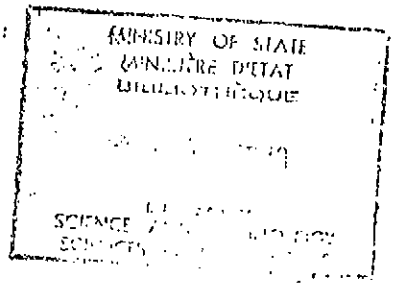

INVESTMENT FOR INNOVATION

by

Gordon R. Sharwood

A report prepared for the Industry Branch of the Ministry of State for Science & Technology

January 1977

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PREFACE

This report was done at the request of the Minister of State for Science and Technology. The need for the report arose from the perception of the Ministry that the investment climate for innovation in Canada was not healthy and that certain measures could be taken which might contribute to changing the climate. The report is a follow-on and builds upon a report done for the Ministry last year by Robert Grasley entitled "The Availability of Risk Capital for Technological Innovation and Invention in Canada".

The focus of this report is mainly on the financial barriers to innovation and more specifically on the investment process. While there are some references to other barriers they are not treated in depth.

I would like to express my special thanks to C. Brice Bowen for his unfailing enthusiasm. This report rests substantially on the assistance he has given to me. Dr. Peter Meyboom was a stimulating catalyst and editorially critical - a source of great help. I acknowledge also the contributions of the members of the staff of the Ministry of State for Science and Technology. In addition I would like to thank Gordon Ritchie, Paul Murray, David MacKinnon and William Mitchell of Industry, Trade and Commerce for their contributions.

Thanks go also to those listed in the Appendix for all the assistance they gave me while putting together this report.

BACKGROUND

The purpose of this paper is to examine trends and developments over the past decade which have influenced investment in innovation in Canada, and to recommend a set of measures to revitalize the investment process in Canadian manufacturing. The measures which are proposed are not aimed at specific technological innovations, but are directed at changing the incentive system to improve the climate for innovation in Canadian industry. More specifically, the measures are intended to provide rewards commensurate with the risks taken by those who are critical to successful technological innovation: the entrepreneur; the individual investor and the institutional investor. The measures minimize direct government involvement in resource allocation, and leave the private sector free to make its own decisions.

The paper is based on the assumptions that it is in Canada's best immediate interest to have a competitive and productive manufacturing sector and that the future of manufacturing in Canada is dependent upon industry's continuing ability to apply the best available technology to the production of goods and services.

The concern of The Ministry of State for Science & Technology in examining the climate for investment in innovation in Canada stems from a deterioration in the amount of research and

development performed by Canadian industry, which it turns out is part of an overall decline in the level of investment in the manufacturing sector. Together, R&D and general investment, represent the innovative potential and the innovative ability of Canadian industry.

CHAPTER I THE ROLE OF INNOVATION

Background

The proposition that innovation is the key to a dynamic economy and that Canada has an inadequate supply of it is not a new one. Policy-makers have been wrestling with the problem for many years. The best overall review of the situation is probably found in "Innovation and the Structure of Canadian Industry" a Background Study for the Science Council by Pierre L. Bourgault completed in 1972. As the background is so well known, only a brief review is given here.

This report rests on the premise that a healthy manufacturing sector is essential to a thriving economy. It is clear that the continued development of the Canadian economy to meet the desires of Canadians for consumption will mean that a large part of the goods used both for consumption and investment in Canada will be purchased from abroad. Thus, as Canadians become aware of the ultimate limitations on their natural resources, it will become increasingly urgent to develop additional means of paying for these imported goods. Or, to put it more colloquially, if Canadians wish to drink orange juice for breakfast and purchase imported automobiles, they must not only sell abroad the products of their mines, oil wells and forests, but the products of their intellect as well.

