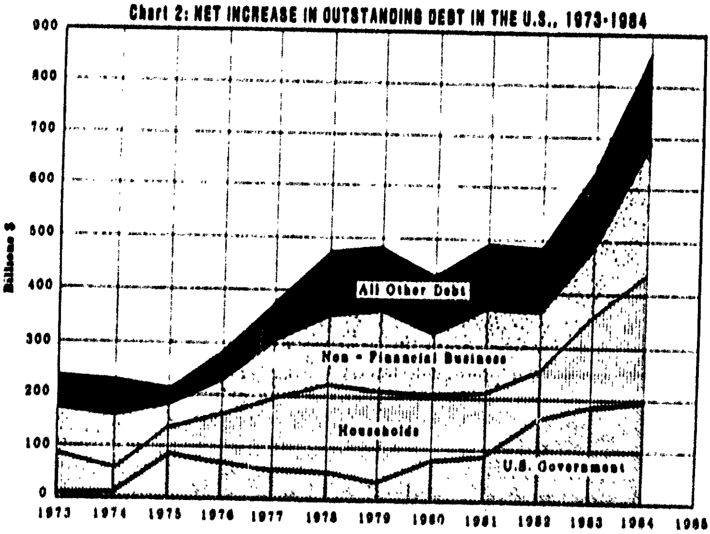

TABLE 3

Growth Rates of Major Debt Aggregates in the U.S., 1973-1984
(Percent Annual Change)

	Domestic Nonfinancial: Total	U.S. Gov't.	Private Non-financial	House-holds	Non-financial Business	State & Local Gov'ts.	Foreign	Non-Financial	Financial	All Sectors
1973	10.5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	30.9	[illegible]
1974	[illegible]	[illegible]	10.4	[illegible]	[illegible]	[illegible]	[illegible]	9.6	[illegible]	10.5
1975	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9.4	[illegible]	8.8
1976	[illegible]	[illegible]	[illegible]	11.7	[illegible]	[illegible]	[illegible]	[illegible]	5.8	10.3
1977	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	11.5	13.0
1978	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	13.6	[illegible]	14.5
1979	[illegible]	6.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	21.6	[illegible]
1980	9.6	11.9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1981	[illegible]	11.5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1982	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1983	11.1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1984	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Source: Federal Reserve Board, Flow of Funds

TABLE [illegible]

Rates of Increase in GNP and Debt, 1973-1984
(% Change)

	Current $ GNP	Implicit Price Deflator	Real GNP	Total Debt	Total Private Nonfinancial Debt	Total U.S. Government Debt
1973	[illegible]	5.8	[illegible]	[illegible]	[illegible]	[illegible]
1974	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1975	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1976	[illegible]	[illegible]	[illegible]	[illegible]	9.5	15.5
1977	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1978	[illegible]	7.4	[illegible]	[illegible]	13.9	9.4
1979	[illegible]	[illegible]	[illegible]	[illegible]	13.5	6.0
1980	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	11.9
1981	[illegible]	[illegible]	2.5	[illegible]	[illegible]	11.8
1982	[illegible]	[illegible]	[illegible]	[illegible]	6.9	19.4
1983	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	16.8
1984	[illegible]	[illegible]	6.8	[illegible]	11.1	16.9

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Chart 3 : ANNUAL GROWTH RATES OF MAJOR DEBT AGGREGATES IN THE U.S., 1973-1984

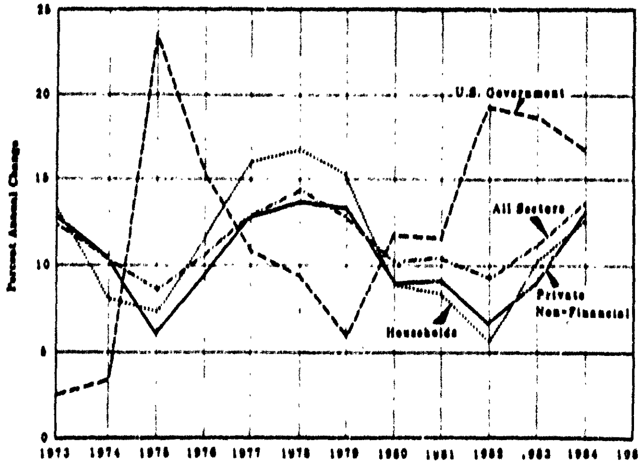

Chart 4: ANNUAL RATES OF INCREASE IN TOTAL DEBT IN U.S. AND IN CURRENT $ GNP

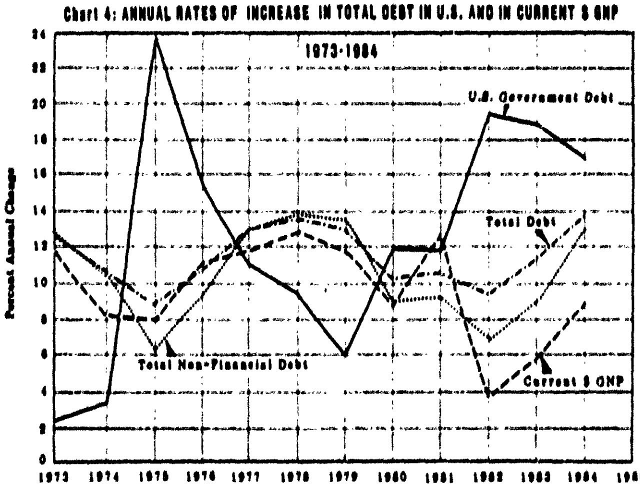

TABLE [illegible]

Net Funds Raised in U. S. Credit Markets, [illegible]
($ billions)

	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1980	1981	[illegible]	[illegible]	[illegible]
Total Net Borrowing	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Total Net Borrowing by Domestic Nonfinancial Sectors:												
U.S. Treasury issues	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Federal Agency issues and mortgages	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Tax-exempt obligations	14.7	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Corporate bonds	[illegible]	19.6	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Home mortgages	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Multifamily Mortgages	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Commercial mortgages	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Farm mortgages	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Consumer credit	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Bank loans N.E.C.*	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Open-market paper	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	11.1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Other**	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Foreign Net Borrowing in U.S.:												
Bonds	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Bank loans N.E.C.	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	11.5	[illegible]	[illegible]	[illegible]	[illegible]
Open-market paper	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
U.S. Government loans	[illegible]	[illegible]	[illegible]	3.3	[illegible]	3.9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

(continued)

TABLE 5 (continued)

Net Funds Raised in U.S. Credit Markets, 1973-1984
($ billions)

	[illegible]	1974	[illegible]	[illegible]	[illegible]	1978	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Total Net Borrowing by Financial Sectors	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
U.S. Government Related.												
Sponsored credit agency securities	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Mortgage pool securities	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Loans from U.S. Government	--	[illegible]	[illegible]	[illegible]	-0.7	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	--	--
Private financial sectors: ***												
Corporate bonds	4.4	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Bank loans N.E.C.	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Open market paper	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Federal Home Loan Bank loans	7.1	[illegible]	[illegible]	[illegible]	4.3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Source: Federal Reserve Board, Flow of Funds.

* Mainly commercial and industrial loans of commercial banks.
** Mainly finance company loans to business and various Government loans.
*** Not included for the year 1973-1977 are small increases in funds raised in mortgages which for the entire period totalled $[illegible] billion.

TABLE 6

Net Funds Advanced in U.S. Credit Markets, 1973–1984
($ billions)

	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
Total Net Funds Advanced	240.4	226.5	213.2	284.4	380.7	478.2	488.7	434.7	491.8	488.8	635.9	865.9
Private Domestic Nonfinancial Sectors:												
Households	40.1	40.8	35.7	27.0	30.5	61.3	71.2	36.4	42.6	51.4	79.1	105.9
Nonfarm noncorporate business	1.4	0.7	0.8	1.2	0.6	1.4	1.8	0.4	2.7	1.8	3.7	5.9
Corporate business	-1.4	7.8	12.3	8.0	-5.3	-2.3	5.2	1.3	15.6	11.8	19.2	25.6
State and local governments	5.6	0.1	1.9	7.7	12.4	13.2	21.5	18.0	9.6	29.1	40.2	41.3
Foreign	0.6	11.2	6.1	15.2	39.6	38.0	-4.6	23.2	16.3	18.1	27.1	42.9
U. S. Government	3.9	9.4	13.4	7.9	10.0	17.1	19.0	23.7	24.1	16.0	9.7	18.8
Financial Institutions:												
Sponsored credit agencies	15.5	20.8	4.5	4.7	6.3	26.7	30.0	26.4	33.2	15.7	3.1	28.2
Mortgage pools	3.6	3.4	7.1	12.2	16.1	13.6	23.1	19.2	15.0	49.5	66.4	43.9
Federal Reserve System	9.2	6.2	8.5	9.8	7.1	7.0	7.7	4.5	9.2	9.8	10.9	8.4
Commercial Banking	34.6	66.8	29.4	59.6	87.6	129.0	123.1	100.6	102.3	107.2	136.1	179.9
Savings and loan associations	26.8	18.1	37.0	50.7	63.2	56.7	49.3	46.2	23.1	20.2	101.6	122.1
Mutual Savings Banks	4.3	3.1	10.7	12.8	11.1	8.8	4.4	5.9	1.0	0.6	18.4	10.2
Credit unions	3.6	2.7	5.4	6.6	7.2	7.3	2.8	2.4	3.7	10.5	16.7	12.8
Life insurance companies	12.3	12.9	16.9	23.7	27.5	33.1	33.4	32.8	34.7	43.5	51.2	53.5
Private pension funds	2.3	5.6	7.0	3.6	12.2	8.3	28.2	30.8	30.8	35.7	27.0	24.9
State and local government retirement funds	5.7	6.7	9.3	9.8	11.9	17.0	10.8	20.9	22.5	24.7	19.0	27.4
Other insurance companies	3.4	4.6	7.3	12.5	17.5	16.5	13.4	9.9	9.4	5.0	1.7	7.2
Finance companies	11.4	4.9	2.6	11.7	22.5	24.0	27.1	13.9	27.0	5.0	24.2	35.1
REITS	5.6	0.2	-4.8	-3.8	-2.4	-1.1	-1.0	-0.7	-1.1	-0.7	-0.3	0.4
Mutual funds	1.3	0.7	0.5	-0.2	3.9	0.8	1.9	4.8	5.3	12.7	14.6	25.5
Money market funds	--	0.8	0.7	0.6	-0.1	3.2	15.8	14.9	62.5	21.4	-21.4	38.6
Brokers and dealers	0.6	-0.8	1.0	3.1	-0.4	-1.3	0.6	-0.7	2.3	-0.2	-12.3	7.3

Source: Federal Reserve Board, Flow of Funds

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Total U.S. Public and Private Debt Continues to Explode

by

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April 4, 1986

The fourth quarter of 1985 Flow of Funds statistics of the Federal Reserve Board have just been released and they show that the explosion of total debt in the United States, which has been under way in the past several years, continued in 1985. In fact, the power of the explosion increased quarter-by-quarter during the year, reaching a startling annual rate of $1.4 trillion in the fourth quarter.

During 1985 as a whole the total outstanding debt--Government and private--increased by a record $1,071 billion. This was a 15 percent annual rate of increase. Since the end of 1979 through the close of 1985 the total outstanding debt has risen from $4.3 trillion to $8.2 trillion, nearly doubling in the past six years. The spread between the 15 percent increase in total U.S. debt in 1985 was a record 9.3 percentage points more than the 5.7 percent increase in total current dollar GNP.

The Record of the Growth of Total Debt in the U.S. Since 1973

Table 1 shows the growth of total outstanding debt in the U.S. since 1973, with a breakdown of the major classes of debt. Table 2 traces the annual net increase of total outstanding debt and its components during the same period. As will be seen, the net increase in total debt has jumped from $491.2 billion in 1982 to $1,070.9 billion in 1985. Charts 1 and 2 show the explosive growth of total debt and its components during the past several years.

Table 3 presents the annual growth rates of total U.S. debt and its major components since 1973. As will be seen at the bottom of the table, the seasonally adjusted annual rate of increase of total debt rose from 11.8 percent in the first quarter of 1985 to 18.6 percent in the fourth, averaging 15 percent for the year. The behavior of state and local government debt was particularly noteworthy. The increase soared to 31.2 percent in 1985 and to a 53.4 percent annual rate in the fourth quarter. This was, of course, the result of the fear that new issues of state and local government bonds would become fully taxable on January 1, 1986. Household debt (consumer and home mortgage) expanded vigorously at a 14.3 percent rate in 1985 and at an annual rate of 15.6 percent in the fourth quarter.

The Expansion of Total Debt Relative to the Expansion of GNP

Table 4 shows the annual rates of increase of total debt in the U.S. relative to the increase of GNP during 1973-1985. Since the debt figures are in current dollars (not corrected for inflation), they are related to GNP in current dollar terms. As will be seen, in Table 4 and Chart 3, there was a close relationship between the rate of increase in total debt and current dollar GNP during the years 1973-1981, which would have been expected. Since then, however, as shown in Chart 3, the gap between the two has widened sharply, with total debt increasing at a 15 percent rate in 1985 and current dollar GNP expanding at only a 5.7 percent rate. Thus, in 1985 the gap between the two was 9.3 percentage points, by far the largest spread since 1981. Similarly, a wide gap has opened up between the rate of increase in total private non-financial debt and current dollar GNP, as shown in Table 4.

