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## FISCAL AND MONETARY POLICY

Moderator: ALLAN B. ROBY, JR. Panelists: EDWARD P. NEUFELD\*, HARVEY D. WILMETH\*\*,  
KENNETH WRIGHT\*\*\*

1. What are current U.S. and Canadian policies?
  - a. Theory vs. practice
  - b. What is not working and why?
  - c. What are the implications of the Thatcher experience in Great Britain?
2. What is the outlook for fiscal policy in the U.S. and Canada?
  - a. What will governmental goals be?
  - b. What is needed to meet these goals?
  - c. How will social insurance programs be affected?
3. What does current monetary policy imply for financial and credit markets and interest rates?
4. What political, social and economic changes must occur for nominal interest rates to begin steadily declining toward parity with real interest rates?

MR. ALLAN B. ROBY, JR: Our topic is Fiscal & Monetary Policy. We have chosen to interpret this as meaning we can discuss broad issues of economic policy and practice. Our distinguished panelists will provide you some insights into the current economic scene and they will welcome your questions.

Our topic this morning is particularly pertinent to the wide-ranging debate occurring now in the United States on how to best solve our economic problems. Fiscal and monetary policy are the tools available to the government to change or to affect the course of the economy.

\*Mr. Neufeld is Senior Vice President and Chief Economist of Royal Bank of Canada in Montreal.

\*\*Mr. Wilmeth is Vice President and Economist for Northwestern Mutual Life Insurance Company.

\*\*\*Mr. Wright is Vice President and Chief Economist of the American Council of Life Insurance.

Fiscal policy is the sum of the federal government's decisions to tax and to spend. It may be thought of as a tool that is intended to be used to balance savings and investment, productivity capacity, and resource use and availability. It is a tool that has been traditionally forged in a joint effort by the executive branch and the legislative branch.

Monetary policy involves control over the sources of our money supply. I will not define money at all other than to observe that the Fed has published enough definitions to run out of M's. While monetary policy today is concerned with the supply or quantity of money, a different view is concerned with the price of money. In this context, the item of concern is how much a unit of money can purchase as opposed to the growth and the amount of money in the economy. Most typically this is discussed in terms of a gold standard or other commodity standard to determine the value of money.

The debate raging in the United States today centers on fiscal policy with some monetary overtones. A policy of spending more than taxing has traditionally been thought to be a stimulant to the economy and to inflation. Much of the concern expressed about the "supply-side" economic programs of the Reagan administration focuses on this expected stimulus. This is natural. Most economists working in the government for many years have been influenced by Keynes' views to the point where they may not be able to fully grasp the implications of the supply-side theory. The very term "supply-side" is based on reaction to the one-sided emphasis of the Keynesians on demand management by the government. This is seen as the key to stability and prosperity. During the Great Depression of the 1930s, it was no doubt true that the countries of the world had considerably greater resources available than demand, and that demand was lacking. The stimulus of demand by government was quite proper in those circumstances, even though it seems it took World War II to really pull us out of the Depression.

In any event, the supply-siders simply feel that production is limited by our available resources. Their thesis is that tax reductions will first work to stimulate savings and investment. This will improve productivity, leading to expansion of productive capacity and leading to lower inflation. In a sense, this is a restatement of the classic economic proposition: to the extent that the government impedes economic activity as a whole, it will impede economic growth.

There is an element of "believe in me and it will all work out" surrounding the administration's program, and it could well be it is too optimistic. However, it seems as though the political climate is right for some changes. Today we will hear views on the current status of some of these ideas in Washington and Ottawa and we will hope to gain some insight into the usefulness of the new approaches. Finally, we will hear of a new perspective to our economic problems with a few suggested solutions thrown in for good measure.

Our first speaker, Dr. Edward Neufeld, is Senior Vice President and Chief Economist of Royal Bank of Canada in Montreal. Ed joined the Bank in January of 1980 after a varied and distinguished career ranging from academia to senior positions in the Canadian federal government. He graduated from the London School of Economics with a PhD in 1954. He has worked with the Bank of England and as a university lecturer. In his spare time, he comments frequently on current economic affairs for the Canadian Broadcasting Corporation. For the period of 1973-1980, he served the Canadian federal government in the Department of Finance and in this position was primarily responsible for international discussions leading to reform of the International Monetary System. Beginning in 1978, he was appointed Assistant Deputy Minister for Tax Policy Legislation, and we heard yesterday how masterfully he handled the difficult issues surrounding life insurance company taxation in Canada. He is clearly well qualified to fill us in on all intricacies involved in creating and managing fiscal and monetary policies.

DR. EDWARD P. NEUFELD: When I reflect on the problems of inflation and growth, I can readily understand why those who arranged this conference came to the conclusion that there should be some discussion of fiscal and monetary policy. The impact of inflation on the value and the volume of long-term financial assets means that there is no group in their professional activities more affected by inflation than the members of this society and the people they serve. Concern over inflation and its long-term consequences has become quite widespread, but that concern continues to be accompanied by considerable skepticism over the ability of the official authorities to bring inflation under control through monetary and fiscal policy. This skepticism is particularly worrisome because I see no alternative to such policy for restoring a more stable economic environment.

First of all, I will comment on the international character of the problems of inflation and slow growth, including some reference to the experiences of the United Kingdom. This will provide the backdrop for an examination of the present economic outlook in Canada and the policy approach being taken by Canadian authorities to combat inflation and encourage growth.

The western world is presently in a period of high unemployment. The rate of economic growth is beginning to improve in North America but continues to deteriorate in Europe and, to a lesser extent, in Japan (Chart 1). The industrialized countries, as a group, have not succeeded in substantially bringing down the rate of inflation although the silver lining here is that they do seem to have put something of a ceiling on it (Chart 2). The United Kingdom witnessed a peak rate of inflation last year of 21.8% and this has been brought down to about 12.6%. As I see it the industrialized countries are converging at about a 10% inflation rate. The major challenge for most of them is the one of achieving a substantial decline in that rate.

The impressive decline in the United Kingdom rate of inflation was accompanied by a level of unemployment that is the highest in the western world. It is the worst that the U.K. has had since April, 1931. Some attribute that situation to the use, for about a year and a half, of monetary policy emphasizing control over the money supply. The strength of sterling arising from both high interest rates and the flow of North Sea oil has hurt export industries.

This experience has led to considerable discussion as to whether Prime Minister Thatcher's economic policy is really doing more harm than good. Opposition has come not just from labour unions but also from the Confederation of British Industry and from certain economists. Simply on political grounds it is wondered whether such high levels of unemployment will force a change in policy approaches.

The U.K. experience tells very little about the ultimate effectiveness of monetary policy. First, it was only in mid-1979 that the stricter monetarist approach was adopted by Mrs. Thatcher, and we are all aware of how long it takes for the impact of slow moving policy to be felt. Our judgment is that it takes at least 18 months before most but not all effects of such policy can be felt. Second, the authorities failed to control M3, their chosen target, even after they adopted "monetary targetry" (Chart 3). Third, it is questionable whether M3 is the appropriate target in the United Kingdom for purposes of controlling inflation, and this is a debate that is presently raging in the United Kingdom. The monetary authorities, by deciding to move toward publishing monetary base figures and figures of a narrower money supply, M2, have acknowledged their concerns over M3. Fourth, to stop the exceedingly high rates of inflation that had been permitted to be built into the economy, probably inevitably meant severe shocks to production and unemployment in the short term. Finally, the paradoxical strength of sterling, because of North Sea oil, seems to have permitted fiscal policy to be less restrictive than it should have been. In 1980-81, borrowing requirements of the public sector increased by 20%, to £6 billion. For these reasons I would be hesitant in taking conclusions from Mrs. Thatcher's policy experiences, and applying them to the North American situation without very careful qualifications.

For Canada, it is developments in the United States that are of paramount importance. When President Reagan announced his economic program envisaging in several years time a balanced budget, 5% real growth and only 6% inflation, this did not go unnoticed in Canada (Chart 5). It meant on the one hand that the prospects were there for a major increase in the U.S. demand for Canadian exports. This clearly was good news. His inflation forecast implied a substantial reduction in interest rates, which was further good news since Canada is likely to continue to be a substantial borrower in U.S. markets. But the program also implicitly contains a warning to Canadian policy authorities. If the United States succeeded in reducing substantially its inflation rate and Canada did not, this would pose problems for the competitiveness of Canadian exports and would raise serious questions over the strength of the

Canadian dollar. We have learned from hard experience that we cannot permit our costs and prices to get far out of line with those in the United States without economic and financial turmoil.

With respect to economic developments in Canada, 1980 was the worst year in terms of economic growth since 1954. However, it does seem as if the worst is over and that 1981 real GNP should increase by about 2% (Chart 6). You would expect that our resource sectors, being propelled by energy developments, should show good growth, and this is true. Real growth for the Canadian economy in 1982 should also be helped by the favorable forecasts for growth in the United States and Europe. However, growth by 1982 should be spread fairly well across the country, which is important for Canada because of the tremendous regional differences in income (Chart 8). One reason the expansion will not be overly robust is that consumers are not going to see that big of an increase in their income after adjusting for inflation. It will be growing and provide some support, but inflation will remain high and eat away at purchasing power.

Canada will be able to finance a substantial proportion of its growth itself. This is because the personal savings rate has held up remarkably well, substantially better than in the United States (Chart 9). One of the reasons for this is that the tax treatment of pension arrangements is quite different in Canada than in the United States. This has provided much better protection against inflation than has been the case in the United States. The long slide in housing seems finally to have come to an end and will begin to cease being a negative factor (Chart 11). The best news is that business intends to increase its capital spending. Our estimate of a 4% real growth in capital spending is more conservative than business itself has indicated in surveys of their capital spending plans (Chart 12). 1981 should see the beginning of satisfactory economic recovery and 1982 should see that recovery rise to normal or better than normal levels.

Unfortunately, the worrisome problem of inflation will continue to be with us. It is true that in the last few years actual wage rates in Canada have not increased as rapidly as those in the United States, following a long period when they exceeded them (Chart 13). But what causes me concern is that in recent months wage settlements in Canada have begun to accelerate well ahead of those in the United States (Chart 14). The last time this happened it led to a major devaluation of the Canadian dollar. We are not presently forecasting that it will happen again. Indeed we are forecasting the opposite, and the recent increasing U.S. wage settlements (not shown in Chart 14) may have narrowed the gap. But we continue to be very conscious over the close relation that exists in movements of inflation and labour costs (Chart 15).