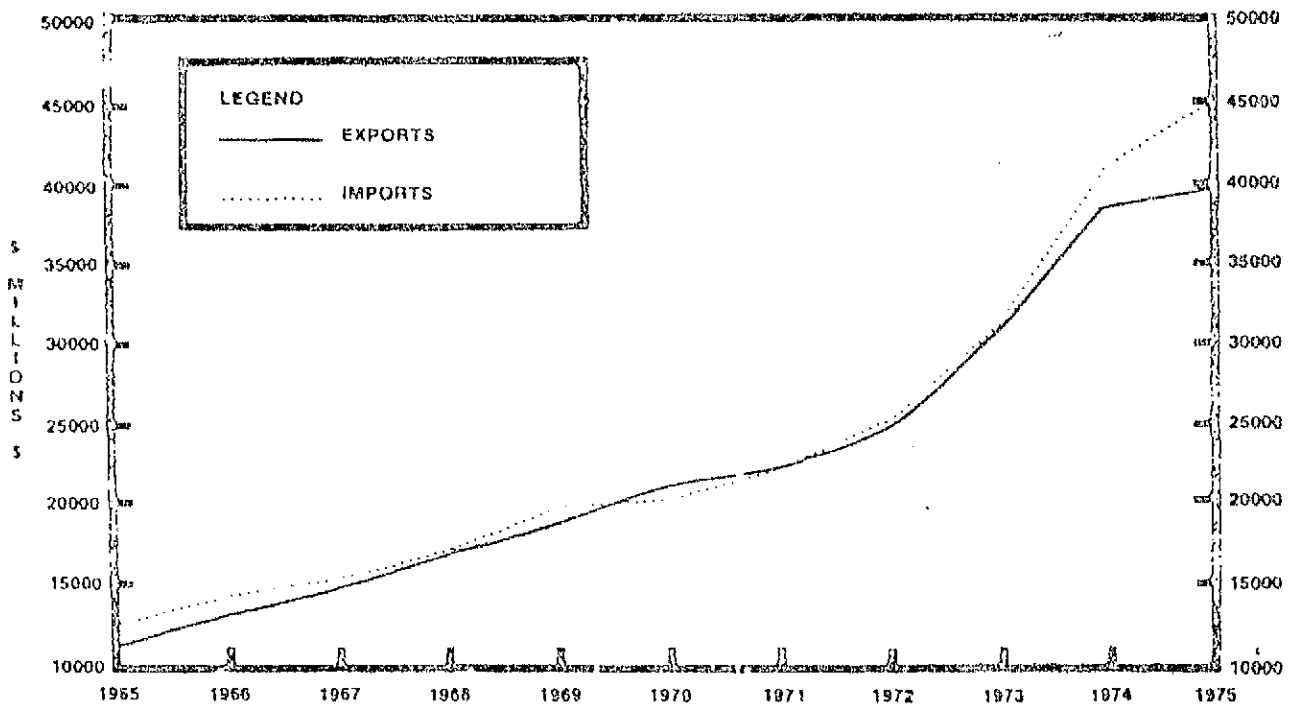
In the perspective of our external trade, two major sectors of the economy can be excluded from this discussion. These are the merchandising and distribution system and the housing sector, neither of which contributes significantly to Canada's balance of payments. Some of the output of the rapidly expanding service sector is being sold abroad, such as engineering consulting services, and certain high technology services which are part manufacturing and part services, such as aerial survey work, for example. In terms of quantity of dollars, however, the service sector is not a large generator of exports.

This leaves us with the manufacturing sector where our costs are high making products difficult to sell abroad on a cost basis alone. It is apparent that our future exports must contain a higher degree of technological skills than has been the case in the past. If this does not take place, and our resources continue to be slowly exhausted, the result will be an ever declining standard of living for Canadians. In other countries, policies which stimulate consumption and undervalue the investment process and which focus almost exclusively on internal trade and internal skills have resulted in severe balance-of-payments problems. Britain is perhaps the most outstanding example in the post-war period.