Net Funds Raised Annually in U. S. Credit Markets, 1980-1985

Table 5 shows the net funds raised each year in U.S. credit markets in 1980-1985. Total net borrowing in 1985 amounted, as noted earlier, to $1,070.9 billion. Some of the detailed numbers are rather staggering. In spite of apparent determination in Washington to reduce the Federal deficit, net new issues of U.S. Treasury obligations totalled $223.6 billion in 1985, compared with $198.8 billion in 1974. Part of the explanation was the high rate of commodity credit payments late in 1985. The net increase of tax-exempt obligations was an enormous $173.4 billion last year, with $96 billion coming in the fourth quarter alone. As interest rates declined, the net new issues of corporate bonds of non-financial corporations rose sharply to $67.9 billion and of financial corporations to $28.6 billion, both record amounts. Similarly, 1985 brought record amounts of increase in home mortgages ($152.8 billion) and in multifamily mortgages ($25.8 billion). The net increase in consumer credit, $103.6 billion, was another record on top of the $94.8 billion in 1984. On the other hand, due to the sluggishness of the economy, the net increase of "Bank loans N.E.C." (largely the commercial and industrial loans of the banks) increased only $30.7 billion in 1985, compared with $79.5 billion in 1984. Finally, the net increase of U.S. Government related mortgage pool securities was a record $78.8 billion last year.

Table 6 shows net funds raised in 1985 on a quarterly seasonally adjusted annual rate basis. As will be seen, the tempo of total net borrowing rose from $844.4 billion in the first quarter to a gigantic annual rate of $1,461.3 billion in the fourth. Tax-exempt issues jumped from a $73.7 billion annual rate in the first quarter to a staggering $370.8 billion in the fourth. Home mortgages followed a similar pattern, rising to a $174.4 billion annual rate in the fourth quarter. On the other hand, net consumer credit expansion fell from a $119.2 billion annual rate in the first quarter to $76 billion in the fourth.

Net Funds Advanced Annually in U. S. Credit Markets, 1980-1985

Table 7 provides the statistics on net funds advanced each year in U.S. credit markets during 1980-1985. The total net funds advanced in 1985, $1,070.9 billion, is, of course, the same as total net funds raised in Table 5. Several of the details in Table 7 merit special comment.

"Households" (not only individual investors but also personal trusts, endowment funds, and other sources of funds not specifically shown in other items in the table) increased their holdings of credit instruments in 1985 by an enormous $198.7 billion, far above any prior year. The state and local governments supplied a spectacular $113.8 billion, undoubtedly the result of the fact that a substantial part of the funds which had been raised by state and local governments in 1985 were reinvested, perhaps temporarily, in the money markets. Of very great importance, foreign investors increased their holdings of U.S. credit market instruments by a record $72.8 billion in 1985. Their holdings will be analyzed in the next section.

The huge $21.6 billion increase in the holdings of U.S. Government securities and Federal agency issues by the Federal Reserve System merits special comment. These holdings were increased by the Fed under its open market operations. When the monetary authorities buy Government securities they supply reserves to the commercial banking system. Since the banks can expand their demand deposits by a multiple of about six times their reserves, the Federal Reserve System through its open market purchases last year made possible an expansion of about $130 billion in commercial bank demand deposits. As will be noted, the net purchases of $21.6 billion by the Fed was more than double any year shown in the table. It would be hard to say, in the light of these numbers, that the Fed was in 1985 anything less than massively easy in its policy. Not surprisingly, the commercial banking system increased its loans and investments by a huge $181.2 billion in 1985.* The composition of this increase is interesting and revealing. The commercial banks expanded their holdings of U.S. Treasury issues by $10.5 billion and reduced their holdings of Federal agency issues by $3.0 billion. The increase in their holdings of tax-exempt obligations was a mammoth $39.3 billion. Other increases were mortgages, $48.2 billion; corporate bonds, $6.2 billion; consumer credit $42.9 billion; bank loans N.E.C. (commercial and industrial), $28.0 billion; and security credit, $10.3 billion. They reduced their holdings of open-market paper by $1.3 billion. Thus it may be said that with the Federal Reserve supplying reserves generously in 1985, and with commercial and industrial loan demand weak, the banks used their lending and investing power to add nearly $50 billion to their holdings of U.S. Government and state and local government obligations, thus in effect monetizing this debt. Finally, there was a huge increase of $85.1 billion in the holdings of credit instruments by mutual fundds. This included $42.0 billion of U.S. Government securities, $31.4 billion of tax-exempts, $11.6 billion of corporate bonds, and $0.2 billion of commercial paper.

Table 8 shows the sharply rising tempo of net funds advanced, quarter-by-quarter at seasonally adjusted annual rates last year. As will be seen, particularly spectacular was the seasonally adjusted rate of $333.3 billion for households in the fourth quarter, the $188.9 billion rate for state and local governments in the fourth quarter, the $201.6 billion annual rate for the commercial banking system and the $103.5 billion annual rate for the mutual funds.

Foreign Investment in U.S. Credit Markets in 1985

As shown in Table 9, foreign investors held $368.7 billion in U.S. credit market instruments at the end of 1985, as well as $98.7 billion of U.S. corporate equities. Their holdings of U.S. Government securities amounted to $214.6 billion and their holdings of U.S. corporate bonds to $103.6 billion.

Table 10 presents the annual net increase in foreign holdings of U.S. credit market instruments since 1962. As will be noted, last year foreign investors added $72.8 billion to their holdings of U.S. credit market instruments, by far a record increase. The net increase in their holdings of U.S. Treasury issues was $21.8 billion, appreciably less than the $26.5 billion in 1984. But in 1985 foreigners added an enormous $41.4 billion to their holdings of U.S. corporate bonds, dwarfing the $16.4 billion in 1984. There was, in addition, a very large $9.6 billion increase in foreign holdings of commercial paper.

Finally, Table 11 provides some measures of the importance of foreign investment in U.S. credit markets. As will be seen in

* The difference between the $181.2 billion total increase in commercial bank credit in 1985 and the $170.8 billion total in funds advanced by commercial banking in 1985 shown in Table 7 is explained by the fact that $10.4 billion of "miscellaneous assets" were liquidated in 1985.

column (3) the net increase in foreign holdings in 1985 amounted to 6.8 percent of the net increase of $1,070.9 billion in total U.S. credit market debt last year. As shown in column (6), the net increase in foreign holdings of U.S. Government securities amounted to 9.7 percent of the total net increase in Treasury issues, somewhat less than the 12.9 percent in 1984. On the other hand, the net increase in foreign holdings of U.S. corporate bonds in 1985 was a whopping 42.9 percent of the total net increase in such issues.

The statistics show clearly that foreign investors have become a major and vital force in the U.S. credit markets. This is a natural development when our country is running a huge and rising deficit in our balance of payments with the rest of the world. With the depreciation of the value of the dollar, our huge balance of payments deficit should level out and then begin to decline so that we must prepare for the time we cannot count so heavily on the availability of funds from abroad.

Concluding Comments

The explosion of total debt in the U.S., and the wide gap between the rate of increase in total debt and the rate of increase in current dollar GNP, are puzzling in many respects both as to their causes and their consequences. My purpose in this paper is just to bring up to date the paper I wrote in August 1985 entitled The Explosion of Debt in the United States. In that paper my conclusion was that the early part of the debt explosion was caused basically by the expectation that inflation would continue indefinitely at a high rate but that more recently, as inflation has receded, it was more the result of very aggressive lending by financial institutions. Certainly the emergence of a massive Federal deficit contributed strongly to the debt explosion, but the facts are that private debt has also exploded. The phenomenal increase in tax-exempt bonds in 1985, caused by the expectation that interest on new issues of tax-exempts would be Federally taxable in 1986, was certainly a very important factor in the record 15 percent rate of increase in total U.S. debt last year. Had the $173.4 billion increase in tax-exempt bonds been a more normal $50 billion, the rate of increase in total U.S. debt would have been 13.3 percent, still a very high number but considerably less than the actual 15 percent rate.

The explosion of total debt raises some baffling questions. How could we have had such a high rate of increase of debt in 1985 accompanied by a significant fall of interest rates? The answer lies in the sluggish growth in real GNP last year, the high enemployment of resources, and the marked decline of the inflation rate. All of these forces fostered an easy credit policy by the Federal Reserve. Beyond this was the huge foreign trade deficit which caused our economy to be "lopsided" with the services and high tech sectors flourishing and many basic industries like steel quite depressed. The strong expansion of foreign investments in the U.S., the natural outcome of our trade deficit, helped greatly to finance the debt expansion, but more important was the aggressively easy credit policy by the Fed which encouraged the monetization of much of the debt. The sluggish expansion of real GNP in the U.S. and in other major industrial countries led to a decline of the inflation rate and particularly to the drop in the price of oil.

Much of the explosion of total U.S. debt occurred during a period of historically very high interest rates. In the case of a substantial part of the debt the rates are adjustable and are now adjusting downward with the very sharp drop of rates. Moreover, much of the fixed-rate debt is being, or will be, refinanced at the much lower level of rates. So, the spectacular decline of interest rates has relieved some of the interest burden of carrying the swollen outstanding debt. Beyond that, the rallies in both the fixed-income and equities securities markets have greatly increased the market values of both bonds and stocks and have thus increased the wealth of the general public.

Can the growth of total debt at an explosive rate far above the growth of current dollar GNP continue indefinitely without serious consequences? Logic would say it cannot because it would ultimately lead to an excessively large burden of debt in the economy which would threaten severe deflationary pressures. There is evidence that we may already be seeing some of the consequences of too fast an expansion of debt in rising credit losses being experienced by lending institutions.

What will happen if the declining dollar halts our expanding trade deficit, as is widely expected, and then leads to a significant decline in the trade deficit. The effect of increasing import prices, in addition to tighter use of labor and other resources as real growth becomes stronger, would tend to cause some rise in the inflation rate and to remove the Fed's option of an easy credit policy. With the trade deficit falling, the supply of foreign funds in our credit markets would decline. So it would seem that under conditions such as these the rate of debt expansion would have to fall if we were to avoid a serious upward movement of rates.

My general conclusion, then, is that it would be unwise to conclude that we can safely ignore the explosion of debt in the U.S.

TABLE 1

Year-End Outstanding Debt in the United States, 1973-1985
($ billions)

	Domestic Nonfinancial									
	Total	U. S. Gov't.	Private Non-financial	House-holds	Non-financial Business	State & Local Gov'ts.	Foreign	Non-Financial	Financial	All Sectors
1973	1,919.1	349.1	1,570.1	670.9	705.9	193.3	67.0	1,986.2	194.0	2,180.2
1974	2,094.2	360.8	1,733.4	725.5	800.0	207.9	79.8	2,174.0	232.6	2,406.7
1975	2,288.8	446.3	1,842.6	778.8	843.5	220.2	91.2	2,380.0	239.9	2,619.9
1976	2,532.6	515.8	2,016.9	871.2	912.2	233.5	110.6	2,643.2	261.1	2,904.3
1977	2,854.1	572.5	2,281.5	1,012.2	1,023.9	245.5	123.9	2,978.0	307.1	3,285.0
1978	3,218.1	626.2	2,591.9	1,182.5	1,147.3	262.0	161.9	3,380.0	381.1	3,761.1
1979	3,604.2	663.6	2,940.7	1,362.5	1,298.5	279.6	182.5	3,786.7	464.7	4,251.4
1980	3,948.3	742.8	3,205.5	1,487.0	1,421.7	296.9	209.6	4,157.9	527.6	4,685.5
1981	4,328.4	830.1	3,498.3	1,619.2	1,576.1	303.0	237.0	4,565.4	611.7	5,177.1
1982	4,728.9	991.4	3,737.5	1,712.1	1,691.1	334.3	226.4	4,955.3	683.4	5,638.7
1983	5,255.3	1,177.9	4,077.3	1,887.5	1,818.8	371.0	245.2	5,500.5	774.3	6,274.8
1984	5,977.5	1,376.8	4,600.7	2,120.7	2,072.2	407.8	246.3	6,223.8	907.3	7,131.0
1985	6,861.3	1,600.5	5,260.9	2,418.4	2,306.2	536.3	245.9	7,107.1	1,094.8	8,201.9

Source: Federal Reserve Board, Flow of Funds

TABLE 2

Net Increase in Outstanding Debt in the United States, 1973-1985
($ billions)