In addition to the problem of wage settlements, Canada has a particular problem related to the future impact of energy prices on inflation. For a long while crude oil prices in Canada have been increasing much

less rapidly than those in other countries and by 1980 were less than 50% of the world price (Chart 16). We feel that this is an unsustainable situation and that over the next several years Canadian prices will have to increase more rapidly than world prices. Therefore, if inflation in Canada is to be controlled and the level brought down, it will require non-energy prices to make up for the continuing increase in energy prices. In 1981 we expect that inflation, as measured by the consumer price index, will be close to 12% and then should decline to around 10%. The GNP deflator may increase by about 10 1/2% in 1981. Excluding food and energy, the two areas that have been particularly troublesome recently, the rate of consumer inflation should be near 8% in 1982 (Chart 17).

This view that inflation will not accelerate in any significant way, and in a year from now will have a downward bias, is heavily influenced by our judgment that monetary policy will prove to be at least partially effective. Some recent analytical work suggests that significant and persistent changes in money supply will have an impact on rates of inflation 18 months later (Chart 18). The question arises as to whether the Bank of Canada will maintain a degree of control over the growth of money supply that will be consistent with a gradual decline in the rate of inflation. I think it will. For over five years the Bank of Canada has pursued a policy of "monetary targetry" and over that period has reduced progressively the target rates of growth of M1. At present it is aiming at maintaining that growth within a range of 4-8% (Chart 20). On the whole, the Bank of Canada has been quite successful in meeting its chosen money supply targets and there is reason to believe it will continue to be successful. This is the single most important reason why we have not had inflation up to 15% and 20% as in the United Kingdom, but rather at some sort of 10% ceiling over the last five years.

There is a great deal of controversy as to whether the Bank brought the rate of money supply down fast enough, but much less controversy than there exists in the United States as to whether it is capable of controlling the rate of growth of money supply. Experience suggests that the Bank is technically capable of controlling the growth of the money supply. There is much less attention in Canada on the week to week and month to month money supply changes. I sense that there is somewhat of an obsession with those weekly Federal Reserve figures in the U.S. My own feeling is that the week to week figures are basically **irrelevant**. What matters is where the money supply will be six months from now on average. That fits in with the view that there is quite a lag in how these things impact the economy.

But there are problems. The first problem is the size of the federal government deficit. This deficit is now running at about \$15 billion and has been rising fairly steadily in recent years (Chart 19). At present it seems that the deficit will not be permitted to increase further. At the same time, the deficit will probably not decline in a way that would make it possible for monetary policy to combat inflation while avoiding substantial pressure on financial markets.

One of the consequences of the control over the money supply in the context of high inflation has been very unstable interest rates. If my analysis is correct, the United States and Canada had greater interest rate instability in the year 1980 than in any year back to the depths of the Depression of the 1930s. Why is it so difficult for monetary policy to bring inflation down without tremendous instability in markets? One of the reasons is that inflation expectations become so deeply imbedded in the economy that no one believes anymore that inflation will ever be controlled.

There is not likely to be a major move toward the acceptance of lower wage settlements or reduced price mark-ups until actual evidence of the success of policy begins to become convincing. In light of these problems, and our view on the strength of inflationary forces, we do not foresee a return to "low" interest rates in the near future (Chart 23). Rather we envisage some decline in short rates but only a minimal decline in long rates.

I should leave no doubt in your minds that monetary policy has already been partially successful and that additional successes will emerge gradually. Without specific control over money supply, we could not have kept the level of inflation within the 10% ceiling over the last five or six years. True, the rate of growth of money supply may not have been reduced quickly enough and therefore may unnecessarily have prolonged some part of the inflation problem. But, when one considers the price pressures from the energy and food areas, the problem of large fiscal deficits, and the "stickiness" of wages and prices generally, one can understand in part why the inflation ceiling has remained so high.

If my view on the ultimate success of monetary policy is justified, then one can also be fairly optimistic about the position of the Canadian dollar. Our balance of payments deficit has not been increasing (Chart 25). We are fortunate in having a surplus in our energy account, with a large deficit in crude petroleum being made up by exports of other forms of energy (Chart 26). Should the present disagreement on energy policy between the federal government and the producing provinces be resolved, then our energy surplus may stay with us for some time. Our interest and dividend payments as a proportion of total export earnings are not high in an historical sense (Chart 27). The good prospects for Canada generally seem to explain in part why the Canadian stock exchanges have outperformed those of the United States (Chart 28). This leaves me with the view that the Canadian dollar presently is on a firm base with a slight bias in the upward direction (Chart 29).

When I consider recent Canadian and U.S. experiences with inflation and economic growth, several points seem to stand out. The first is that there is no substitute for controlling the growth of money supply if inflation is to be controlled. This simple fact is being increasingly understood in both countries. One can quarrel about the details, but

direct controls have not worked. There is no alternative to controlling the growth of money and credit, even if this produces unstable interest rates from time to time. Second, while the U.S. seems to have had more trouble than Canada in meeting its money supply targets, both already have sufficient degree of control to preclude any major acceleration of inflation. Third, large fiscal deficits have complicated the task of monetary policy in both countries, in that they have put pressure on financial markets. Fourth, with prospects for some stabilization of the fiscal situation in both countries and continued determination to control the growth of money and credit, the outlook is for a downward bias in inflation in 1982.

This is good news for financial and credit markets. While instability there undoubtedly will be, it should be less than in 1980. Interest rates will not be "low", but they should reflect fairly quickly any solid evidence that inflation rates are coming down.

Solid evidence; that is what we need now. We still do not have it. But our analysis leads us to have hopes that it will emerge. Patience is a virtue.

MR. VICTOR MODUGNO: I would like to know what effect the instability in interest rates in the United States has on Canada. In 1980 there was a change in emphasis by the Federal Reserve, where now interest rates are fluctuating and very high, and I assume that this would have an effect on international capital flows and on the Canadian situation.

DR. NEUFELD: You are absolutely right. It has a very great impact. We simply cannot withstand interest rate instability in the United States. We know that if you have instability, we will have instability. It is true that the Bank of Canada succeeded in dampening it somewhat. So we had periods this last year when our interest rates were actually below your interest rates. Our prime rates, CD rates and even long term rates were running below your rates. We can soften a bit the impact of your rates on ours, but there is no way that we can withstand them. We are very directly involved on a week to week basis, not just on a month to month basis.

MR. W. PAUL McCROSSAN: I would like to ask a question about the conflict between the Bank of Canada's two functions. One is the control of the money supply and the other is as the ultimate provider of government funds. In view of the deficits, are these functions going to come into conflict, at least as unemployment rises? With the current level of deficits, if the Bank tries to keep control of the money supply, is there likely to be accelerating unemployment and is that going to put pressure on the banks to expand the money supply to become the lender of last resort to the federal government?

DR. NEUFELD: There are two parts to your question. One is whether the unemployment consequences of bank policy will be troubled and the other is whether the high government deficit will cause problems for the Bank



of Canada's policy. We do not see much of an increase in the unemployment rate, at least such that things will not really get worse politically than they have been. Surveys in Canada seem to indicate that public opinion is now more concerned over inflation than unemployment. So on that point, I do not think the Bank of Canada in the period ahead will be terribly obstructed.

On the question of the high financing requirements of the central government, the fact is that the Bank of Canada has met its monetary target and has said that it will continue to do so. It simply cannot compromise on its policy for the sake of financial markets or interest rates. It is very troublesome and very tricky and it makes life much more difficult for monetary policies and high deficits. However, it will probably not force the Bank of Canada to let go and create a lot more money just for the sake of financing government. In Canada, the Bank of Canada policy is government policy. That is right in the law, contrary to here where you pursue more separation of power approach to these issues. And there is no question that if the government of Canada wanted to force the Bank of Canada off its policy, it could do so. It has the legal right to do so, but in the nature of things, I do not think it will happen.

MR. CHARLES GREELY: You mentioned that you expected instability in interest rates even under good conditions in the near future. When do you think, under the best conditions, we are going to have short term rates substantially lower than long term rates?

DR. NEUFELD: I am hesitating, but I was wondering if it would be before I retire or not. It is going to be a long while. I just do not think that you will have it before people honestly believe the inflation rate is under control and see it in the form of much lower rates, and where your control over money supply no longer continually bumps against the need for the economy to expand. I think we are months and months away from that situation. So while short rates could get down to long term rates, even this year, I cannot see them falling below long term rates for quite a long while.

MR. SAMUEL ECKLER: I want to make one brief comment and then address a question to Dr. Neufeld. The comment concerns the kind of comfort he felt and the optimism he articulated about 10% or 11% inflation rates or even 8% in the next few years. I remember meetings of the Society of Actuaries going back 10 or 12 years when many of us were very disturbed and concerned with 3% and 4% inflation rates. The kind of comfort that he expresses, I find for myself a little disturbing.

Now the question I would like to address to him is this. He puts federal deficits in Canada (we have a mammoth one compared to the American one) as a troublesome factor, but not as a causative factor. I am not sure if I understood him. And he puts the money supply as the engine through which we are going to control inflation. I am always puzzled because economists that I have heard usually do not show any

real concern about deficits in the sense of their being a causative factor. I wonder if he could explain to me why it is not the causative factor?

DR. NEUFELD: First, a comment on your initial comment, because there clearly was less than perfect communication on that point. In troubled times you are often content with small mercy, and the small mercy is that at least it looks as if we are not going to accelerate the way the United Kingdom accelerated in inflation. That is the nature of my optimism. It certainly was not based on a feeling that 10% is tolerable. I do not think it is. With 10% inflation and current marginal tax rates, no one holding debt securities today can hang on to capital.

The causal relationship between deficits and money supply are very tricky. I mentioned that the Bank of Canada had met its target but may well have been too slow in bringing its target down. If you think it reacted too slowly, you first have to make a judgment as to what the target should be, and that is not easy. The causal relationship is not simple, not straightforward, but lies rather in the area of the impact of large deficits on the state of the financial markets and the ability of the central bank within the context of those financial markets to really control the growth of credit. What is often missed is that large deficits have very negative effects in addition to their effect on the growth of the economy. What they do, quite apart from inflation, is direct funds away from areas that could well be very productive and send them to areas that are much less productive. This is not an inflation issue, but is certainly an issue of real growth changes and improvements in the standards of living.

MR. ROBY: Our next speaker is Dr. Kenneth M. Wright, Vice President and Chief Economist of the American Council of Life Insurance, based in Washington, D.C. Ken is, essentially, the industry's official economist and we are very fortunate to have him in that role. He is an expert in the analysis of demand and supply of funds and the money and capital markets. Ken received his doctorate in Economics from Columbia University and regularly presents the ACLI's position on economic matters to Congress, the Treasury and to his friends at the Fed. Before joining the Industry, he served in senior positions with major banks here in New York, as well as serving as economist with the Federal Reserve Bank.

DR. KENNETH M. WRIGHT: I have a different kind of presentation to give you. It is a little short on facts and figures, but I hope you will find it is long on interpretations, commentary and weaving together some strands that are basically familiar to any close reader of the political scene. And particularly the scene that surrounds our current budgetary discussions. I am going to talk about the budget. I am going to talk about monetary policy. I am going to talk about their interrelationships and, finally, their implications for the future that we all face together and the role that actuaries must play in that future.

Let me first look at the logic of the Reagan Budget Plan, which is described as an economic recovery program. Please note that it is not described as an anti-inflation program. The logic of the plan works in this fashion. It is believed, first and foremost, that the burden of taxation is too high in this country. The Republican Administration has long been anxious to put into effect a plan to cut taxes quite severely, both on the personal front and on the business front. In creating the new Reagan budget, they have proposed to cut taxes by \$54 billion in fiscal 1982, starting next October, which is the year most of us are focusing on at this moment.

It has two parts to it. The personal income tax rates would be cut by 10% with consequences on the personal tax burden and then, of course, a series of accelerated depreciation reforms on the business tax side which would stimulate investment. There is a problem with cutting taxes and that is the danger of creating a large deficit. It is a matter of concern since we already have a very large deficit and this might make it even larger unless something else is done. Spending cuts, as proposed by the Reagan administration, were \$41 billion for fiscal 1982. Because of various growth factors on different sides of the budget, the deficit would not be enlarged, but indeed would be reduced in the Reagan plan. From this year's deficit, which is calculated to be about \$54 billion, next year's deficit would fall to \$45 billion.

This is the plan and we are now in that phase of Congressional review which determines how well and in what shape that plan may survive. The Democrats have responded with their own version of the fiscal plan, now in its final stages of discussion under the budget control procedures. Those procedures, centered in the House Budget Committee at the moment, and later in the Senate Budget Committee, set overall targets on the totals of spending, taxing and the components of each side. But it should be remembered that this particular procedure is not the end of the process. It is only the beginning of one stage. Coming later will be second stages dealing with appropriations procedures on the forms of spending and there will also be lengthy debates in the Ways and Means Committee on the nature of the tax cuts.

The important thing about this struggle is who is going to prevail. This is why the President, himself, went directly to the Congress trying to appeal for support for his program on the basic theory that the American people want and deserve basic reductions in the size of government. He is having a lot of trouble with his program because the Democrats do not want to simply go along with whatever someone else has proposed, and because there will be a great deal of discussion about where the benefits will flow. Will the tax cuts stimulate consumption at the lower income brackets where inflation has done a good deal of damage? That is a different proposition from the Reagan targets which are to stimulate the savings investment process by a tax cut which

would run across the board and leave a good deal of the benefit for those in the upper brackets who are able to save and able to invest, and thereby able to stimulate economic growth.

The vote that is coming up will be only round one. The symbolic thing to me is whether or not an initial victory on the budget front by the Reagan forces will allow them to go on to later victories. One of those victories could be a tax cut measure that will apply to three successive years. The appropriateness of passing tax cut legislation over successive years, thereby crossing over election seasons, is an important point of contention between Republicans and Democrats.

The question is, will supply-side economic theories really hold water? The theory essentially says that taxes today are so burdensome that if they were lowered, they would unleash a new burst of effort on the personal level as well as investment on the financial level to actually stimulate economic activity, growth and incomes so that the remaining taxes would bring in higher tax revenues which would wipe out the initial tax cuts. This is a very controversial point of view and is not widely accepted among the economics profession, though there are some very vociferous people who will support and defend it.

I would make a distinction between supply-side economics as it emanates from the people in the Reagan administration and a somewhat broader approach that economists have favored called supply management. This is what Dr. Neufeld referred to earlier. It means shifting away from demand management in the Keynesian theory, where all you have to do is increase demand and the rest takes care of itself. Supply management involves productivity and the level of output. Supply-side economics is a more refined point of view which says the tax cuts will virtually finance themselves.

There is considerable skepticism about how large the deficit might actually be. If taxes are cut by \$50 billion, will it enlarge the deficit by that amount or will spending cuts be enacted as an offset? Wall Street has become quite concerned that we may be facing a deficit of \$70 - \$75 billion rather than the \$45 billion that is contained within the official Reagan administration programs. The reasons for the discrepancy between \$70 billion, which I consider to be sort of the standard forecast on Wall Street, and \$45 billion, which is the standard forecast in Republican circles, lie in assumptions about the pace of economic growth in response to the tax cut and also whether there is an underestimation in the estimates contained within the Reagan budget.

While many in my profession are skeptical about supply-side economics, the Reagan administration and specifically the Treasury officials, both Donald Regan and his Undersecretary, Beryl Sprinkel, are both actively attacking what is termed defeatist Keynesian economics. In the Keynesian approach, deficits and the size of those deficits are a rather critical variable and they are saying big deficits mean more inflation. To the supply-siders and monetarists, deficits are not so critical.

They are saying, "Do not attack our program because there is still a deficit; support our program because we need those tax cuts first and foremost."

This leaves us with a question as to where the anti-inflation part of this program comes from. The approach that is current in Washington among Treasury officials, for example, is that the anti-inflation part comes from pursuing appropriate monetary policy. Here we get into an interesting conflict of personalities in the Washington scene because the Treasury is actively telling the Federal Reserve to follow a particular monetary policy. In effect, they have laid down standards that the so-called "independent" Federal Reserve should pursue over the next several months, and this is breaking the usual ground rules. The Fed is supposed to coordinate policy, work in harness in the broadest way, but they are not governed, as they are in Britain and Canada, by the incumbent administration or the incumbent Congress for that matter. This has produced quite a lot of friction between those two key elements in Washington.

You are all familiar with the school of thought known as Monetarism. One of the leading proponents of Monetarism in the Friedman sense for the last 30 years is Dr. Sprinkel. He has been very vocal and very specific on how monetary policy should be run, though he has no personal responsibility for running it. My conversations with the governors at the Federal Reserve indicate that they are very keenly feeling the pressure from the Treasury. They feel that they know what they are doing and they are spending a lot of time thinking about the best way to do it. They often scoff that they only know what criticisms are being made from the Treasury by what they read in the newspapers. They get it through that indirect source rather than through direct consultations. So there is a friction which is political because the weakness of the Reagan program is that it does not have sufficient anti-inflationary elements to impress economists or the financial markets of Wall Street. In order to make up for that deficiency, it is important to the Administration in its strategy to say that inflation can be controlled if the Federal Reserve does the right thing.

What is the right thing? The right thing as seen by the Federal Reserve is to hold back the growth of money by targeting monetary growth by a percent lower than the past year. Through a gradual series of reduced monetary growth targets the expectation will be a reduced rate of inflation. If monetary growth is reduced, the question still remains what part of money GNP will be reduced. Will it be the real activity or the price factor of GNP? Will monetary restraint to that degree hold back prices or hold back basic economic activity? That still remains to be seen.

There is encouragement to me on the monetary front and this ties back to some earlier remarks. What we are learning about monetary policy when it is targeted on volume of money and not on the level of inter-

est rates is that there are very long lags in the response to reduced money supply. These lags can run 12-18 months. The encouragement is that the restriction of monetary growth really began 12-18 months ago so that we may start seeing basic results in the inflation area. How big those results will be, how low inflation will fall, is something over which optimism is very hard to generate. We are really talking about bringing down inflation rates from the 12% level to something possibly like 9% or even 8%. It is in the right direction, but it gives very little comfort because it is not a tolerable rate.

What does all this mean for the actuarial profession, which has to work within a framework of an economic setting? What we are seeing is an attempt through the fiscal side to spur activity but leaving open the question of restraining inflation. What we see on the monetary side is a valiant effort to hold back monetary growth in the hope that it will restrain inflation without restraining growth. The results, unfortunately, are that we will still have, for the next two or three years, an uncomfortably high level of inflation. Any design of insurance products, any plan for investment strategy which does not take account of the high probability of an inflation rate running at least in the 7%-9% level is going to miss the targets. We are seeing improvement, but fiscal and monetary policies do not offer that degree of improvement that would bring us down to a very minimal inflation rate.

The final point I would make is that in its efforts to be more effective on the inflation rate by targeting reserves, monetary policy has shifted to a basis which produces much more volatile interest rates. This is something that we have seen over the last 18 months with basic shifts in policy. The message I would leave with you is that this appears to be a permanent change in the foreseeable future, a continuing condition which means that rates will move as much as 700 or 800 basis points up and down within a single calendar year. I am not making a prediction as to where they are going to move in this current year. They are going to work higher by year-end, but the key message is volatility and, for us in the life insurance business, we have to condition our policies and our products to recognize that volatility is what we must deal with. This has implications for how we design pension plans and pension withdrawal privileges, what we do about policy loans and policy loan interest rates and a whole range of implications for product design. In summary: 1) inflation will remain high and 2) we will see volatile and rather high interest rates over the next two to three years because of what we are doing on the policy front.

MR. ROBY: Ken, you mention that we have to be alert to this continuing volatile interest scenario for product design. Does this also apply to investment policy?

DR. WRIGHT: The people I have worked with on the investment front respond to that volatility in two ways. One is shortening up the investment maturities. All new investments are being done on a much shorter-term basis than we had seen traditionally in this business.