	Domestic Nonfinancial									
	Total	U.S. Gov't.	Private Non-financial	House-holds	Non-financial Business	State & Local Gov'ts.	Foreign	Non-Financial	Financial	All Sectors
1973	187.7	8.3	179.4	78.1	88.5	12.8	6.3	194.0	45.6	239.8
1974	175.3	11.8	163.5	54.8	94.1	14.6	15.0	190.3	39.0	229.3
1975	193.0	85.4	107.6	53.5	41.8	12.3	11.3	204.4	7.3	211.6
1976	243.5	69.0	174.5	91.5	69.8	13.2	19.3	262.8	21.0	283.8
1977	319.4	56.8	262.6	140.7	110.0	12.0	13.5	332.9	45.8	378.7
1978	369.8	53.7	316.2	172.0	127.6	16.5	33.8	403.6	74.1	477.7
1979	386.0	37.4	348.6	179.3	151.7	17.6	20.2	406.2	82.4	488.7
1980	341.8	79.2	262.6	118.9	126.5	17.2	27.2	371.8	57.6	426.6
1981	372.7	87.4	285.3	119.7	158.6	6.8	27.2	407.6	89.0	488.9
1982	395.3	161.3	234.1	87.9	120.2	25.9	15.7	419.8	80.2	491.2
1983	542.9	186.6	356.3	187.4	131.2	37.6	18.9	545.3	89.2	651.0
1984	765.9	198.8	567.1	239.2	283.0	45.0	2.8	734.8	138.2	906.9
1985	883.8	223.6	660.2	297.7	234.0	128.5	-0.4	883.4	187.5	1,070.9

Source: Federal Reserve Board, Flow of Funds

Chart 1: YEAR-END OUTSTANDING DEBT IN THE U.S., 1973-1985

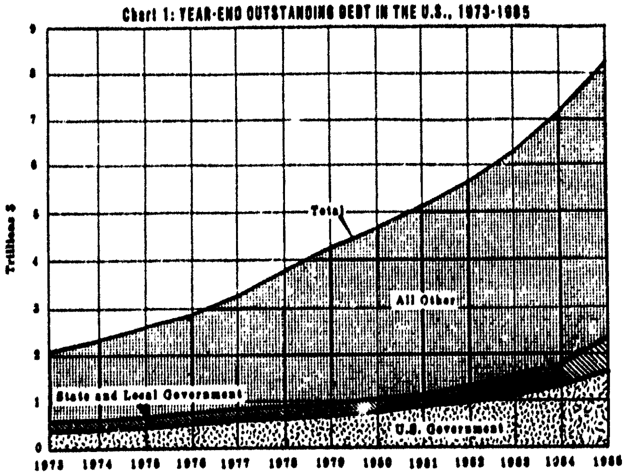

Chart 2: NET INCREASE IN OUTSTANDING DEBT IN THE U.S., 1973-1985

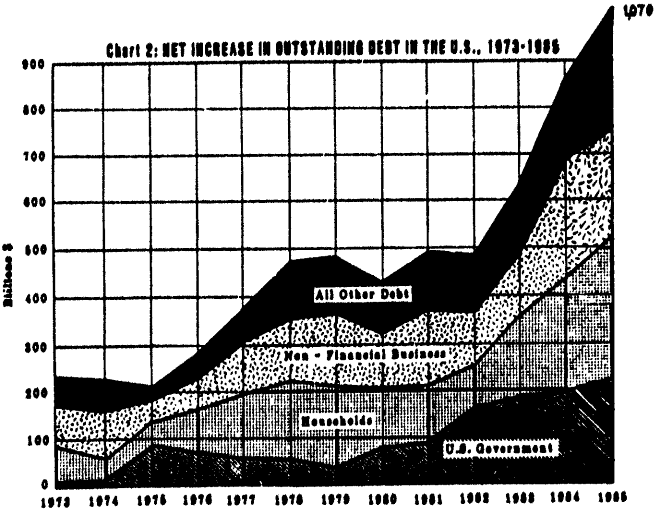

TABLE 3

Growth Rates of Major Debt Aggregates in the U.S., 1973-1985
(Percent Annual Change)

	Domestic Nonfinancial								
	Total	U.S. Gov't.	Private Non-financial	House-holds	Non-financial Business	State & Local Gov'ts.	Foreign	Financial	All Sectors
1973	10.8	2.4	12.9	13.2	14.3	7.1	16.5	30.9	12.4
1974	9.1	3.4	10.4	6.2	13.3	7.0	22.4	20.2	10.[illegible]
1975	9.2	23.7	6.2	7.4	5.2	5.9	14.2	3.1	8.5
1976	10.6	15.5	9.5	11.7	8.3	6.0	21.[illegible]	8.8	10.[illegible]
1977	12.6	11.0	13.0	16.1	12.1	5.1	12.2	17.5	13.[illegible]
1978	13.0	9.4	13.9	17.0	12.5	6.7	27.2	24.1	14.5
1979	12.0	6.0	13.5	15.2	13.2	6.7	12.5	21.6	13.0
1980	9.6	11.9	9.0	9.0	9.7	6.2	14.9	13.5	10.[illegible]
1981	9.6	11.8	9.1	8.8	11.2	2.1	13.0	15.9	10.5
1982	9.2	19.4	6.8	5.6	7.6	8.5	6.6	13.1	9.6
1983	11.6	18.8	9.7	11.3	7.7	11.4	8.3	12.9	11.6
1984	14.7	16.9	14.0	13.0	15.4	12.2	1.1	17.6	14.5
1985	14.8	16.2	14.3	14.3	11.0	31.2	-0.2	20.4	15.0
1985 - I	11.5	10.6	11.8	12.2	10.7	14.8	-2.9	17.8	11.8
II	12.7	15.7	11.8	12.5	9.7	19.2	1.0	17.7	13.0
III	12.6	11.4	13.0	14.0	9.5	26.0	2.6	21.0	13.4
IV	19.2	23.7	17.9	15.6	12.7	53.4	-1.3	19.4	18.6

Source: Federal Reserve Board, Flow of Funds

TABLE 4

Rates of Increase in GNP and Debt, 1973-1985
(% Change)

	Current $ GNP	Implicit Price Deflator	Real GNP	Total Debt	Total Private Nonfinancial Debt	Total U.S. Government Debt
1973	11.8	5.8	5.8	12.4	12.9	2.4
1974	8.1	8.8	-0.6	10.5	10.4	3.4
1975	8.0	9.3	-1.2	8.8	6.2	23.7
1976	10.9	5.2	5.4	10.8	9.5	15.5
1977	11.7	5.8	5.5	13.0	13.0	11.0
1978	13.0	7.3	5.3	14.5	13.9	9.4
1979	11.5	8.9	2.5	13.0	13.5	6.0
1980	8.9	9.0	-0.2	10.2	9.8	11.9
1981	11.7	9.7	1.9	[illegible]	9.1	11.8
1982	3.7	6.6	-2.5	9.6	6.8	19.4
1983	7.4	3.8	3.5	11.6	9.7	18.8
1984	11.0	4.1	6.5	14.5	14.0	16.9
1985	5.8	3.3	2.3	15.0	14.3	16.2

Chart 3: Annual Rates of Increase of Total Debt in U.S. and of Current $ GNP, 1973 - 1985

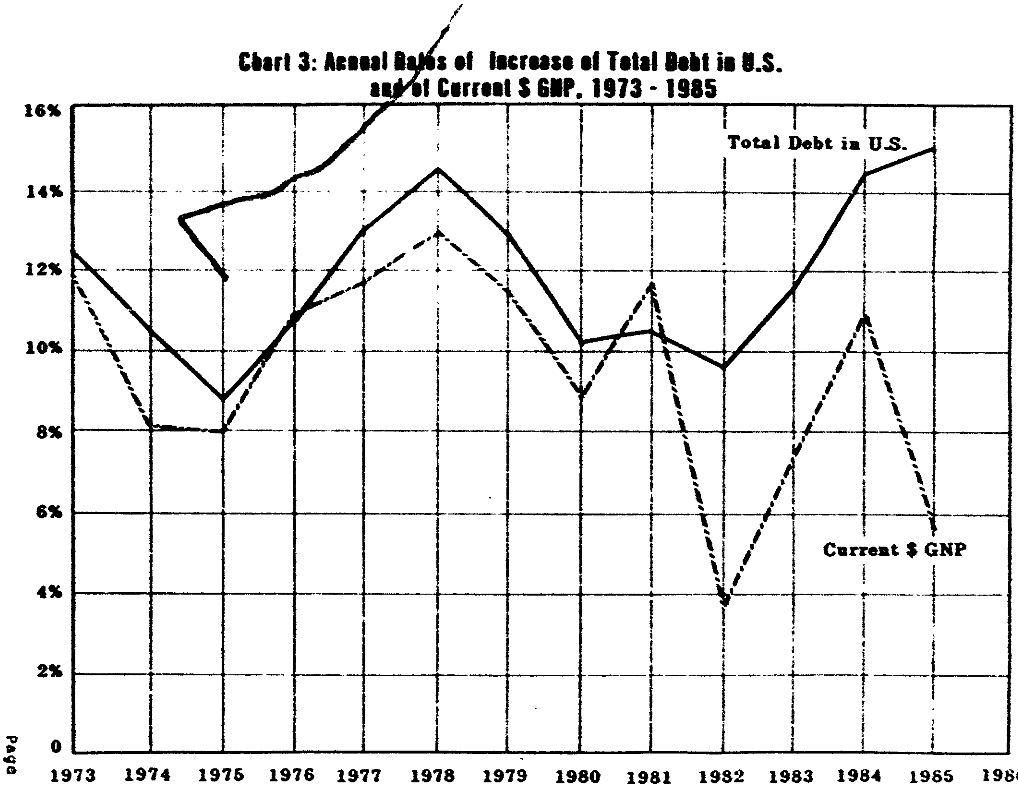

Table 5.

Net Funds Raised in U.S. Credit Markets, 1980-1985
($ billions)

	1980	1981	1982	1983	1984	1985
Total Net Borrowing	426.6	488.9	491.2	651.0	906.9	1,070.9
Total Net Borrowing by Domestic Non-Financial Sectors:						
U.S. Treasury Issues	79.2	87.4	161.3	186.6	198.8	223.6
Federal agency issues and mortgages	-0.6	-0.5	-0.9	-0.1	-0.2	-0.1
Tax-exempt obligations	30.3	23.4	48.6	57.3	65.8	173.4
Corporate bonds	26.7	21.8	18.7	16.0	47.1	67.9
Home mortgages	94.2	72.2	50.5	116.6	130.7	152.8
Multifamily mortgages	7.6	4.8	5.4	11.9	20.7	25.8
Commercial mortgages	19.2	22.2	25.2	48.9	62.0	59.0
Farm mortgages	10.2	10.0	4.2	2.6	-1.0	-4.5
Consumer credit	4.7	22.6	17.7	56.7	94.8	103.6
Bank loans N.E.C.*	37.0	54.7	54.2	26.8	79.5	30.7
Open market paper	5.7	19.2	-4.7	-1.6	24.2	12.9
Other**	27.1	34.4	14.2	20.7	43.3	38.8

(continued)

Table 5. (continued)

Net Funds Raised in U.S. Credit Markets, 1980-1985
($ billions)

	1980	1981	1982	1983	1984	1985
Foreign Net Borrowing in U.S.						
Bonds	0.8	5.4	6.7	3.8	4.1	4.9
Bank loans N.E.C.	11.5	3.7	-6.2	4.9	-7.8	-6.9
Open market paper	10.1	13.9	10.7	6.0	2.5	-1.0
U.S. Government loans	4.7	4.2	4.5	4.3	4.0	2.5
Total Net Borrowing by Financial Sectors						
U.S. Government related:						
Sponsored credit agency securities	24.3	30.5	14.9	1.4	30.4	20.6
Mortgage pool securities	19.2	15.0	49.5	66.4	44.4	78.8
Loans from U.S. Government	1.2	1.9	0.4	--	--	--
Private Financial Sectors:						
Corporate bonds	1.8	3.5	13.7	12.6	25.9	28.6
Mortgages	--	--	0.1	--	0.4	-0.2
Bank loans N.E.C.	-0.9	0.9	1.9	-0.2	1.0	4.2
Open market paper	4.8	20.9	-1.1	16.0	20.4	41.3
Federal Home Loan Bank loans	7.1	16.2	0.8	-7.0	15.7	14.2

Source: Federal Reserve Board, Flow of Funds

* Mainly commercial and industrial loans of the commercial banks.

** Mainly finance company loans to business and various Government loans.

Table 6.

Net Funds Raised in U.S. Credit Markets in 1985
Quarterly Seasonally Adjusted Annual Rates
($ billions)

	I	II	III	IV
Total Net Borrowing	844.4	956.3	1,021.8	1,461.3
Net Borrowing by Domestic Non-financial Sectors:				
U.S. Treasury Issues	145.7	222.6	167.9	358.7
Federal Agency issues and mortgages	-0.2	-0.1	-0.1	-0.1
Tax-exempt obligations	73.7	103.0	146.1	370.8
Corporate bonds	58.0	78.0	62.8	72.8
Home Mortgages	122.7	145.0	169.1	174.4
Multifamily mortgages	23.1	22.0	24.2	33.6
Commercial mortgages	57.7	56.2	61.4	60.7
Farm mortgages	0.2	-4.8	-8.5	-4.9
Consumer Credit	119.2	106.7	112.4	76.0
Bank loans N.E.C.*	14.4	33.7	33.8	41.0
Open market paper	23.5	3.1	11.0	13.9
Other**	49.9	18.2	24.0	63.0
Foreign Net Borrowing in U.S.:				
Bonds	2.3	8.0	2.8	6.6
Bank loans N.E.C.	-11.9	0.7	7.5	-23.8
Open Market paper	0.3	-9.5	-4.6	9.7
U.S. Government loans	2.0	3.2	0.6	4.3
Net Borrowing by Financial Sectors:				
U.S. Government-related				
Sponsored credit agency securities	25.0	27.1	3.0	27.2
Mortgage pool securities	58.7	74.7	87.3	94.8
Loans from U.S. Government	--	--	--	--
Private Financial Sectors				
Corporate bonds	18.8	47.5	14.5	33.5
Mortgages	--	-0.3	-0.3	-0.2
Bank loans N.E.C.	0.3	1.9	14.0	0.4
Open market paper	47.3	9.6	72.9	35.7
Federal Home Loan Bank loans	13.5	9.9	20.1	13.3

* Mainly commercial and industrial loans of the commercial banks.