Secondly, there is more flexibility in lending terms as to the prevailing rate. You do not lock yourself in any longer to a 15-year rate if you can avoid it. Find ways for adjustments in those rates, renegotiations in the level of rates, because the volatility can take you up so high or bring you temporarily so low as to make it very suspect and ill-advised to lock yourself in for more than a short period.

MR. ROBY: Is there greater interest in having an equity position when you are financing development projects?

DR. WRIGHT: This has been the big move among the larger companies on real estate equity. It is interesting that there has not been a return to stock market equity positions. The difficulty is that there is a lumpiness in the real estate field since the pieces that you buy have to be so large that you do not want to put that much money in a single investment if you are a medium-size or smaller company. So the instincts are there. The ability to carry out that policy is limited, however.

MR. GREELEY: If the best that can be accomplished under a Republican administration is a cut in inflation rate of 1%, 2% or 3% over the next three or four years, what do you think that will do to public expectations in the inflation area? Do you think that the public will react favorably that at least this is a start, or do you think they will react that if this is the best we can do now after the disaster of the previous four years, we might as well give up the ship? Will they think that we will never lick inflation and therefore expectations will never be decreased? Do you see any optimism in the public's reaction to such modest accomplishments as you predict?

DR. WRIGHT: I am not too hopeful, but for a different reason. You speak of success over the next two or three years of these policies as leading to a gradually lower inflation rate. We are still so subject to bursts of inflationary pressure from abroad that we are going to see a step forward in lower rates and then a step backward with higher inflation rates and the public's perception will be that it looks better for awhile and then, bingo, it looks terrible. You have to cancel out all the improvement that you had been expecting and, in that direction, I find it hard to visualize a basic lowering of expectations about inflation.

MR. ROBY: Our next speaker is Harvey D. Wilmeth, Vice President and Economist of the Northwestern Mutual Life Insurance Company. He is responsible for economic research with particular emphasis on how inflation will impact company operations. His specialty is business cycle economics. He has an interesting perspective on economic conditions that I think is quite fascinating.

MR. HARVEY D. WILMETH: I have my own description of economic theory. It is a little like a dense fog. You can reach out to try to get hold of it, but it is hard to find any real substance. When you mix it with

politics, the substance can become even more illusive. I sometimes describe economic theory as being about 30% witchcraft, 20% folklore, 15% statistics, 10% accounting, and 5% logic. With all the actuaries in the audience, I am sure someone noticed that this only adds up to 80%. That is the way it is with economic theory. It does not really add up. I am going to start with some quite broad concepts, then explain how they relate to some of our specific current problems such as inflation and sky-high interest rates.

I have charted the cumulative inflation for five-year periods going back to 1940 as measured by the GNP implicit price deflator, not by the more volatile CPI. Two high inflation periods occurred in the 1940's as a result of the Second World War, followed by four five-year periods of comparatively low inflation. Then, in the 1970's, inflation returned to the wartime levels. My projection of inflation for the five years from the end of 1980 to the end of 1985 is 64%, a new high. I want to emphasize that is a projection, not necessarily a forecast. It is the amount of inflation we would need in the next five years in order to avoid massive stagnation or depression if we try to stimulate the next recovery through the same devices which we have been using for the last quarter century. As a rule, I do not speak about inflation as the basic problem, but rather as part of an adaptive mechanism by which we defer the adverse consequences of more fundamental imbalances in the economy.

Now let us shift from the mundane to the cosmic and talk a little about the basic philosophies of social organization. Capitalism vs. socialism is the great battle of cultures in the world today - the free market economies vs. the communist economies. Actually, there is no pure socialist economy or pure capitalist economy anymore. We are all mixtures. But it is awfully important for us to understand the complementary strengths and weaknesses of these two basic systems. Historically, capitalism has been extremely effective in the production of goods and services, but periodically it breaks down in a recession or depression. It has been breaking down in this manner ever since capitalism first emerged from early feudalistic societies. In earlier times, they called those breakdowns commercial crises. Every half century or so there would be a commercial crisis that was a lot worse than the others which would be called a depression. Capitalism has a weakness in distribution, not in the sense of who gets how much, but rather in sheer ability to clear the marketplace. When you have a depression in a capitalistic economy, you do not have shortages of raw materials. You do not have shortages of labor. You do not have shortages of plant and equipment. You have surpluses.

A second strength of capitalism is the dispersed ownership of wealth, which is supportive of democratic government. It is increasingly embarrassing these days to our leading socialist thinkers that none of the communist economies have been able to move past the dictatorship stage. Michael Harrington and I were the two economists participating in a symposium put on by the United Church of Christ earlier this year. Michael Harrington is the current leader of the American Socialist



Party. He was very concerned about this fundamental problem. The immense concentration of power in socialist countries makes it difficult to establish or maintain democratic institutions. If we want to preserve a market economy and the kind of political freedoms we have, it is important to understand the fundamental weakness of capitalism and do something about it.

Socialism is terrific on distribution. People line up for hours to buy such simple commodities as toilet paper. The trouble with socialist economics is they cannot produce. In addition, the concentration of control over wealth makes it essentially impossible to maintain democratic institutions. Now if we think we have problems under capitalism, think of the problems the socialists have. In order to solve their production problems, they have to achieve a fundamental change in human nature. In order to solve our problems of not being able to clear the market under conditions of full employment and stable prices, we need institutional change. Institutional change is difficult to achieve, but it is not impossible. It does not require a change in human nature.

It is important to understand some of the great stable, long-term relationships in our economy. The ratio of tangible wealth to GNP is one of those relationships. Tangible wealth is defined as land, structures of all types, machinery and equipment, and inventories. Gross tangible wealth measured in current dollars has grown from \$532 billion in 1925, over half a century ago, to \$8.9 trillion in 1975. (This data was prepared by John Kendrick and published by the Conference Board.) Gross tangible wealth means before adjustment for accumulated depreciation and obsolescence. Net tangible wealth (after depreciation) increased from \$343 billion to \$5.5 trillion. In the same period, gross national product increased from \$93 billion to \$1.5 trillion. Now the important thing is not the magnitudes, but the relationships. In 1925, we had about \$5.75 of gross tangible wealth per dollar of GNP. In 1975 it came out \$5.97, but that was a recession year. Net tangible wealth was \$3.69 in 1925 and \$3.73 half a century later. This is remarkable stability.

The ratio of monetary wealth to GNP is another stable long-term relationship. Benjamin Friedman, one of the research directors of the National Bureau of Economic Research, has prepared a chart which, for the period from 1919 through 1978, shows the ratio of nonfinancial credit market debt to gross national product. Nonfinancial credit market debt is the source of the overwhelming proportion of privately owned monetary wealth. Monetary wealth is any kind of asset denominated in the monetary unit, be it cash values of life insurance, bank accounts, treasury bills, or money market funds. The chart shows that monetary wealth grows in parallel with gross national product which grows in parallel with tangible wealth. Financial statements of the U.S. economy prepared by the Federal Reserve show that private debt has a practical limit of about \$1.00 for each \$3.00 of private tangible wealth.

Think about the implications of this for a minute. Real growth over the last century has been 3% to 3.5% a year on average. Some years higher, some years lower. What this says is that if we want stable prices, and if monetary wealth can only grow in parallel with tangible wealth and GNP, then we can only expand debt at the rate of 3.5% a year. In 1979, private debt increased by 13.9% in the U.S. This is almost four times the rate consistent with stable debt burdens at stable prices. Federal debt increased at a much lower rate than private debt in 1979. The monetary saving rate has been running about three times as high as it could if we had dynamic equilibrium at stable prices in the growth of tangible wealth, monetary wealth and GNP.

Money matters. It matters very much. It makes a lot of difference who owns it and who owes it. By "money", I mean the broadest definition: total monetary wealth. Out of \$286 billion of debt in 1950, which equaled \$1.42 per dollar of GNP, \$.75 represented federal debt. At the end of the Second World War privately owned federal debt was equal to \$1.20 per \$1.00 of GNP. In 1979 total debt was about \$1.50 per \$1.00 of GNP - not much change. But look at the structure: Federal debt down to \$.28, over a 75% reduction in the proportionate amount of federal debt since the end of the Second World War. Every single category of private debt increased sharply. Household debt from \$.25 in 1950 to \$.56, corporate debt from \$.25 to \$.41. The increase in the private debt burden has reduced the liquidity of all of the private sectors of the economy. As you can see, the federal sector is winning. Here is part of the result. At the end of the Second World War, the nonfinancial corporate business sector had a little over \$.50 of liquid assets for each dollar of liability, i.e., current liabilities plus long-term debt. That was unusually high. \$.30 would probably be a comfortable level. Today it is \$.13. The decline in liquidity in the household sector has not been this severe, but it has been substantial. The same thing has happened in the farm sector and in the non-corporate business sector. This decline in private liquidity has resulted directly and primarily from the shift in debt burden which has taken place, a shift away from the federal sector and towards the private sectors. In 1979 there was something like \$390 billion of total deficit financing in the U.S. of which only \$37 billion represented net increase in private holdings of federal debt. All the rest represented private or state and local government deficit financing.

The GNP financing rate is the proportion of GNP which can be viewed as having been paid for through the net expansion in nonfinancial credit market debt each year. There has been a steady uptrend in the GNP financing rate and in the CPI inflation rate since 1950. In order to have stable debt burdens and a stable monetary wealth ratio at stable price levels given our historic growth rates, the GNP financing rate should be approximately 5%. It has not been down to that level in the whole post war period. If we are serious about wanting to reduce inflation, we have to reduce the need for inflation. To reduce the need for inflation, we have to reduce the rate of credit expansion. The historical record is very clear on this.

Something has been happening to interest rates. Henry Kaufman's predecessor at Salomon Brothers was an economist named Sidney Homer. Sidney Homer was a student of the history of interest rates. He published a book titled A History of Interest Rates. What the historic record says is that if you want stable price levels, long-term interest rates need to be of the order of 2 1/2% to 4%. We know this. There is no way that reasonably full employment and stable price levels can be reconciled with the current levels of interest rates. And yet the national policies we are following today practically guarantee that each successive business cycle recovery will be accompanied by new highs in interest rates, credit expansion rates and inflation rates. We simply have not done our homework. We have not looked at the relationships that the historic record validates.

What do we know about the rise in interest rates? What would we have to do to turn it around? The traditional, free market way of doing it is called a depression. 10-15 years would do the job the traditional way. Unfortunately, our form of government might not be stable under those conditions. We would have immense pressures to utilize the distribution capabilities of socialism as a balance wheel for the weaknesses of capitalism. We have seen elements of that already in the partial nationalization of some of our railroads, in aid to Chrysler, and in various other bail-out schemes. You can be essentially certain that if the current policies lead to substantial escalation in unemployment, and a continuation of the present levels interest rates which are destroying the long-term debt market we are voting for socialism. We need better answers to these problems.

Have you ever heard anyone say inflation is due to too much money chasing too few goods? M1 is probably the most important kind of money. It has declined by 2/3 since the end of the Second World War, and the relationship between the proportionate amount of M1 money and noninterest-paying money and interest rates is striking. It is a logical relationship. The higher interest rates rise the more everybody is going to economize on nonearning balances and the lower the balances needed to pay for bank services. The Federal Reserve System today has no means of increasing the economic or proportionate size of the M1 money supply. The open market committee could buy a billion dollars of treasury bills and increase the monetary base by a billion dollars. Instead of that increasing the proportionate amount of money it would just stimulate that much more credit expansion and we would end up with a continued decline in the proportionate amount of money. We will not make any basic progress against inflation until conditions are created that result in a higher rate of increase in M1 than in credit market debt. We will not make basic progress against inflation until average portfolio yields of debt instruments begin to decline. It is not much to take satisfaction in to see a temporary reduction in inflation rates during the contraction period in an ordinary business cycle, when you know very well that the next expansion is going to lead to new cyclical deterioration. We need cycle to cycle improvement, not just a little short-term improvement within an individual business cycle.

Now what is the problem? Why haven't we been able to figure out better answers to these relationships? I think that an outmoded monetary theory which does not apply to a sophisticated modern economy has blinded us to the underlying relationships that really count. The quantity equation of exchange that lies at the heart of neoclassical monetary theory is an undifferentiated demand side monetary theory. It deals with total demand, with aggregate demand for aggregate product. It does not differentiate between demand for investment and demand for consumption. It also has trouble deciding what money is. If some simple definition such as noninterest bearing money is used, the theory clearly does not work. We have had a 2/3 decline in that kind of money, and inflation has gone up rather than down. If you take some other definition of money and include interest bearing forms of liquidity, it is hard to find any place to stop short of total liquid assets. Why should a savings deposit in a commercial bank be counted as money and treasury bills not be counted as money? I have been on Northwestern Mutual's cash committee ever since the Federal Reserve Accord in 1951. I cannot think of a single time when we had any difficulty closing a transaction that required us to shift from some form of interest bearing liquid asset to demand deposits long enough to close the transaction.

All modern societies are going to generate an adequate quantity of transaction media. What we need to do is to figure out how to generate the needed amount of capital formation without excessive use of credit in the process. Now how much capital formation do we need? It is a good bit more than we talk about normally. Consumer durables are capital assets, too. When all of the types of durable goods are included in the figures, to have a healthy economy we need to expend about 25% of GNP on gross private capital formation. In order to have stable prices with stable debt burdens, we have to be able to generate that amount of effective demand with only about 20% of it paid for through net expansion in private debt, assuming all expansion in private debt is used in this way. That is a challenge. We have not even thought about what would have to be done to achieve it.

A different kind of monetary theory, what I call a supply-side monetary theory, attempts to deal with that problem. The monetary theory that counts is multidimensional. It recognizes the whole structure of monetary wealth. It recognizes that there are limitations to the debt carrying capabilities of the different sectors. It recognizes that monetary assets and debt burdens are both important. It recognizes the liquidity needs of private businesses and households, liquidity needed to be able to generate the needed demand for capital formation without excessive use of credit. Here is the new velocity equation:

$$V^I \cdot PMW = I - \Delta PD$$

Where:  $V^I$  = investment velocity of private monetary wealth  
 $PMW$  = private monetary wealth  
 $I$  = gross private investment  
 $PD$  = net increase in private debt used to finance investment

If only 20% of capital formation can be financed through net expansion in debt, the other 80% must be paid for by the investment velocity through the turnover of existing monetary wealth. You can have borrowing equal to debt repayment without any expansion in debt at all. If we want to create the kind of dynamic equilibrium conditions that make stable debt burdens compatible with stable price levels, then monetary wealth times investment velocity must equal investment less the proportion of investment paid for through net expansion of debt. To generate the needed level of capital investment at a zero inflation rate requires an investment velocity of monetary wealth of about 15% per year. We are not going to achieve that investment velocity at current interest rates.

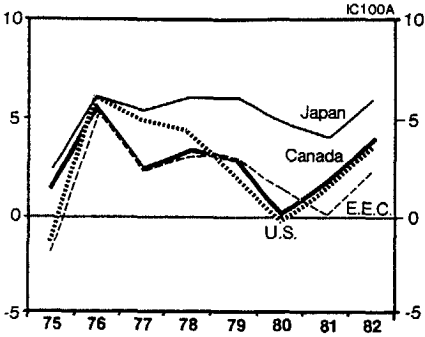
Most debt service payments today go to pay interest, not to pay principal. The function of inflation in that environment is to transfer enough wealth back from creditors to debtors each year to prevent the increase in interest rates from causing a shift in real income flows. Monetary saving and monetary dissaving is a zero sum game. There are a number of policies that could be pursued which would help to reconcile capital formation needs with sustainable levels of credit expansion. However, the problem is deeper than we have been talking about. There is a fundamental design flaw in the reserve mechanisms administered by the Federal Reserve System. There is no possible way of using the present reserve mechanisms to bring about the kind of adjustments which are needed in the money and credit system without the assistance of a full scale depression.

To the actuaries in the audience concerned about future interest rates, I suggest the following. If we were to correct the flaws in our institutional arrangements, we could literally launch a progressive decline in interest rates, inflation rates and credit expansion rates. In 5-10 years we could be back to conditions which made reasonably full employment consistent with miraculously stable prices, 1% to 2% inflation per year, a normal yield curve, and interest rates much lower than they are now. If the new multidimensional monetary theory were accepted, there would be actions which could be taken quickly. Some of the most important ones would not even require new legislative authority. Those actions could have enough impact within a period as short as six months to substantially ease the current financial crisis. By that I mean a sharp reduction in short-term interest rates, and a significant reduction in long-term rates. But think of the problems in achieving the necessary consensus, even assuming all my theories are correct. We have all grown up with a demand side monetary theory, neoclassical theory. The Reagan administration is sensitive to the inadequacies of neo-Keynesian demand theory. They give no evidence of being equally sensitive to the inadequacies of neoclassical monetary theory.

If traditional monetary policies are pursued, interest rates are going to continue to be extremely volatile. Inflation rates, interest rates, and credit expansion rate will continue to ratchet up from business cycle to business cycle, so long as our political leaders refuse to accept the traditional alternative: a full-scale depression. But there is hope for a better outcome. A new monetary theory, supported by a rapidly expanding data base, offers new answers for the old problems.

Chart 1

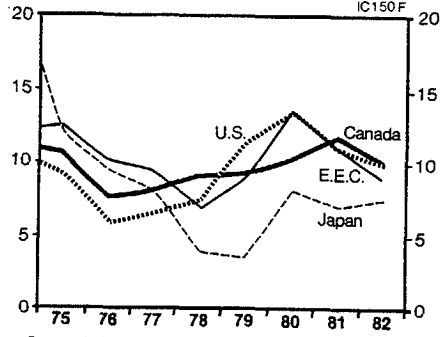
**Real GNP**  
Percent Change Over Year Ago



Forecast by The Royal Bank of Canada, Economics Department  
Source: IMF, OECD

Chart 2

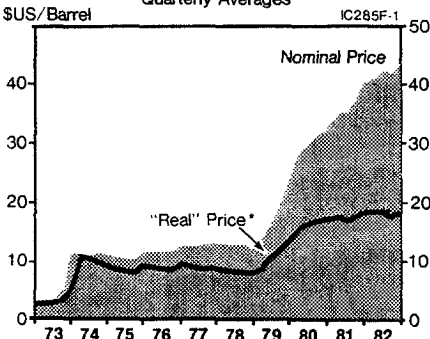
**Consumer Prices**  
Percent Change Over Year Ago



Forecast by The Royal Bank of Canada, Economics Department  
Source: IMF

Chart 3

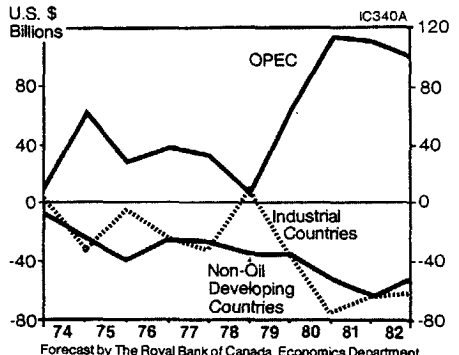
**Crude Oil Prices**  
Average OPEC Official Sales Price  
Quarterly Averages



\*\* "Real" price deflated by industrial countries consumer price index 1973=100  
Forecast by The Royal Bank of Canada, Economics Department  
Sources: CIA, IFS

Chart 4

**World Current Account**



Forecast by The Royal Bank of Canada, Economics Department  
Sources: OECD

## Chart 5

## PRESIDENT REAGAN'S ECONOMIC POLICIES

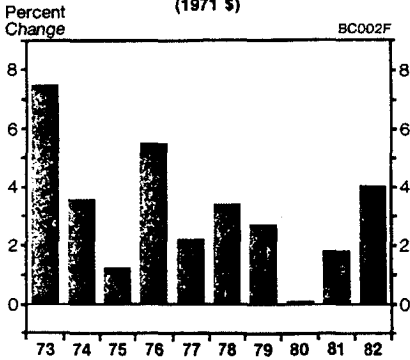
## (II) RESULTS FORESEEN BY THE ADMINISTRATION

(1)	<u>BUDGET</u>	<u>9/30/81</u>	<u>FISCAL YEAR ENDING</u>			<u>9/30/84</u>
			<u>9/30/82</u>	<u>9/30/83</u>		
	BUDGET DEFICIT (BILLIONS)	-54.5	-45.0	-22.9		+ .5
	SPENDING AS % OF G.N.P.	23.0	21.8	20.4		19.3
(2)	<u>GROWTH AND INFLATION</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>		<u>1983</u>
	REAL G.N.P. - %	- .1	+ 1.1	+4.2		+5.0
	INFLATION - C.P.I. - %	+13.5	+11.1	+8.3		+6.2
(3)	<u>STRUCTURE OF FEDERAL GOVERNMENT SPENDING</u>	<u>9/30/81</u>	<u>FISCAL YEAR ENDING</u>			<u>9/30/86</u>
			<u>PERCENT OF TOTAL</u>			
	DEFENCE	24.1				36.8
	ELDERLY AND POOR	36.6				40.1
	INTEREST ON FEDERAL DEBT	9.8				6.8
	ALL OTHER	29.5				16.2
		<u>100</u>				<u>100</u>