** Mainly finance company loans to business and various Government loans.

Source: Federal Reserve Bank, Flow of Funds.

Table 7.

Net Funds Advanced in U.S. Credit Markets, 1980-1985
($ billions)

	1980	1981	1982	1983	1984	1985
Total Net Funds Advanced	424.9	487.8	491.2	651.0	906.9	1,070.9
Private Domestic Nonfinancial Sectors:						
Households	30.4	51.2	46.1	74.0	126.0	198.7
Nonfarm noncorporate business	0.4	2.7	1.6	4.7	8.0	8.1
Corporate business	-2.2	11.5	13.8	22.5	22.8	-2.0
State and local governments	17.9	7.5	27.2	47.7	49.9	113.8
Foreign	23.3	16.2	22.8	27.1	45.9	72.8
U. S. Government	23.7	24.0	15.9	9.7	17.1	22.5
Financial Institutions:						
Sponsored credit agencies	26.4	33.2	16.0	3.4	28.8	25.1
Mortgage pools	19.2	15.0	49.5	66.4	44.4	78.8
Federal Reserve System	4.5	9.2	9.8	10.9	8.4	21.6
Commercial banking	100.6	102.3	107.2	136.1	181.7	170.8
Savings and loan associations	46.2	22.8	18.8	104.7	123.4	75.5
Mutual savings banks	5.9	0.9	0.7	18.4	10.1	12.1
Credit unions	2.4	3.7	10.6	16.7	12.8	16.9
Life insurance companies	33.2	34.7	43.5	50.6	56.3	65.6
Private pension funds	30.6	31.1	35.2	25.9	24.9	23.4
State and local government retirement funds	20.9	22.5	23.4	16.0	28.7	19.4
Other insurance companies	9.9	9.4	5.0	1.7	9.1	9.6
Finance companies	13.5	20.9	10.2	27.5	39.3	48.1
REITS	-0.7	-1.1	--	0.1	0.8	1.8
Mutual funds	4.8	5.3	12.7	14.6	25.7	85.1
Money market funds	14.9	62.5	21.4	-21.4	38.0	1.5
Brokers and dealers	-0.7	2.3	-0.6	-6.3	4.9	1.7

Source: Federal Reserve Board, Flow-of-funds

Table 8.

Net Funds Advanced in U.S. Credit Markets,
1985 -- Quarterly Seasonally Adjusted
Annual Rates
($ billions)

	I	II	III	IV
Total Net Funds Advanced	844.4	956.3	1,021.8	1,461.3
Private Domestic Nonfinancial Sectors				
Households	199.8	160.4	101.3	333.3
Nonfarm noncorporate business	8.0	8.9	11.2	4.4
Corporate business	-31.1	-3.0	1.7	24.0
State and local governments	74.3	78.1	113.9	188.9
Foreign	32.6	71.2	96.3	91.3
U.S. Government	30.6	8.8	26.6	24.0
Financial Institutions				
Sponsored credit agencies	33.3	28.8	19.8	18.4
Mortgage pools	58.7	74.7	87.3	94.8
Federal Reserve System	20.4	32.8	-16.4	49.7
Commercial banking	126.1	168.3	187.2	201.6
Savings and loan associations	62.4	-0.7	127.7	112.6
Mutual savings banks	19.2	5.1	15.1	9.3
Credit unions	20.4	17.1	11.2	19.0
Life insurance companies	53.1	66.4	69.3	73.6
Private pension funds	22.0	31.7	33.2	6.8
State and local government retirement funds	-9.4	19.5	26.3	41.3
Other insurance companies	8.4	11.6	8.3	10.3
Finance companies	42.7	38.8	43.8	67.1
REITS	4.4	-3.4	0.6	5.4
Mutual funds	72.7	79.6	84.7	103.5
Money market funds	-0.3	50.1	-28.5	-15.4
Brokers and dealers	-3.7	11.7	1.1	-2.3

Source: Federal Reserve Board, Flow of Funds

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TABLE 9.

Outstanding Financial Assets Held by Foreigners ($ billions)

Year-end	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
Total Financial Assets	69.3	70.8	77.3	83.3	87.1	88.6	107.3	117.0	123.2	131.7	160.4	191.4
Gold and SDRs	24.2	25.4	26.7	27.5	29.4	30.0	29.5	30.0	29.2	32.8	36.8	43.4
U. S. demand deposits	3.1	3.2	3.5	4.5	4.6	5.0	5.3	5.9	6.2	6.7	6.5	8.3
U. S. time deposits	2.9	3.4	4.3	5.5	6.1	6.4	7.7	7.4	8.8	7.1	7.5	10.6
Net interbank claims	3.1	3.0	3.2	3.7	3.8	6.7	7.3	9.4	16.8	10.5	5.8	6.8
U. S. corporate equities	11.8	10.3	12.5	13.0	14.6	12.6	25.5	29.5	26.8	27.2	30.8	39.1
Credit market instruments	13.0	14.4	15.1	15.9	16.1	14.5	16.5	16.7	16.3	26.7	53.2	61.6
U.S. Government securities	11.0	12.2	12.9	13.3	13.3	10.8	12.9	12.4	10.4	19.7	46.0	54.4
U. S. corporate bonds	0.7	0.7	0.8	1.0	0.8	1.4	1.3	1.5	2.0	2.7	3.0	3.1
Acceptances	1.4	1.4	1.4	1.6	2.0	2.3	2.2	2.8	3.8	4.3	4.1	4.1
Security credit	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.6	0.4	0.3	0.3	0.4
Trade credit	0.8	0.7	0.7	0.7	0.9	1.4	2.0	3.4	4.2	6.2	6.6	7.4
Direct investment in U.S.	7.4	7.4	7.9	8.4	8.8	9.1	9.9	10.8	11.8	13.3	13.9	14.9
Other	-2.9	2.6	3.4	3.1	2.6	2.9	3.4	3.9	2.8	0.9	-1.0	-0.9
Memo:												
Total liabilities of foreigners to U. S.	69.4	74.4	80.2	91.2	98.3	104.3	114.1	123.9	132.6	138.4	140.6	161.5

Year-end	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
Total Financial Assets	204.9	222.0	234.7	262.8	290.1	330.3	400.6	463.8	493.4	493.1	573.9	630.6	702.7
Gold and SDRs	47.3*	47.0	47.0	46.5	46.1	47.3	52.5	58.3	60.7	50.5	59.8	59.2	58.3
U. S. demand deposits	13.2	14.0	13.7	16.9	19.3	19.0	23.4	23.5	19.7	16.0	17.5	19.5	21.1
U. S. time deposits	13.4	21.1	22.6	20.7	21.0	22.2	24.6	25.8	28.1	36.9	35.4	40.0	41.3
Net interbank claims	4.1	4.1	-5.7	-11.4	-12.0	-6.3	14.3	-0.9	-15.9	-48.8	-48.8	-20.8	-16.2
U. S. corporate equities	33.5	24.2	35.3	42.9	39.8	42.1	42.3	64.6	64.6	76.8	97.3	95.9	98.7
Credit market instruments	62.2	73.4	79.5	94.7	136.3	167.6	163.1	186.4	202.6	225.4	252.5	295.9	368.7
U.S. Government securities	54.7	58.4	66.5	78.1	109.6	133.1	119.0	129.7	136.6	149.4	166.3	192.8	234.6
U. S. corporate bonds	3.1	4.0	4.6	5.5	9.3	11.2	13.8	22.0	30.4	41.0	45.8	62.2	103.6
Acceptances	4.4	11.0	8.4	11.1	15.5	23.3	30.2	34.7	35.5	35.0	40.6	40.9	30.5
Security credit	0.3	0.3	0.4	—	—	—	—	—	—	—	—	—	—
Trade credit	8.4	10.3	11.9	15.4	17.1	20.1	20.6	24.0	24.0	24.1	23.0	23.7	[illegible]
Direct investment in U.S.	20.6	25.1	27.7	30.8	34.6	42.5	54.5	83.0	108.7	124.7	137.1	159.6	179.5
Other	3.9	2.4	2.3	6.3	-2.1	4.9	-0.4	7.1	0.9	0.4	0.1	5.0	[illegible]
Memo:													
Total liabilities of foreigners to U. S.	181.3	208.3	237.2	277.8	298.8	362.5	425.7	477.6	542.7	547.7	582.3	597.1	[illegible]

Source: Federal Reserve Board, Flow-of-funds

Table 10.

Net Increase in U.S. Credit Market Debt Held by Foreigners, 1962-1985 ($ billions)

	Total Net Increase in Foreign Holdings of U.S. Credit Market Debt*	Net Increase in Foreign Holdings of U.S. Treasury Issues	Net Increase in Foreign Holdings of U.S. Corporate Bonds	Net Increase in Foreign Holdings of U.S. Acceptances
1962	1.4	1.3	0.0	0.0
1963	0.7	0.6	0.1	0.0
1964	0.8	0.4	0.2	0.2
1965	0.2	0.0	-0.2	0.4
1966	-1.6	-2.5	0.6	0.2
1967	2.0	2.1	-0.1	0.0
1968	0.2	-0.5	0.2	0.6
1969	-0.4	-2.0	0.5	1.0
1970	10.4	9.3	0.7	0.5
1971	26.5	26.3	0.3	-0.2
1972	8.4	8.4	0.1	0.0
1973	0.6	0.3	0.0	0.3
1974	11.2	3.7	0.9	6.6
1975	6.1	8.1	0.6	-2.6
1976	15.2	11.6	0.9	2.7
1977	39.6	31.5	3.8	4.4
1978	33.3	23.5	1.9	7.8
1979	-4.5	-14.1	2.6	6.9
1980	23.3	10.7	8.2	4.5
1981	16.2	6.9	8.4	0.8
1982	22.8	12.8	10.6	-0.5
1983	27.1	16.9	4.9	5.4
1984	45.9	26.5	16.4	3.0
1985	72.8	21.8	41.4	9.6

* Totals will not always add up due to rounding.

Source: Federal Reserve Board, Flow-of-funds

TABLE 11.

Measures of Foreign Investment in U.S. Credit Market Debt, 1962-1985
($ billions and percentages)

	(1) Net Increase in Total Credit Market Debt in the U.S.	(2) Net Increase in Foreign Investment in U.S. Credit Market Debt	(3) (2) ÷ (1) %	(4) Net Increase in U.S. Treasury Securities	(5) Net Increase in Holdings of U.S. Govt. Securities by Foreign Investors	(6) (5) ÷ (4) %	(7) Net Increase in U.S. Corporate Bonds	(8) Net Increase in Holdings of U.S. Corporate Bonds by Foreign Investors	(9) (8) ÷ (7) %	(10) U.S. Net Exports of Goods & Services
1962	60.2	1.4	2.3	6.2	1.3	21.0	4.4	0.0	0.0	6.4
1963	66.4	0.7	1.0	4.1	0.6	14.6	5.2	0.1	1.9	7.6
1964	73.1	0.8	1.1	5.3	0.4	7.5	6.3	0.2	3.2	10.1
1965	80.4	0.2	0.2	1.3	0.0	0.0	7.7	-0.2	-2.6	8.8
1966	76.9	-1.6	-2.1	2.4	-2.5	-104.0	10.4	0.6	5.8	6.5
1967	79.8	2.0	2.5	8.9	2.1	23.6	15.4	-0.1	-0.6	6.3
1968	108.2	0.2	0.2	10.4	-0.5	4.8	13.3	0.2	1.5	4.3
1969	117.0	-0.4	-0.3	-1.2	-2.0	-167.0	12.8	0.5	3.9	4.2
1970	108.7	10.4	9.6	12.8	9.3	72.7	23.5	0.7	3.0	6.7
1971	151.9	26.5	17.4	26.1	26.3	101.0	23.7	0.3	1.3	4.1
1972	190.9	8.4	4.4	14.2	8.4	59.2	15.3	0.1	0.6	0.7
1973	240.4	0.6	0.2	7.9	0.3	3.8	13.6	0.0	0.0	14.2
1974	226.5	11.2	4.9	12.1	3.7	30.6	22.7	0.9	4.0	12.4
1975	213.2	6.1	2.9	85.8	8.1	9.4	30.4	0.6	2.0	26.8
1976	284.4	15.2	5.3	69.1	11.6	16.8	32.8	0.9	2.7	13.8
1977	380.7	39.6	10.4	57.7	31.5	54.6	32.9	3.8	11.6	1.9
1978	456.3	33.3	7.3	55.1	23.5	42.6	28.7	1.9	6.7	4.1
1979	487.3	-4.5	-0.9	38.8	-14.1	-36.3	25.1	2.6	10.4	18.8
1980	412.3	23.3	5.7	79.8	10.7	13.4	28.4	8.2	28.9	32.1
1981	487.2	16.2	3.3	87.6	6.9	7.9	25.3	8.4	33.2	33.9
1982	457.2	22.8	5.0	162.1	12.8	7.9	28.3	10.6	37.5	26.3
1983	643.1	27.1	4.2	186.7	16.9	9.1	24.9	4.8	19.3	-5.3
1984	906.9	45.9	5.1	199.0	25.6	12.9	73.0	16.4	28.4	-59.2
1985	1,070.9	72.8	6.8	223.6	21.8	9.7	96.5	41.4	42.9	-74.4

Mr. TAUZIN. Do you have to leave now, Mr. O'Leary?