Chart 6

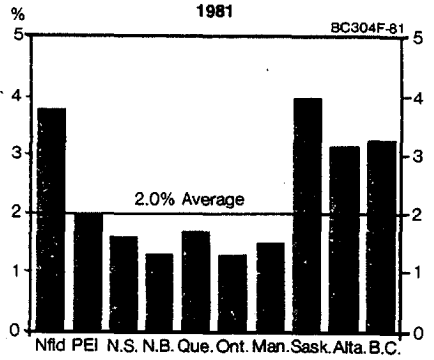
**Gross National Expenditure**  
(1971 \$)



Forecast by The Royal Bank of Canada, Economics Department

Chart 7

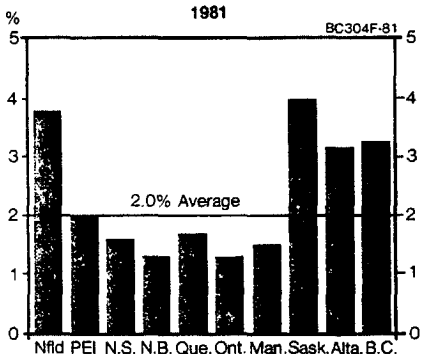
**Real Growth in Gross Domestic Product**  
(Percent Change, 1971\$)



Forecast by The Royal Bank of Canada, Economics Department

Chart 8

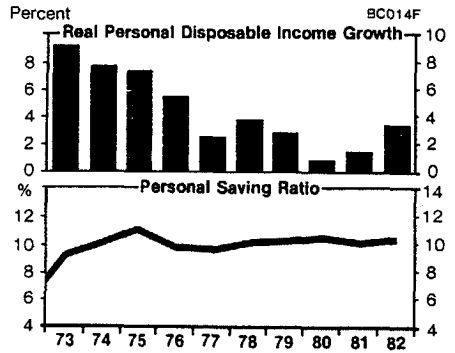
**Real Growth in Gross Domestic Product**  
(Percent Change, 1971\$)



Forecast by The Royal Bank of Canada, Economics Department

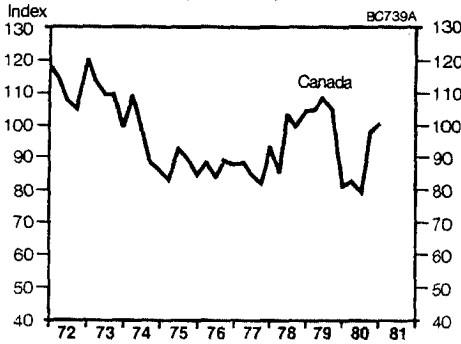
Chart 9

**Income and Savings**



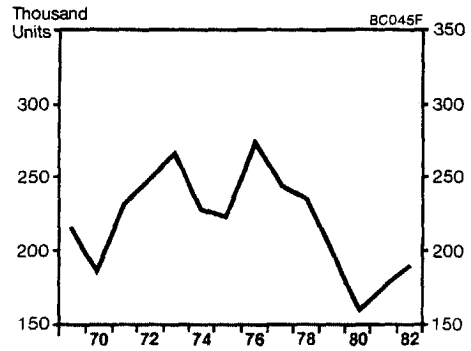
Forecasts by The Royal Bank of Canada, Economics Department  
Source: Statistics Canada

Chart 10 **Index of Consumer Attitudes**  
(1961=100)



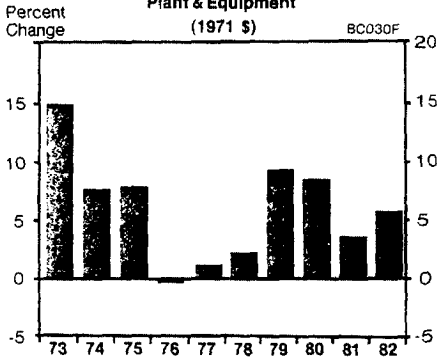
Source: Conference Board in Canada

Chart 11 **Total Housing Starts in Canada**



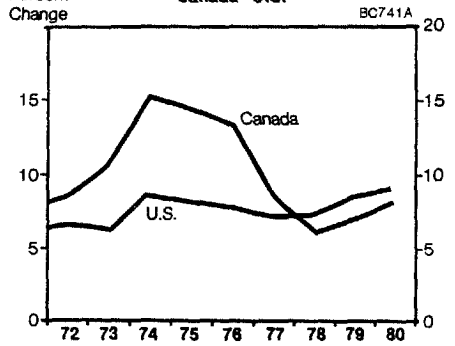
Forecast by The Royal Bank of Canada, Economics Department  
Source: C MHC

Chart 12 **Business Fixed Investment**  
Plant & Equipment (1971 \$)



Forecasts by The Royal Bank of Canada, Economics Department  
Source: Statistics Canada

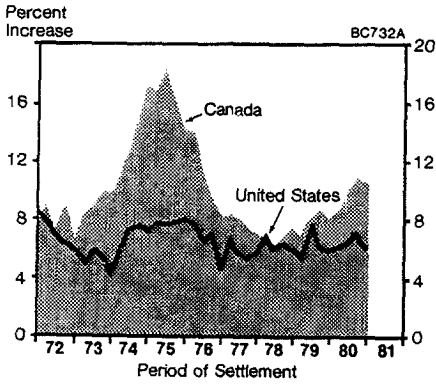
Chart 13 **Actual Wage Rates**  
Canada - U.S.



Source: Statistics Canada; U.S. Dept. of Labor

Chart 14

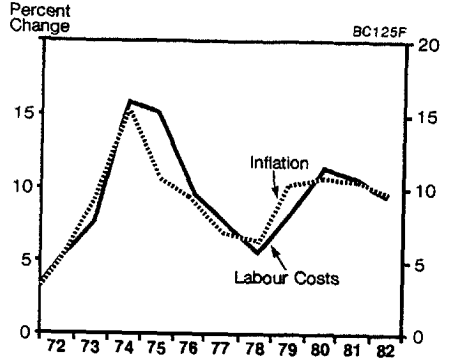
**New Wage Rate Settlements**



Source: U.S. Dept. of Labour, Bureau of Labour Statistic, Monthly Labour Review

Chart 15

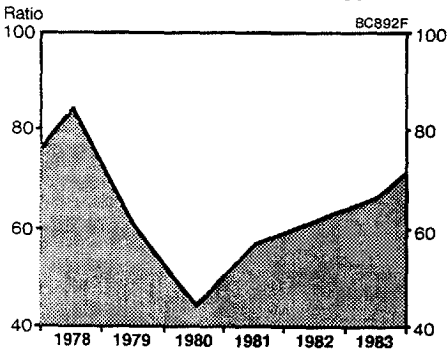
**Unit Labour Costs and Inflation**



Forecast by The Royal Bank of Canada, Economics Department  
Source: Statistics Canada

Chart 16

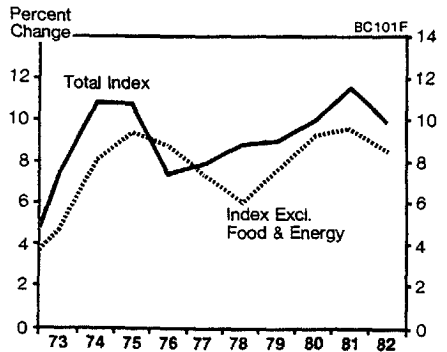
**Canadian Crude Oil to World Crude Oil Prices**



Forecast by The Royal Bank of Canada, Economics Department  
Source: Statistics Canada

Chart 17

**Consumer Price Index**

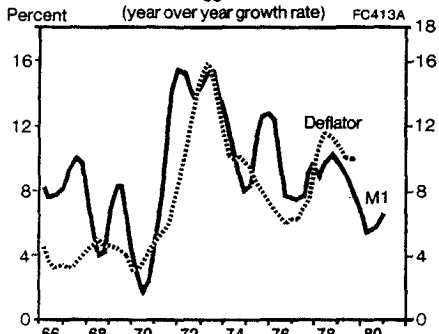


Forecast by The Royal Bank of Canada, Economics Department  
Source: Statistics Canada

Chart 18

**Money Supply and Inflation\***

Inflation Lagged 18 Months  
(year over year growth rate)

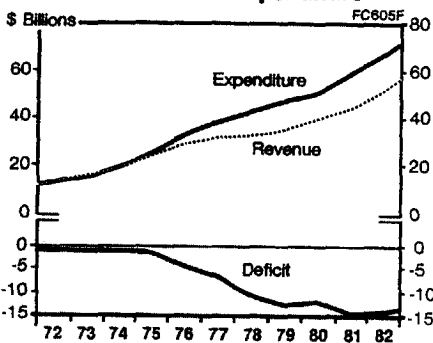


\*Smoothed three quarter moving average of M1 and GNP implicit price deflator

Source: Bank of Canada

Chart 19

**Federal Government Revenue and Expenditure<sup>1</sup>**



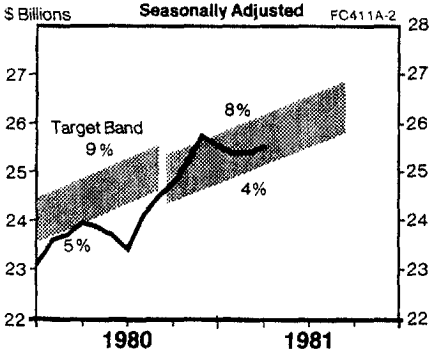
<sup>1</sup>Budgetary Basis, Fiscal Year End  
Forecast by The Royal Bank of Canada, Economics Department