Mr. O'LEARY. I do. I could maybe answer a question or two if you have them.

Mr. TAUZIN. If you gentlemen don't mind, I would like to pursue one thought with you. Is it realistic to believe that the U.S. foreign trade deficit is going to improve even as the dollar declines in international markets when half of the deficit is made up of energy imports and those imports are on the rise, not on the decline?

Mr. O'LEARY. Up until a relatively short period of time ago, we were running a trade surplus, in spite of the fact that we had those energy imports. So it is reasonable to expect over a period of time with this depreciation in the value of the dollar that the trade deficit will at least be markedly reduced. That is our policy. That is our hope, that it will achieve that.

I would say within a period of 4 or 5 years, if these exchange rates hold, there is a good chance that we may come back into a trade surplus position. This will take time, but that is our policy. That is what we are shooting for. That is what we are trying to achieve. That is the reason we have got the pressure on to depreciate the dollar relative to the yen, relative to other currencies. That is the whole objective of it, to correct that trade deficit.

Mr. TAUZIN. Mr. O'Leary, the early signs for this year are that despite the position of the dollar on most of the world markets, as low as it has been since some of the years in the seventies, the trade deficit is not really moderating dramatically. On the contrary, we are going through a period of enlarging energy imports, and the prospect of losing the domestic capacity to produce as a result of the cheap prices in the marketplace tends to put us into a more vulnerable position with regard to pricing of those energy imports into the future.

Don't the trend lines indicate that we are going to be in worse shape on foreign trade, not better shape?

Mr. O'LEARY. No, I don't think so. I think those people who study trade flows anticipated that this decline in the value of the dollar would have its effect only with a considerable lag. It is what economists call the so-called J curve. Traditionally, when a currency is depreciated, its trade position is improved but it is improved with a lag of several months. Most business forecasts today predict a stronger second half of the year, anticipating that we are going to begin to see the advantageous effect of the depreciation in the value of the dollar as we go through the second half of the year.

Mr. TAUZIN. We will be interested in seeing that.

Thank you very much. As you can see, when Mr. Volcker left, we almost lost most of our committee here. Mr. O'Leary, thank you very much for your contributions today.

Mr. Segal, would you proceed, sir.

STATEMENT OF HARVEY H. SEGAL

Mr. SEGAL. Thank you, Mr. Chairman.

I share Mr. O'Leary's concern about the rapid growth of domestic debt, especially over the last 2 years. I think it is a trend that can't be sustained for long, especially in an environment of low and falling inflation.

I am a little bit more optimistic that somehow things will turn for the better. I like to think that the debt surge is principally the reflection of forces that are partly aberrant and essentially reversible; that the surge in household debt will be moderated as the stimulus of lower home mortgage rates is spent; that the Gramm-Rudman-Hollings restraints will really slow Federal spending and as a result reduce U.S. Government borrowing a bit; and finally, that the uncertainty over the tax exempt status of municipals—and that is the fuel behind the veritable explosion of State and local government offerings—will be banished.

Now, those may prove to be tall hopes, but I don't think that a failure to realize them is necessarily going to spell disaster. We live in a fiat money world, and I would agree with what Mr. O'Leary implied, that if we get in trouble, we are going to inflate our way out.

Now, what troubles me more than the size or the growth of our debt is its composition. I think that we have lost sight of an old but valid distinction between productive debt, which finances additions to real wealth or productive capacity and enhances economic efficiency, and debt which is a counterpart of none of those benefits and so is a dead weight burden.

Unfortunately, a lot of the Federal debt falls into this category, and in my view it is particularly menacing because of the ease with which the Government can lighten the real burden through inflation. You know, it is fashionable in magazine and newspaper articles to point to dead weight in discussion of the Third World debt, but I think that the invidious distinctions that have been drawn between the First World and the Third World countries are a bit exaggerated.

Finally, a last point, Mr. Chairman, about which I have very strong feelings. I think that the governors of the Federal Reserve Board and those of you in Congress who pressured them took no real account of the distinction between productive and dead weight debt when on January 8 they extended regulation G to so-called junk bonds issued in hostile corporate takeovers.

The ostensible reason at the time was that bond-financed takeovers were leading to the dangerous overleveraging of the corporate sector, but there is no evidence to support that view then or in some of the numbers that Mr. O'Leary has presented in evidence. If that view were valid, the Fed should have extended Reg G to all bond-financed changes in ownerships, not just the hostile takeovers.

So what began as a misplaced concern over corporate debt has made Congress, through the agency of the Fed, a potentially dominant player in contests for control of publicly held companies. It is not a role that a legislature should play. What is more, I believe that there is a strong and positive case to be made for more, rather than less, corporate debt.

Greater reliance on credit markets and less on internally generated funds would enhance corporate profitability, preclude ill-advised efforts to diversify, and diminish conflicts between managers and outside investors.

Thank you.

[The prepared statement of Mr. Segal follows:]

Statement by

Harvey H. Segal

Fellow

Manhattan Institute for Policy Research

Thank you, Mr. Chairman. I'm Harvey Segal of the Manhattan Institute, and I'm honored by the Subcommittee's invitation to testify on the problems of indebtedness. It's a large subject, and my principal interest is in persuading you that there's a serious misunderstanding about the debt --the so-called junk bonds--issued to finance corporate takeovers. But in leading up to that issue, I'll first touch on some other matters of general concern.

The growth of total domestic debt: Policymakers become concerned--and rightly so--when the growth of debt oustripes the growth of income. The fear is that borrowers will become overburdened and that there will be defaults followed by destabilizing reductions of credit demand. And the situation is complicated when the growth of nominal income --GNP at current prices-- is strongly affected by price deflation.

James O'Leary in his excellent analyses of the debt explosion points to to an inordinately large gap that's opened up between the growth of total debt and the growth of nominal income, and E. Gerald Corrigan, president of the New York Federal Reserve Bank, has raised essentially the same point. What happened in 1985 is that nominal GNP grew at only 5.8% while total debt grew at very rapid 15%. The principal reason for the wide gap was the fall of inflation, as measured by the GNP deflator, to only 3.3%, the lowest annual increase since 1967. Now I prefer what happened last year over what happened in 1981 when nominal GNP increased at 11.7% and total debt at 10.5. The gap, to be sure is smaller. But that's because inflation in 1985 was 9.7%, a record high and real GNP increased by a puny 1.9%

But while I prefer last year's mix of inflation and real growth to that in 1981, there is a gap problem. Clearly it would be difficult to go on piling up debt at such a rate, particularly in the face of falling rather the rising inflation, a situation in which the real burden of debt increases. A solution, in my view, will come when some special forces cease to operate. Household debt in 1984-5 rose sharply because of the drop of home mortgage rates. There was veritible explosion of state and local govenment issues because of the great uncertainty of the tax-exempt status of municipal securities. And U.S. government borrowing was very high because of the failure reduce federal expenditure. I think that each of those special forces will, to one degree or another, be reversed by next year. Yet if I'm proven naively optimistic, it won't be disastrous. The American economy, especially in this age of fiat money, can weather a debt problem. As Adam Smith replied when told by a friend that the surrender of General Burgoyne would "ruin" Britain, "There's much ruin in a nation."

Productive and dead-weight debt: About 150 years ago when our state governments were enthusiastically promoting the construction of turnpikes, canals and railroads--or what were popularly called "internal improvements"--governors were fond of making a distinction between productive and dead-weight debts, those debts that added to real wealth, productive capacity and economic efficiency and those that didn't. There is, to be sure, a subjective element in determining what's truly productive and what fails to meet that criterion. But most of the U.S. government debt is dead weight, and it also poses a constant threat because of the temption to inflate and thus lighten the real burden of interest and principal.

The distinction between dead-weight and productive is explicit in much of the concern over Third World debt with horror stories of huge dams and other projects which were fully funded but never built. Most of them are probably true, but our record in the First World doesn't justify the piously invidious comparisons that are often drawn. There's a lot dead-weight debt on the U.S. balance sheet, and it isn't all confined to the federal government. I've recently been looking at the state of New York which has a total debt more than $45 billion, many times national average on a per capita basis, and much of it very debt weight. If there is no objection, I should like to submit my New York State piece -soon to published by the Manhattan Institute - for the record.

Debt and contests for corporate control: There's no evidence in the flow-of-funds numbers that corporate debt is growing at an alarmingly rapid, unsustainable rate. In fact, the borrowings in 1985 were markedly less than in 1984. And it's for that reason, as well as others, that I very much regret the Federal Reserve Board's decision of January 8 to extend the Regulation G margin to the so-called junk bonds issued to finance hostile corporate takeovers. Mr. Chairman, those reasons were set forth in my Washington Post op-ed piece of January 27 which I should like to submit for the record. Aside from the very real mischief that could result if the Congress --through its agents on the Federal Reserve Board--were to become a major player in contests for corporate control, there are compelling arguments against any public policies that raise the costs of removing incumbent managers.

Recent analysis of the way corporations work -- ideas that can be traced by to Adam Smith-- views managers as working as the agents of the outside investors. And since the interests of the two groups diverge --managers, for example, have little interest in limiting their prerequisites --there are conflicts. One conflict that arises in mature or slow-growing industries, especially in these times of of deflationary pressures, is over the disposition of the "free cash flow". As pointed out in a brilliant paper by Michael E. Jensen, who teaches at both Harvard and Rochester, free cash flow is corporate income in excess of dividend payouts and what can be invested in viable capital projects. It's a surplus that's often gone to fund ill-advised and unsuccessful diversification efforts. And the failure to pay out the free cash flow to the shareholders depresses the market valuation of the company, opening a gap between the market value and what the individual pieces could be sold for in a divestiture.

Jensen argues --rightly, I believe--that much greater corporate reliance on debt financing would work to almost everyone's advantage. Shareholders would realize greater returns --and certainly the short-term experience with takeovers and leveraged buyouts supports that claim. And efficiency would be enhanced as ill-conceived conglomerates are dismantled and managers are forced to rely on the credit market rather than on retained earnings. But won't the leveraging make the corporate sector more unstable? Jensen's answer is no, and he points to the development of strip financing, arrangements under which investors buy bundles of debt and equity. With strip financing there's little incentive to force a troubled firm into bankruptcy. There would instead be recourse to reorganizations.

I don't think that current wave of takeovers and buyouts is an ephemeral phenomenon--the result of a conspiracy by greedy raiders, high real interest rates or deflationary pressures. I think instead that it's the result of the sort of pressures that emerge in a rich and mature economy. The Wall Street Journal (April 11, 1986) recently carried a feature story on Kohlberg, Kravis Roberts & Co., princes of the leveraged buyout, in which it's pointed out that both the pension funds of Oregon and Wisconsin are big KKR investors. Because the overwhelming bulk of our pension plans are benefit rather than contribution specific, there's enormous pressure to increase rates of return. And so pension funds are hardly reluctant to lean on inept managements. Back in the 1970s a friend who managed several billions of trade union pension funds used tell us of the personal abuse to which he was subjected when his forecasts of yields went awry. We though then that his it was his clients who were particularly uncouth. But since then the patience of the entire $1.25 trillion plus pension market has grown short.

I'd like to close with this thought. The outcome of contests for corporate control --like elections for political office--are never really predictable. Sometimes the winners will be worse than the incumbents they displace. But does Congress want to put itself in the position of prejudging the issue? Anyone who has ever served as anoutside corporate director would, I think, be inclined to say no.

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The Washington Post

MONDAY, JANUARY 27, 1986

Harvey H. Segal

The Fed's New Junk Bond Rule

Time was when reasonably well-informed people knew just what the Federal Reserve Board is supposed to do. As the executive arm of our central bank, it regulates the creation of money and credit. But that changed on Jan. 8.

As a result of a too little noted rule on the use of what are pejoratively known as junk bonds, the Fed has greatly expanded its scope. It can now function as a corporate takeover review board, making it a truly major player in battles to change the managements of publicly held companies. And in that new role, there's the danger that the Fed will inflict losses on shareholders and diminish the efficiency of the economy.

Here's what the Fed did. First, in an unprecedented move, it extended Regulation G to junk bonds issued in hostile takeovers. Reg G, authorized in 1934, protects lenders against losses on loans that are secured by stocks and bonds. Buyers have to put up at least 50 percent in cash and secure their loans by pledging the purchased securities. The Fed's rationale for bringing the hostile raiders' junk bonds under Reg G is that they are "indirectly secured" by the stock of the targeted company.

Second, the Fed limited the new extension of Reg G to bonds issued by a "shell corporation," an entity with no business operations, no cash flow and no significant function other than to acquire the stock of the targeted company. Hence the Fed would have exempted Pantry Pride, an operating company, in the Revlon takeover.

Now you don't have to be a corporate raider to argue that the Fed's move was bad, and here's why.

Flaw One: The Fed stretches credulity in contending that junk bonds are indirectly secured by the targeted company's stock. Buyers of junk bonds know fully well that they are secured by the income and assets of the acquired company. And that's perfectly obvious when the shell merges with the target and retires its stock.

Flaw Two: The shell test flies in the face of financial realities. Why, in corporate takeovers, are consortiums of wealthy individual investors and large financial institutions viewed as less credit worthy than operating companies?

Flaw Three: The new rule discriminates against those seeking to oust incumbent managements. The new G-rule doesn't apply to friendly takeovers or leveraged buy-outs in which insiders float scads of junk bonds to take companies' private stock. These exemptions contradict the warnings of Fed officials that corporate debt is dangerously high. Actually it isn't.

But the most important and harmful consequence of the Fed's action is that it hobbles takeovers. That's why the new G-rule was supported by the Business Council, the National Association of Manufacturers and the AFL-CIO. What will happen if the new G-rule is effective is that investors will be deprived of gains because stock prices usually rise sharply in takeovers. And the barrier to the removal of inept managers will make it more difficult for this country to hold its own in an increasingly competitive world.

Lest this be misconstrued as Fed-bashing, it should be said that the board responded to strong congressional pressure, which, in turn, was choked by the howls of threatened corporate managers. So what the Fed did was something that Congress as a whole would not have voted to do. All of which demonstrates that a bad government practice—bypassing the legislative process through pressure on a regulatory agency—makes for bad public policy.

The writer is a fellow at the Manhattan Institute for Policy Research.

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The Politics of Debt

by
Harvey Segal

New York is neither the biggest, the wealthiest nor the most populous state in the union. But it does bear the dubious distinction of having the largest debt. The debt of New York State and its authorities increased nearly tenfold between 1960 and 1985, to a total of $45.4 billion. Although $45.4 billion is a staggering number, the composition of the debt is as important as its size for what it says about the way in which the Empire State is governed.

According to New York's Constitution, debt issues are supposed to be approved by a majority of the electorate. Yet less than a fifth of New York's debt falls under the rubric of voter-approved "general obligations," bonds and notes backed by the full faith and credit of the state. All the rest, nearly $36.7 billion, was incurred through devices, sanctioned by the courts, that circumvented the Constitution.

Debts of New York State and its Authorities
(in billions of dollars)

	1960	1985
General obligations:		
Bonds and notes	$.99	$3.81
Tax anticipation notes	.15	4.30
Guaranteed authority debt	.50	.59
General obligations, total	1.64	8.70
Moral obligation bonds and notes	--	12.85
Lease-purchases	.01	5.64
Authorities: bonds and notes	2.92	18.19
Total debt	$4.57	$45.38

As a result, New York's long-term debt--the State and authority bonds outstanding--is twice as large as California's, with its much larger population. And the disparity for short-term debt--notes of a year or less--is even more striking. In 1984, New York's spring tax anticipation borrowing of $4.3 billion represented more than 40% of all short-term debt issued by states for operating purposes.

Nelson Rockefeller, in his long tenure as governor, relied on independent state authorities to undertake vast programs of urban renewal, higher education and housing. To finance that work--and bypass the legislative process--he introduced the

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moral obligation bond, which is backed only by a promise that the state will provide sufficient money to meet the interest payments. With that tenuous assurance--which is less than the conventional committment to repay the principal--the Urban Development Corporation, the Dormitory Authority, the Housing Finance agency and other entities began to sell, in 1961, billions of dollars of bonds and notes in the tax-free securities markets.

But after 15 years of smooth sailing, the moral obligation ship nearly foundered in 1975. The economy was in deep recession, and in February the Urban Development Corporation, no longer able to borrow, defaulted on its notes and a large bank loan. A second blow came in May when it became clear that New York City, after concealing large deficits for years, was stone broke. Albany's response to the Big Apple's embarassment was the Municipal Assistance Corporation. It issued more than $8 billion of moral obligation bonds and notes, more than doubling the total outstanding in a single year. At the same time New York's Legislature clamped ceilings on the moral obligation debts of other authorities so that the total outstanding has remained roughly constant since 1975.

Another device for running off-budget deficits are lease-purchases, under which the state agrees to lease buildings or other facilities rather than make outright purchases. Included in the $5.6 billion shown in the table is a $518 million obligation to the County of Albany for building Nelson Rockefeller's great Albany Mall.

The final and largest hunk of debt consists of those bonds and notes of the authorities for which the state has no obligation, moral or otherwise. It's sometimes said that those debts aren't really public obligations because they are so well secured by streams of revenue. But that's a sanguine view. The debts of the Port Authority, the Thruway and other agencies are very well secured and so are unlikely to become an additional burden on the taxpayers. But more than half of the $18.2 billion of debt was incurred by authorities that make loans for housing and hospitals, and the risk of default on those claims can't be ignored.

Assuming a conservative 7.5% rate, the interest on the entire state and authority debt comes to some $3.4 billion, and it's a burden that the electorate bears through higher taxes, tolls and other charges than they would otherwise pay. And that raises the question of why New York's debt is so large and why it contines to grow.

The answer is that without voter initiative, referendum and recall, there's no mechanism for breaking New York's vicious cycle of ever higher expenditures and ever bigger debt. Efforts to challenge the constitutionality of moral obligation bonds were rejected by the courts during the 1970s. And so long as wealthy New Yorkers are able to deduct state taxes on their federal income tax returns and buy a variety of tax-free securities issued by state authorities, the spend-and-borrow system--with the full support of lawyers and securities underwriters--will in the future operate much as it has in the past.

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Harvey Segal is a Senior Fellow at the Manhattan Institute.

Mr. TAUZIN. Thank you, Mr. Segal.
Mr. Soros.

STATEMENT OF GEORGE SOROS

Mr. SOROS. As you have probably seen from my written testimony, I am not a professional economist nor a recognized financial expert. I am a participant in the financial markets.

I have thought about the problems of credit long and hard and I have tested my views against the market. I believe you are right to be concerned about the unsustainable expansion of credit which has occurred in the last decade or so, but I am less sure about what this subcommittee or indeed Congress itself can do about it.

In my written testimony I have put before you a theoretical framework in terms of which the problem can be understood. In contrast to the prevailing wisdom, which maintains that markets are always right, I start from the position that markets are always biased, and the prevailing bias plays an important role in determining the course of events.

There is a two-way interplay between the participants' perceptions and the course of events, which I call reflexivity. The outcome is not the equilibrium described in textbooks but a continuous process of change. In a reflexive process, market expectations can be self-fulfilling but only up to a point because there is always a bias involved.

Using this approach, I developed the concept of a credit cycle and the concept of a regulatory cycle, and I have tried to locate where we are within that constellation. I concluded that the stage where credit expansion becomes unsustainable was actually reached in 1982, but the bust that usually follows a boom has been avoided by the successful intervention of the authorities.

Instead of a sudden catastrophic collapse of credit, the turning point came at different times in different sectors: In 1982 for the less-developed countries, in 1984 for the banking system and the savings and loan industry, and in 1986 for the Federal budget. I believe that 1986 is also a turning point for consumer credit, but it is too soon to be sure about that.

I am now more optimistic than I have been since 1982, although my optimism is directed more at the financial markets than at the real economy. The real economy has the backlash from the previous excesses to contend with: Banks are in the process of deleveraging; the fiscal stimulus is being withdrawn; the consumer is overextended; and large parts of the world are in depression.

I believe that the decline in oil prices also becomes a depressant beyond a certain point, say $16 a barrel. It is to be hoped that lower interest rates and the increased confidence engendered by the booming stock and bond markets will be sufficient to offset these negatives, but there is a real danger that financial stimulation will lead to financial speculation rather than economic growth.

This is the point I should like to expound on a little here.

There seems to be a large and growing dichotomy between the financial markets and the real economy. Viewed from Wall Street, the outlook couldn't be better. We are in the midst of what is now widely regarded as the boom of a lifetime. Yet, if we look at the real world, the picture is much less reassuring. Overall activity as measured by the GNP is sluggish. We could have a negative quarter coming up. There are pockets of deep trouble both at home and abroad.

Where does the dichotomy come from and what will it lead to? It is quite normal for the financial markets to discount developments in the real world in advance. If that is all that is involved here, there is nothing to worry about. By the same token, that would not be sufficient to generate the boom market of a lifetime.

I believe we are witnessing something more than a normal cyclical swing. We are at a peculiar point, both in the credit cycle and in the regulatory cycle.

In the credit cycle, we are now in the declining phase, but the doubtful debt has not been washed out of the system. It shows up on the asset side, not only of the banks but also of the holders of the banks' obligations. Moreover, for the last few years, our economy has been driven by a gigantic engine, namely the budget deficit, which has been spewing out financial claims in the process. As a consequence, the world is awash with financial assets. These assets are now finding their way into stocks and bonds.

In the regulatory cycle, we are at a curious point where the bias in favor of deregulation is still reining supreme but the need for government intervention in specific areas is beginning to reassert itself. In particular, the regulation of banks has been tightened but financial markets enjoy a greater degree of freedom than at any time in the last 50 years.

Banks are obliged to de-leverage, so that they are reluctant to extend credit unless they can package it and resell it. But with the creation of new financial instruments, there is no limit on the amount of leverage available in the financial markets. Even as the Federal Reserve contemplates the feasibility of abolishing margin requirements on stock purchases, currently standing at 50 percent, index futures are traded with a margin of 6 percent or less. Futures trading has grown to such an extent that it has become the tail that wags the dog.

These conditions are conducive to a boom-bust sequence in the stock and bond markets which is initially self reinforcing but eventually self defeating. During the self-reinforcing phase, the process exerts an almost irresistible attraction for funds. The self-reinforcing phase is going to continue as long as the real economy languishes.

I have no doubt that the self-reinforcing phase of the boom market will not last forever. The deflationary forces currently at work will eventually exhaust themselves and, with the help of lower interest rates, the economy will eventually pick up. But, I suspect that a boom in the real economy is going to be delayed and by that time stock prices may have reached such dizzying heights that a rise in interest rates may precipitate a crash and cut the recovery short.

We have recently experienced a similar development in a foreign exchange market. With the dollar rising and interest rates high, foreigners could make more money holding dollar assets than in any other way. No wonder that the dollar kept on rising. It has required the concerted effort of the authorities to reduce the prospect of an eventual collapse.

I should like to emphasize that I am not predicting a stock market crash, certainly not at this stage of the game. I do believe that the risk of excesses has shifted from the banking system to the financial markets. History shows that excesses are much harder to correct after they have occurred than before.

I do not have any specific recommendations to put before you. I realize that the idea that the financial markets need to be controlled is an athema to those who are still bewitched by the magic of the marketplace.

The thought I should like to leave with you is that financial markets are inherently unstable and stability can be preserved only by making it an explicit policy objective. The instability is due to the imperfect understanding of the participants and that includes the regulators. This is a consideration that should be kept in mind in devising regulations.

I believe existing margin regulations ought to be preserved and the leverage inherent in some of the newer financial instruments ought to be looked at.

Thank you.

[Testimony resumes on p. 162.]

[The prepared statement of Mr. Soros follows:]

Testimony of George Soros

President, Soros Fund Management Co., Inc.

before the

Subcommittee on Telecommunications,

Consumer Protection and Finance

April 23, 1986

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My name is George Soros. I am not a professional economist nor a recognized financial expert. I am a participant in the financial markets. I manage an international investment fund which has grown from $6 million in 1969 to $1.4 billion currently, mainly through capital appreciation. Ten thousand dollars invested in 1969 have appreciated to 2.2 million dollars currently, a compound rate of growth of 35.5 percent over the last 16 years. I have thought about the problems of credit long and hard and I have tested my views against the market. I believe you are right to be concerned about the unsustainable expansion of credit which has occured in the last decade or so, but I am less sure about what this Subcommittee, or indeed Congress itself, can do about it.

Instead of plying you with a lot of statistical information, I shall try to put before you a theoretical framework in terms of which the problem can be understood. I start from a position which is diametrically opposed to the generally accepted view. Theories of efficient markets and rational expectations attribute to market participants taken as a group an ability to anticipate future developments which they do not possess as individuals. Market prices are supposed to discount the future with an accuracy that borders on the miraculous. Markets are always right - that is prevailing wisdom.