Source: Department of Finance

Chart 20

**Money Supply (M1)\***

Seasonally Adjusted

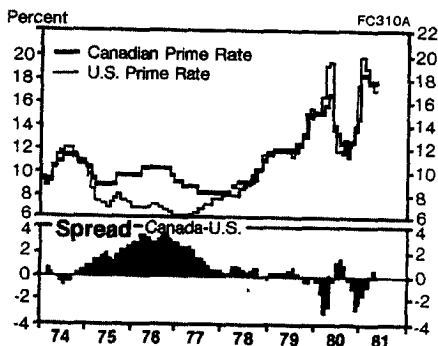


\*Currency plus demand deposits

Source: Bank of Canada

Chart 21

**Canadian and U.S. Prime Interest Rates**



Source: The Royal Bank of Canada, Economics Department

Chart 22 Long-Term Interest Rates

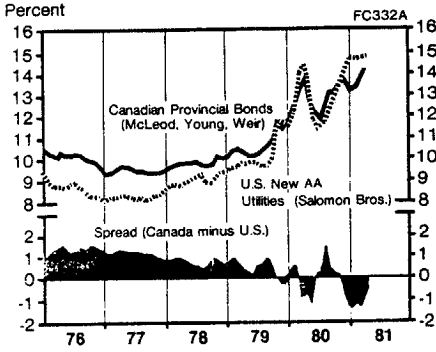


Chart 23 Alternative Borrowing Rates

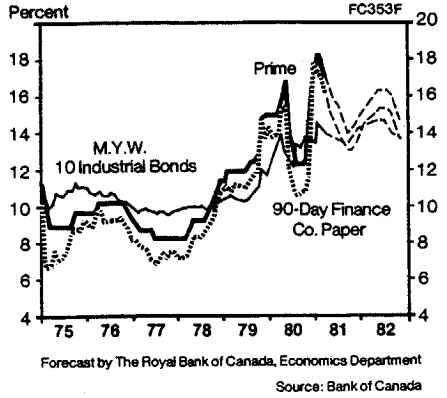
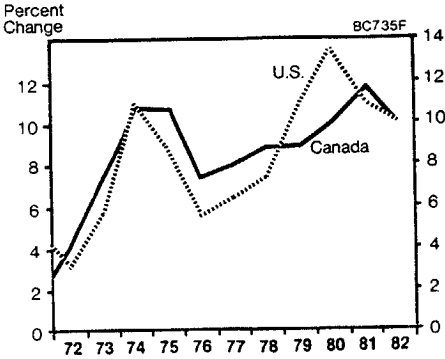
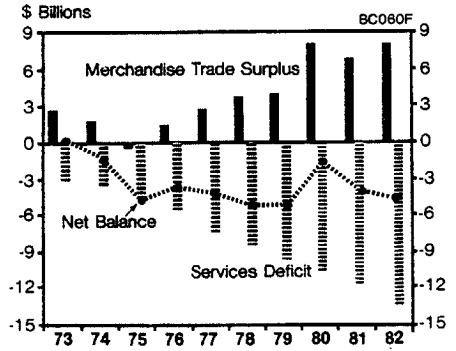


Chart 24 Consumer Price Index



Forecasts by The Royal Bank of Canada, Economics Department  
Source: Statistics Canada

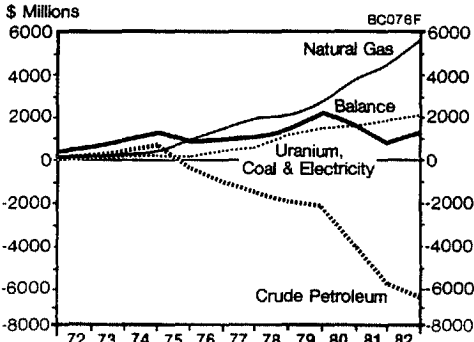
Chart 25 Current Account Balance



Forecasts by The Royal Bank of Canada, Economics Department  
Source: Statistics Canada

Chart 26

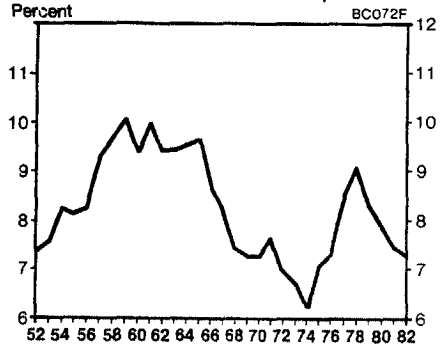
**Canadian Net Energy Trade**



Forecast by The Royal Bank of Canada, Economics Department  
Source: Statistics Canada

Chart 27

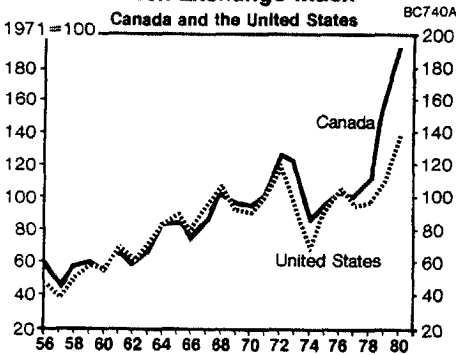
**Interest and Dividend Payments  
as a Percent of  
Total Goods and Services Exports**



Forecast by The Royal Bank of Canada, Economics Department  
Source: Statistics Canada

Chart 28

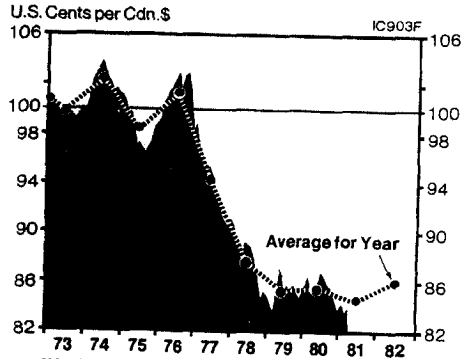
**Stock Exchange Index  
Canada and the United States**



Source: Bank of Canada

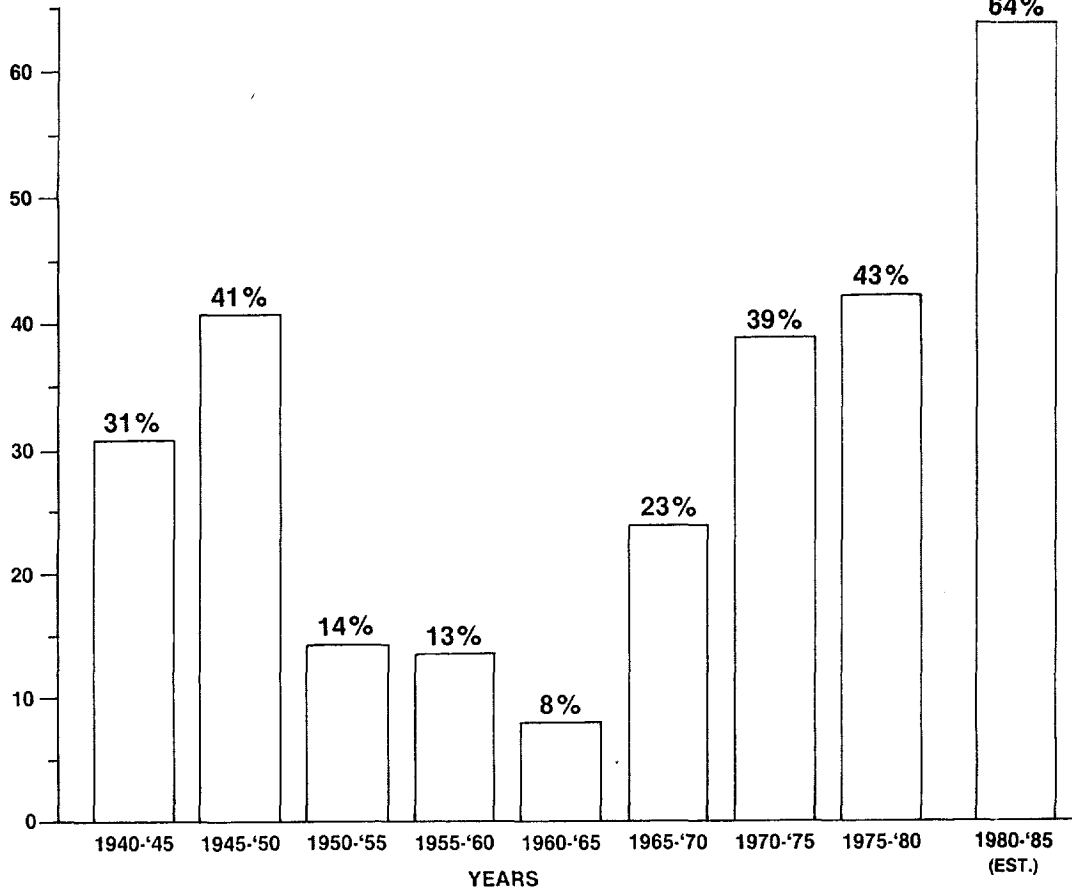
Chart 29

**Forecast for Canadian Dollar in U.S. Funds\***



\* Monthly average (business days), noon spot rates  
Forecast by The Royal Bank of Canada, Economics Department  
Source: Bank of Canada

# INFLATION SCOREBOARD 1940 - 1985



Based on GNP Implicit Price Deflator

DOMESTIC NATIONAL WEALTH AND WEALTH COEFFICIENTS

(DOLLAR AMOUNTS IN BILLIONS)

	<u>1925</u>	<u>1929</u>	<u>1948</u>	<u>1957</u>	<u>1966</u>	<u>1973</u>	<u>1975</u>
GROSS DOMESTIC WEALTH (GDW)	\$532.7	604.1	1,507.3	2,595.7	3,974.1	7,400.9	\$8,950.6
NET DOMESTIC WEALTH (NDW)	\$343.3	386.8	859.9	1,536.8	2,487.2	4,657.2	\$5,587.6
GROSS NATIONAL PRODUCT (GNP)	\$ 93.1	103.1	259.1	442.8	753.0	1,306.3	\$1,499.0
<hr/>							
WEALTH COEFFICIENTS							
GDW/GNP	5.72	5.86	5.82	5.86	5.28	5.67	5.97
NDW/GNP	3.69	3.75	3.32	3.47	3.30	3.57	3.73