I disagree. I take the view that the participants' understanding is inherently imperfect. My position can be justified on epistomological grounds - the object of the participants' understanding is subject to their own decisions - but we need not go into that here. Suffice it to say that participants always bring a certain bias to the decision-making process and markets which combine the decisions of individual participants always manifest a prevailing bias. The prevailing bias affects the course of events, endowing markets with a certain ability to fulfill their own expectations. In other words, it is not market expectations that reflect the future correctly, but the future that reflects - to a greater or lesser extent - current expectations. The correspondence between future events and current expectations is never perfect - if it were, the concepts of efficient markets and rational expectations would be justified - but it is pronounced enough to give these misleading concepts some credibility. Moreover, the correspondence is greater for the market taken as a whole than for the individual participants - that is because it is the prevailing bias, as expressed in market prices, that influences the future course of events rather than the bias of the individual participant.

In my interpretation, the prevailing bias plays an important role in shaping the course of events. It is not the only force at work but it is a force whose importance has not been properly appreciated. It is unique to situations which have thinking participants - there is no counterpart to be found in the phenomena studied by natural science. That is, in fact, the reason why it has been ignored. Economists have been so anxious to create a hard science comparable to the physical sciences that they went to great trouble to eliminate a disturbing influence that stood in the way. They assumed perfect knowledge even though they could not support it with empirical evidence. The result is an elegant theoretical construction with imposing mathematical formulae whose relevance to the real world is questionable. Economic theory is based on the concept of equilibirum, but if the participants' bias plays a causal role, equilibrium is never reached. What we have instead, is a process in which the participants' perceptions influence the course of events while the course of events influences the participants' perceptions in a never-ending sequence. I use the word "reflexive" to describe the interaction between perception and reality in the sense in which the French call a verb reflexive when its subject also doubles as its object. One may speak of an adjustment process but then one must realize that the participants are aiming at a moving target and the moving of the target is part of the same process as the adjustment.

The process is likely to lead to excesses in one direction or another. It starts with a prevailing bias which affects the course of events. The result may reinforce the bias. If it does, the process may continue until both the bias and its influence on the course of events become excessive. Since there is a bias involved, events cannot continue to fulfill expectations indefinitely, especially when the bias is becoming progressively more pronounced. Eventually, expectations are bound to be disappointed, or else there may be an external event that cuts across expectations. When that happens, a self-reinforcing process starts working in the opposite direction. The trend, which had been sustained by expectations, is reversed, causing expectations to be reversed, and reversed expectations reinforce the reversed trend. We can observe such initially self-reinforcing and eventually self-defeating sequences all around us. They are as much a part of the economic landscape as the "normal" adjustment process we are familiar with from the textbooks. These reflexive processes are particularly prevalent whenever credit is involved.

There seems to be a special affinity between reflexivity and credit. That is hardly surprising: credit depends on expectations; expectations involve bias; hence credit is one of the main avenues that permit bias to play a causal role in the course of events. But there is more to it. Credit seems to be associated with a particular kind of reflexive pattern which is known as boom and bust. The pattern is asymmetrical: the boom is drawn out and gradually accelerating, the bust sudden and often catastrophic. By contrast, when credit is not an essential ingredient in a reflexive process, the pattern tends to be more symmetrical. For instance, in the foreign exchange market it does not seem to make much difference whether the dollar is rising or falling: the exchange rate seems to follow a wavelike pattern.

I believe the asymmetry arises out of the reflexive connection between loan and collateral. In this context I give collateral a very broad definition: it will denote whatever contributes to the creditworthiness of a debtor, whether it is actually pledged or not. It may mean a piece of property or an expected future stream of income; in either case, it is something on which the lender is willing to place a value. Valuation is supposed to be a passive relationship in which the value reflects the underlying asset; but in this case it involves a positive act: a loan is made. The act of lending may affect the collateral value: that is the connection that gives rise to a reflexive process.

The act of lending usually stimulates economic activity. It enables the borrower to consume more than he would otherwise, or to invest in productive assets. There are exceptions, to be sure: in case of a leveraged buy-out, for instance, the effect is not necessarily stimulative. By the same token, debt service has a depressing impact. Resources that would be otherwise devoted to consumption or the creation of a future stream of income are withdrawn. As the total amount of debt outstanding accumulates, the portion that has to be utilized for debt service increases. It is only net new lending that stimulates; and total new lending has to keep rising in order to keep net new lending stable.

A strong economy tends to enhance the asset values and income streams which serve to determine creditworthiness. In the early stages of a reflexive process the amount of credit involved is relatively small so that its impact on collateral values is negligible. That is why the expansionary phase is slow to start with and credit remains soundly based at first. But as the amount of debt accumulates, total lending increases in importance and begins to have an appreciable effect on collateral values. The process continues until a point is reached where total credit cannot increase fast enough to continue stimulating the economy. By that time, collateral values have become greatly dependent on the stimulative effect of new lending and as new lending fails to accelerate, collateral values begin to decline. The erosion of collateral values has a depressing effect on economic activity which in turn reinforces the erosion of collateral values. Since the collateral has been pretty fully utilized at that point, a decline may precipitate the liquidation of loans, which, in turn, may make the decline more precipitous. If the value of the collateral falls below the value of the loans outstanding, we have a bust. This is the anatomy of a typical boom and bust sequence.

Booms and busts are not symmetrical because at the inception of a boom, both the volume of credit and the value of the collateral are at a minimum; at the time of the bust, both are at a maximum. But there is another factor at play. The liquidation of loans takes time; the faster it has to be accomplished, the greater the effect on the value of the collateral. In a bust, the reflexive interaction between loans and collateral becomes compressed within a very short time frame and the consequences can be catastrophic. It is the sudden liquidation of accumulated positions that gives a bust such a different shape from the preceding boom.

The reflexive relationship between the act of lending and the value of the collateral is not an easy one to work with. The stimulative effect of lending depends on what it is used for; a loan utilized to build a new plant will stimulate the economy while a loan used for a leveraged buy-out will not. Moreover, the effect of economic stimulation on collateral values varies according to the stage of the cycle: it is likely to be negligible in the early stages and more pronounced as the amount of credit accumulates. It would be difficult to establish a quantitative relationship between lending and collateral; but it would be equally difficult to deny its existence. For instance, in the international lending boom of the 1970s, both the gross national product of the borrowing countries and the value of their export commodities rose so rapidly, that their debt servicing capacity, as measured by various debt ratios, more or less kept pace with their debt burden, in spite of the exponential growth of their overall indebtedness. Only after the second oil shock did the various debt ratios begin to deteriorate significantly but by then it was too late to arrest the process.

The amazing thing is that the reflexive connection between lending and collateral has not been generally recognized. There is an enormous amount of literature on the trade cycle, but I have not seen any mention of it. Moreover, the trade cycles which are generally discussed in textbooks do not correspond to the credit cycle I have described here. They are short-term fluctuations within the larger pattern. There is an awareness of a larger cycle, such as the Kondratieff Wave but it has never been "scientifically" explained.

Exactly where we are in the larger cycle is difficult to determine. I must confess I have been confused on the issue since 1982. The reason for my confusion is that while the boom has clearly run out of steam, the bust has not taken place.

Busts can be very disruptive, especially if the liquidation of collateral causes a sudden compression of credit. The consequences are so unpleasant that strenuous efforts are made to avoid them. The institution of central banking has evolved in a continuing attempt to prevent sudden, catastrophic contractions in credit. Since a panic is hard to arrest once it has started, prevention is best practiced in the expansionary phase. That is why the role of central banks has gradually expanded to include the regulation of money supply. That is also why organized financial markets regulate the ratio of collateral to credit.

In the current cycle, the authorities have been able to prevent a bust. We find ourselves in a twilight zone where the "normal" process of credit expansion has culminated long ago but the "normal" process of credit contraction has been prevented by the authorities. We are in uncharted territory because the actions of the authorities have no precedent. If it had not been for their intervention, the international debt crisis of 1982 would surely have culminated in a bust and again in 1984 the twin problems of the Continental Illinois Bank and of Financial Corporation of America would likely have culminated in a banking crisis. We are now facing trouble in Texas and in Mexico but financial markets are confident of the

Central Banks' ability to handle the situation.

The boom and bust pattern has been broken because the regulators have been successful in intervening. Instead of a simple credit cycle we are witnessing a more complex process, which has two sets of participants instead of one: competitors and regulators.

The key to understanding this complex process is to realize that the regulators are also participants. There is a natural tendency to regard them as superhuman beings who somehow stand outside and above the process and intervene only when the participants have made a hash of it. That is not the case. They are also human, all too human. They operate with imperfect understanding and their activities have unintended consequences. They seem to adjust to changing circumstances even less well than those who are motivated by profit and loss, so that regulations are generally outdated: they are designed to prevent the last mishap, not the next one. The deficiencies of regulation tend to be more noticeable when conditions are rapidly changing and conditions tend to change more rapidly when the economy is less regulated.

One begins to discern a reflexive relationship between the regulators and the economy they regulate. There are excesses in regulation, just as there are excesses in credit, but the regulatory cycle does not have the asymmetric character of the credit cycle. The swings from excessive regulation to excessive deregulation are more likely to follow a symmetrical, wavelike pattern, similar to the over and undervaluation of the dollar in a freely floating exchange rate system. The length of the cycle seems to be correlated with the credit cycle and one can sense intuitively why that should be so. Credit expansion and contraction have much to do with changes in the economy which in turn have a bearing on the adequacy of regulations. Conversely, the regulatory environment influences not only on how fast credit can expand but also how far. Clearly, there is a two-way connection between credit and regulation, but it is far from clear to me at present what pattern, if any, the interaction follows. This is the main source of my confusion.

I have identified a credit cycle that follows a boom/bust pattern; a regulatory cycle that is more wavelike, and an interplay between the two whose pattern is unclear. There are, of course, many secular developments involved as well, some of which relate to credit, some to regulations, and some to both. I have mentioned that central banks tend to get stronger after each crisis: that is a secular development that renders each cycle unique. In the Great Depression both the banking system and the international trading system collapsed, making the contraction of credit and economic activity much more severe than it would have been otherwise. We can be certain that every effort will be made to avoid a similar collapse in this cycle. I did not mention the information revolution which is creating a more flexible and volatile financial system nor the increasing integration of the world economy. These and other influences conspire to produce a unique course of events which it is easier to explain than to predict.

This is the theoretical framework I use. It does not yield any unconditional predictions because the future course of events is always contingent on the participants' decisions. It may be considered unsatisfactory on that account; but perfect understanding is not vouchsafed to me any more than to other market participants.

Using this framework, the entire post-war period may be considered as a period of credit expansion. The expansion became unsustainable, especially in the field of international lending, after the second oil shock and the banking system would have collapsed if the lenders of last resort had not come to the rescue. Recognizing how difficult it would have been to protect the banks, they made history by bailing out the borrowers. I thought at the time that the turning point in credit expansion had been reached but I was wrong. Only international lending to the heavily indebted countries came to a stop, the overall expansion of bank credit continued unabated.

It was a measure of the seriousness of the international debt problem that in spite of a substantial reverse flow of resources from the heavily indebted countries, made possible only by severe declines in economic activity, overall levels of indebtedness have continued to rise. The problem continues to fester and several countries are probably past the point of no return; that is to say, they will never be able to improve their debt ratios significantly. Arranging for an orderly reduction of their debt burden - similar to bankruptcy reorganization procedures in any civilized country - is a task which has not yet been tackled.

The magnitude of the potential losses was so great that the banks could not have taken them. Therefore they were protected from having to do so. Instead, arrangements were made to lend to the heavily indebted countries, on a collective basis, the amounts necessary to keep the loans current. The loans stayed on the books; indeed, they rose by the amounts newly lent on a collective basis. The banks sought to reduce their exposure to the less developed countries. Since they could not do so in absolute terms, they tried to achieve it relatively, by increasing the rest of their business. Their aggressive expansion helped the economy, both in this country and in other parts of the world; but it increased the leverage in the balance sheets of the banks even further.

The real impetus to economic recovery came from the budget deficit. Fortuitously, it was already in place at the time the international debt crisis broke but it was kept in check by a highly restictive monetary policy. When the monetary brakes were taken off, the economy took off. The outcome was a strange combination in which a strong economy, a strong currency, a large budget deficit and a large trade deficit mutually reinforced each other to produce non-inflationary growth. What was a benign circle for the United States was a vicious circle for the debtor countries. High real interest rates and low commodity prices combined to render the debt burden even harder to bear. Since the kingpin of the whole constellation was the rearmament policy of the United States, it can be aptly described as Imperial Circle.

Neither the headlong expansion of bank credit nor the Imperial Circle was sustainable indefinitely. The turning point in the banking system came in 1984, with the twin crises of Continental Illinois Bank and Financial Corp. of America. Regulatory attitudes underwent a radical shift: capital requirements were raised and the examiners became much tougher in the treatment of bad loans. Banks reacted by restricting their lending and expanding their service activities. The net effect was to move liabilities off the balance sheets of the banks. In response, the regulators have recently imposed capital requirements on off-balance sheet items. All in all, the current activities of the banks seem to be conducted on a sound basis and it is only the remnants of past mistakes that are causing difficulties.

The Imperial Circle was unsustainable, first, because the trade deficit engendered by the strong dollar was bound to have a negative effect on economic activity and second, because the exponential growth of the budget deficit could not be tolerated for ever. The turning point in the dollar came in 1985; in the budget deficit in 1986. There was a danger that the Imperial Circle would be reversed and a declining dollar would combine with a declining economy to create a vicious circle; but the danger was averted by engineering an orderly decline in the exchange rate and a coordinated reduction in interest rates.

The outlook is now quite favorable, although more so for the financial markets than for the economy. The economy has many deflationary forces to contend with and it is to be hoped that lower interest rates and the increased confidence that is engendered by the booming stock and bond markets will be sufficient to offset them. Much depends on when capital will start moving from financial into real assets. That, in turn, depends on relative rates of return. The volatility of markets and the possibilities of leveraging favor financial speculation over investment in real assets.

My review has been sketchy and incomplete. I have not dealt with the problem of agricultural loans, the problems in real estate, the price of oil, consumer credit and many other issues. The picture that emerges is that the expansionary phase of the credit cycle is behind us but, with the help of the regulatory authorities, the turn did not come all together but at different times in different sectors. As a consequence, a bust has been avoided. In the regulatory cycle we have seen an almost complete swing from excessive government regulation to unrestrained competition. We are now at a curious moment when the bias in favor of deregulation is still strong but the need for government intervention in specific areas is beginning to reassert itself.

Regulation of the banking industry has been tightened, the freely floating exchange rate system has been abandoned; and the need to coordinate economic policies has been recognized. The hands-off attitude of the first Reagan administration has been quietly replaced by a more active management of the economy. It is this subtle shift that makes me more optimistic about the outlook than I have been since 1982.

Three main problem areas deserve your attention. One is the legacy of past excesses; another is the prospect of new excesses in the future; and the third is the need for a stronger institutional framework for international cooperation.

The international debt problem has been contained but it continues to fester. In every civilized country, there are legal procedures for the orderly liquidation of excessive indebtedness. We have no such procedures for international debt: they need to be developed. Mexico will soon offer us an opportunity to do so.

There are many problems with domestic debt as well. The precipitous decline in the price of oil is rapidly pushing a number of banks over the brink; but the orderly liquidation of insolvent institutions is now a well trodden road. Still, as the number of institutions multiplies, a simmering problem will gradually approach the boiling point.

Traditionally, the authorities prefer to arrange the acquisition of failing institutions by larger, sounder ones. Such forced mergers used to offer an easy way out when the industry was tightly regulated, failures were few and far between and the acquiring institutions were financially strong. The failing bank had a valuable franchise that could be auctioned off to the highest bidder without endangering the structure of the industry. But as the processs of credit expansion and deregulation progressed, the procedure of "merging out" insolvent units became both more frequent and less satisfactory. The franchises became less valuable and the acquiring institutions less able to withstand a dilution of their financial strength. A concentrated industry is seemingly stronger. For instance, the clearing banks of England have never had any difficulty in attracting deposits although Midland Bank, for one, was in worse shape than any of the surviving banks in the United States. But increasing concentration increases the danger of catastrophic losses. What would happen to England if the clearing banks were unable to collect interest on their loans to less developed countries? Closer to home, Bank of America was encouraged to acquire First of Seattle; but who is going to acquire Bank of America if the need arises? We have already had the first instance, that of Continental Illinois Bank, where no buyer could be found. We may yet arrive at a point where several of our largest banks end up as public property. It has happened in other countries.

Looking ahead, I see the risk of excessive credit expansion shifting from the banking system to the financial markets. Bank regulation has been tightened, but the idea that credit needs to be controlled remains anathema to believers in the "magic of the market place". Even as the Federal Reserve System contemplates the feasibility of reducing or eliminating margin requirements on stock purchases - currently standing at 50% - index futures are traded with a margin of 6% or even less and futures trading has grown to such an extent that it has become the tail that wags the dog. For a variety of reasons, some of which I mentioned here, we are in the midst of what I consider "the bull market of a lifetime". If we do not control the credit involved, it may well end up in a crash, just as it did in 1929. We are very far from that point, but it is worth thinking about it.

Historically, the institution of central banking has evolved in response to crises. We have recently passed through a series of financial crises which have been successfully contained. There is therefore no pressure to strengthen the institutional framework. That is a pity. The world economy is much more interdependent and in particular, capital moves much more freely and rapidly than ever before. I believe we are badly in need of an international central bank of some kind. The regulators have made many mistakes in the last 15 years, the worst of which was to allow commercial banks to go on a competitive lending spree to less developed countries. They have a valid excuse: competitive pressures prevent them from excercising adequate control over international capital flows. An international central bank would be able to control international credit and - given the imperfect understanding of participants - credit needs to be controlled.

Mr. TAUZIN. Thank you, Mr. Soros.

Mr. Segal, you mentioned your hope in the Gramm-Rudman-Hollings effort going on, and I should mention you are one of the few that still mentions Senator Hollings. He said that his name was the first thing cut under Gramm-Rudman. The Supreme Court is now debating the legality of Gramm-Rudman. There is some real concern that there has not been, as the Washington Post reported, any real significant change in budgeting on the Hill.

Do you still maintain any real degree of hope that the budget deficit will be under any degree of control in the near term?

Mr. SEGAL. Well, I have some hope, whether it is from the Gramm-Rudman-Hollings mechanism or just a heightened sense of responsibility in the Congress, that a tighter lid will be maintained on Federal spending.

Mr. TAUZIN. The point you make at the conclusion of your written remarks caused me some consternation. You mention that the action by Congress on regulation, pressuring the extension of regulations, so-called junk bonds, was not necessarily a good idea.

We held extensive hearings with reference to the hostile takeover situation and the impact it had upon the ability, particularly of companies in the oil exploration industries where a lot of hostile takeovers were occurring, their ability to finance new exploration development and also their ability to hold reserves. The hostile takeovers created pressure to satisfy stockholders' interest in returns on equity. We found that it lowered the horizons by which oil companies plan their futures, that the tendency to hold reserves was weakened, that the amount of money set aside in those large oil companies for their exploration budgets were declining.

We have seen the effect now in the oil markets. Yet you say there has been no evidence to support the view that indeed there was overleveraging of the corporations' debt and as a consequence we should not have intervened or suggested intervention in the so-called junk bond issue.

How do you say there is no evidence when we have seen so much dramatic change in the ability of particularly the oil sector to finance its operations and its long-term horizons?

Mr. SEGAL. Mr. Chairman, if you look at the whole corporate sector, whether in the flow of funds numbers that are in Mr. O'Leary's papers or in Chairman Volcker's testimony this morning, you will actually find that the corporate sector as a whole borrowed less in 1985 than it did in 1984.

If I may, sir, I would like to turn to the oil industry in particular, which I know is something your constituents are profoundly affected by, and to make some comments there.

I think there really was a conflict there between shareholders and the managements of oil companies. If you take the case of Gulf before the takeover, they had a policy of plowing back all of their surplus, what I like to call the free cash-flow, that is funds over and above dividends and whatever else they are going to invest in, and they were putting it back into oil.

It turns out that in view of what was happening in the market, that there was a negative discounted present value of those oil reserves. It seems to me this is not something that shareholders, outside shareholders, who weren't on the corporate payroll but were looking for decent rates of return, simply could not stand still for that and it was for that reason that Gulf became a target for the takeover.

I don't really think it is a case of a bunch of wicked raiders out there that are making this happen. I think there is enormous pressure for higher rates of return from investments in U.S. corporations.

Mr. TAUZIN. Don't you agree that U.S. Government policy particularly in the manner we treat takeovers in the Tax Code, the ability by which takeovers are financed, partially through the Tax Code, encourage that situation, one acerbated the conflict between shareholders and managers and led to some of the conditions by which—indeed, many of the companies are incapable now of expanding their exploratory budgets and expanding their additions to reserves, which are pretty important to the country.

Mr. SEGAL. I have never thought that the corporate income tax made any sense at all. It does encourage retained earnings which are often unwisely used. I think perhaps the Tax Code in other ways made some of the buyouts or takeovers more attractive than they would have otherwise been.

But, I don't think it is a decisive factor. I think we have a real problem as far as getting the corporate sector more efficient and raising the returns on investment. There are about a trillion and a half of private pension funds. Those pension fund managers, because our pension system is largely a benefit specific one, are really under great pressure.

Last week there was a feature article in the Wall Street Journal on Kohlberg Kravis, Roberts, the princes of the leveraged buyouts, and when you go down into that story, you see who their partners are. The partnerships have a minimum price tag of $20 million, and they include the pension funds of the State of Oregon and the State of Wisconsin. There is a lot of pressure to get higher rates of return.

What I am trying to argue and what I argued in the testimony I submitted for the record is that I don't think that we should look at this corporate reorganization, this whole movement, as a battle between the good fellows and the bad ones. The raiders aren't angels, but heaven knows, neither are the incumbent corporate managers, some of whom have been there for an awfully long time. They really get very lazy.

Mr. TAUZIN. I can't disagree with that. My only point is that the Federal Government's role is making junk bond financing a profitable venture because of the tax consequences of deducting interest and debt. Additionally it has helped the debt financing but it has exacerbated the movement toward hostile takeovers. The move toward hostile takeovers has not always been in the best interests of either the corporate community or the national goals of energy development, for example.

Mr. SEGAL. If that were true, it might have been better to have worked on the Tax Code rather than apply regulations. What you are really doing in applying Reg G is raising the cost of hostile takeovers. By the same token, there would be an absolute cry of outrage if Congress arbitrarily said they were going to raise the cost of every race for political office.

Mr. TAUZIN. I understand.

Mr. SEGAL. In both cases, we are talking about governments.

Mr. TAUZIN. Mr. Soros, an interesting analysis. I have to tell you that I have been intrigued by your theories and your analyses, particularly the view that the stock market and the real economy are indeed at some odds today. There are many people who look at the present economy and say there are really two out there. One, a booming, bustling retail and service economy and the second, a very depressed manufacturing and mining economy. That is not reflected in the stock market nor in the financial markets apparently yet.

Is that correct? Can you explain the reason why you don't see it reflected in those markets?

Mr. SOROS. It is reflected because the relative valuation of let's say a booming financial service company is much higher than that of a manufacturing or mining company. The market does reflect relative values.

The point I was trying to make is that the markets are not just reflecting conditions but are also active ingredients in making things happen.

Mr. TAUZIN. You also make that point as opposed to the banking industry, which is heavily regulated, whether correctly or incorrectly, and into which the Federal agencies can heavily intervene. You credit some intervention at the right time in 1982 as being successful in preventing serious problems in the banking industry.

You make the point that the financial markets themselves outside of the banking industry are not so heavily regulated and are more volatile and are becoming more volatile—I am trying to find your words—more——

Mr. SOROS. Leveraged.

Mr. TAUZIN. Leveraged, I suppose, is the best word. What do you suggest? Should we as the Congress insist on more supervision by appropriate Federal agencies into those markets? What other suggestion do you have for us?

Mr. SOROS. I do think that merging regulation should be maintained and supervision should be maintained.

Mr. TAUZIN. Is there something we are not doing that we should be doing, particularly with the red flag you are kind of waving at us?

Mr. SOROS. I think it is very early at the moment. I don't see any serious excesses in the financial markets yet. I think they are going to develop if things go in the way I foresee. I think it would be appropriate to look at the situation and to consider what kind of regulations are necessary.

I think Chairman Volcker really endorsed that in his testimony this morning. He said there are all these new instruments that are being invented and maybe even their inventors don't quite know how they function and regulators are always one step behind. Indeed, they are. I think it would be appropriate to consider that.

Leverage takes many forms. Certainly we are now already in a situation where the index futures have become a powerful influence in the stock market. You have occasions when let's say the expiration of a certain index future maturity moves the stock market quite a few percent in a matter of minutes.

This has the potential of eventually making movements more volatile than they would be otherwise.

Mr. TAUZIN. Without putting you in the spot of suggesting things we might want to consider, I would very much appreciate it, and I think the committee would, if you would give it some thought, perhaps consider supplementing your written statement, with some ideas that we ought to be thinking about and talking about now in view of the prospects of some of the danger signs that we can spot today.

The only thing we have done that I can recall is that we have legislated in the area of some of those new instruments which border on gambling. Indeed, the stock market itself is a gamble. Those instruments have become more and more akin to the prohibitive forms of gambling in the States and the Nation. That's the only area we have really touched so far and to any large degree.

I wonder if you might consider supplementing it with some ideas on how we might avoid what you consider could be some dangerous situations in that marketplace.

Mr. SOROS. I will certainly give it some thought.

I could mention one instance where I was personally involved. And this involves trading in commodities where we have a brokerage firm called Volume Investors that went broke. And I discovered, to my amazement, even though I am supposed to be a sophisticated investor, that my funds were at risk. You see, I was under the impression that funds are segregated and, you know, if the broker goes bust there is no problem. Apparently, in the commodities market, that is not the case. That is something that you may want to look into.

Mr. TAUZIN. Interesting. We are being called to the floor. I think that means we have a little quorum call and a vote behind it.

Let me thank you both for your contributions and apologize for the absence of more members. But your testimony is a part of the record and helps us form the basis upon which we hopefully make some serious and wise decisions in the future. Thank you very much, gentlemen.

The hearing is, I believe, adjourned.

[Whereupon, at 12:35 p.m., the subcommittee meeting was concluded.]