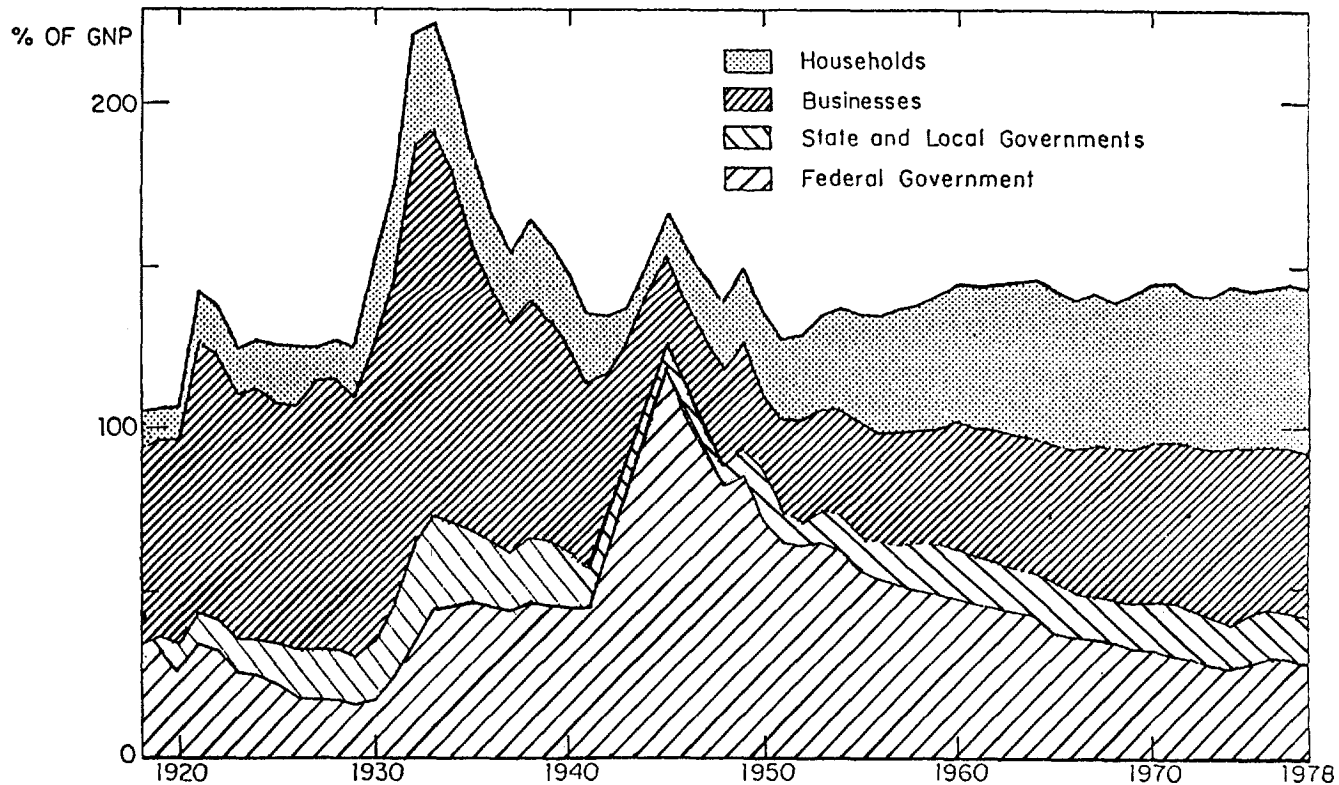
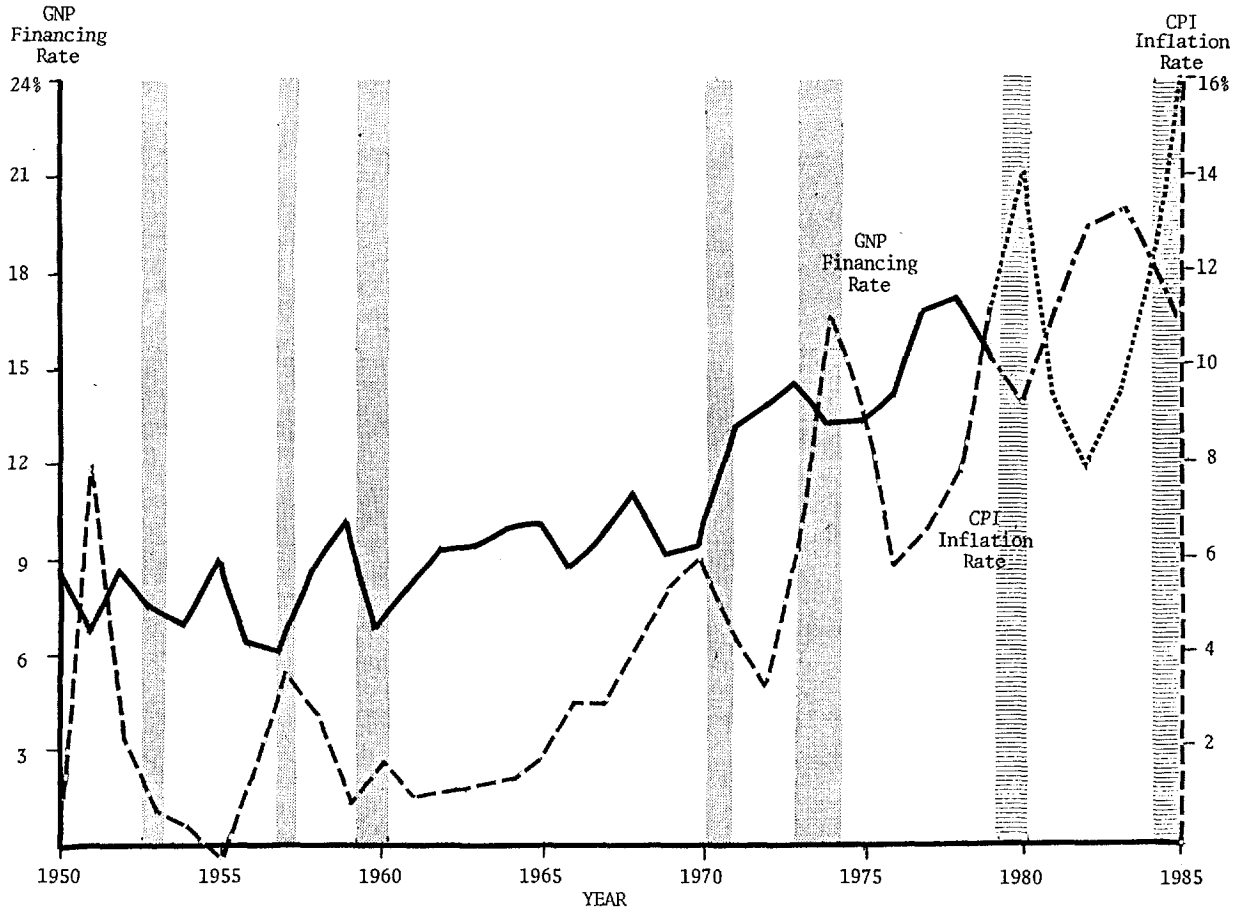


FIGURE 1  
OUTSTANDING DEBT OF U.S. NONFINANCIAL BORROWERS

## RATIO OF DEBT TO GNP

	<u>1950</u>	<u>1955</u>	<u>1960</u>	<u>1965</u>	<u>1970</u>	<u>1975</u>	<u>1979</u>
<b>GNP (Billions)</b>	<b>\$ 286.2</b>	<b>\$ 399.3</b>	<b>\$ 506.0</b>	<b>\$ 688.1</b>	<b>\$ 982.4</b>	<b>\$ 1,528.8</b>	<b>\$ 2,368.8</b>
<b>Non-Financial Credit Market Debt</b>							
<b>Federal</b>	<b>75.6%</b>	<b>57.6%</b>	<b>46.7%</b>	<b>38.1%</b>	<b>30.6%</b>	<b>29.2%</b>	<b>28.0%</b>
<b>State and Local</b>	<b>8.7</b>	<b>11.6</b>	<b>14.2</b>	<b>15.0</b>	<b>15.2</b>	<b>14.6</b>	<b>12.7</b>
<b>Households</b>	<b>25.0</b>	<b>34.0</b>	<b>42.8</b>	<b>49.6</b>	<b>49.0</b>	<b>50.5</b>	<b>56.0</b>
<b>Farm</b>	<b>3.3</b>	<b>3.4</b>	<b>3.9</b>	<b>4.7</b>	<b>4.8</b>	<b>5.5</b>	<b>6.5</b>
<b>Non-Farm Non-Corp.</b>	<b>4.5</b>	<b>4.6</b>	<b>5.1</b>	<b>6.8</b>	<b>7.8</b>	<b>8.2</b>	<b>7.3</b>
<b>Corporate</b>	<b>24.8</b>	<b>26.0</b>	<b>30.3</b>	<b>32.3</b>	<b>38.3</b>	<b>41.2</b>	<b>40.5</b>
<b>Total</b>	<b>142.0%</b>	<b>137.2%</b>	<b>143.2%</b>	<b>146.6%</b>	<b>145.7%</b>	<b>149.2%</b>	<b>151.0%</b>
<b>Financial Credit Market Debt</b>	<b>2.8</b>	<b>4.4</b>	<b>6.0</b>	<b>8.7</b>	<b>11.8</b>	<b>16.0</b>	<b>20.5</b>
<b>Trade and Sec. Credit</b>	<b>15.0</b>	<b>16.6</b>	<b>17.8</b>	<b>19.2</b>	<b>21.4</b>	<b>16.5</b>	<b>18.8</b>
<b>TOTAL DEBT</b>	<b>159.8%</b>	<b>158.2%</b>	<b>167.0%</b>	<b>174.5%</b>	<b>178.9%</b>	<b>181.7%</b>	<b>190.3%</b>

GNP FINANCING RATE VS. CPI INFLATION RATE



# YIELDS OF PRIME LONG CORPORATE BONDS 1900 - 1979