Recent Trends

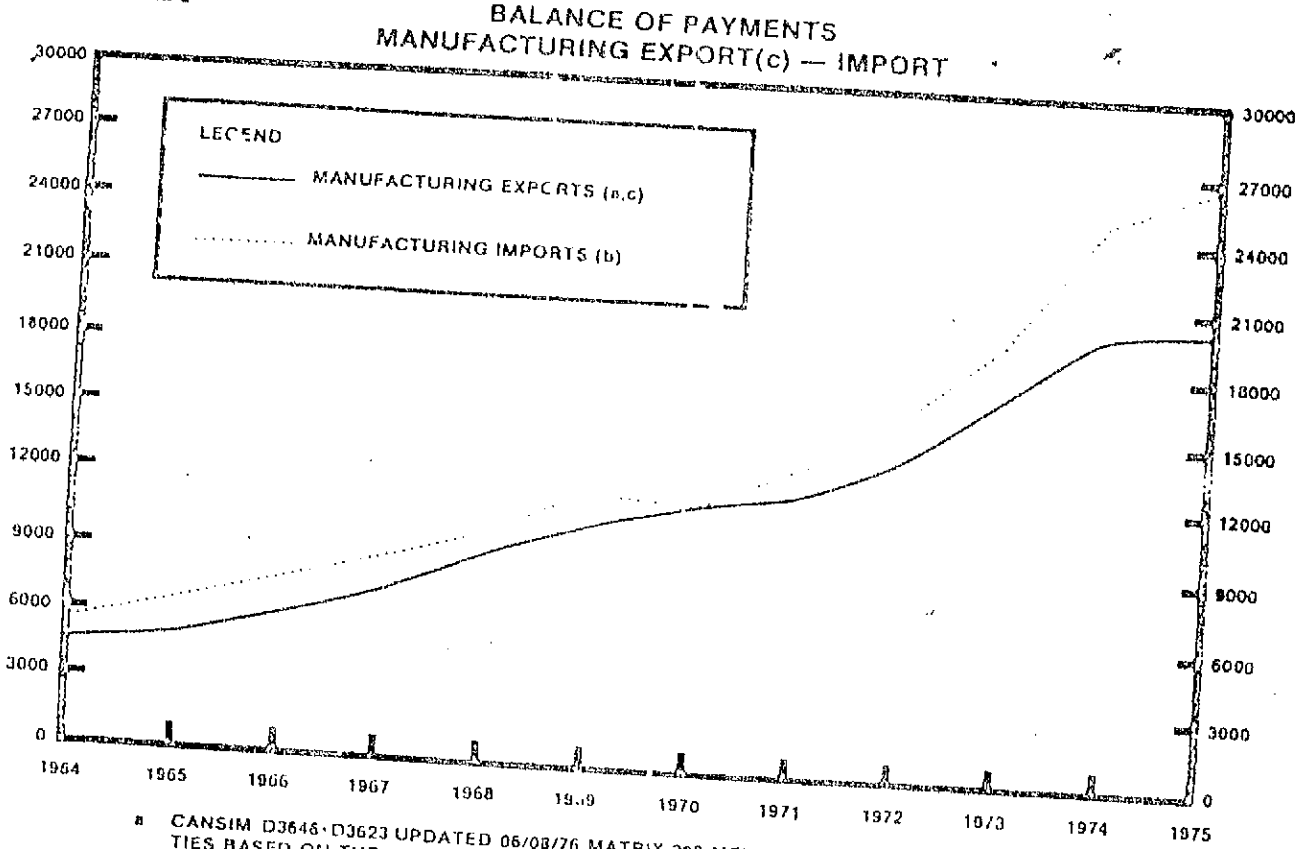
Let us briefly review the evidence for the propositions outlined above. Figure 1 indicates the deterioration in our balance of trade over the last few years. A closer examination of the underlying statistics show that the fundamental reason for this deterioration has been the increasing deficit on our balance of trade in manufacturing as shown in figure 2.

FIGURE 1 BALANCE OF PAYMENTS — GOODS AND SERVICES
1965-1975



SOURCE: STATISTICS CANADA — QUARTERLY ESTIMATES OF THE CANADIAN BALANCE OF INTERNATIONAL PAYMENTS

FIGURE 2



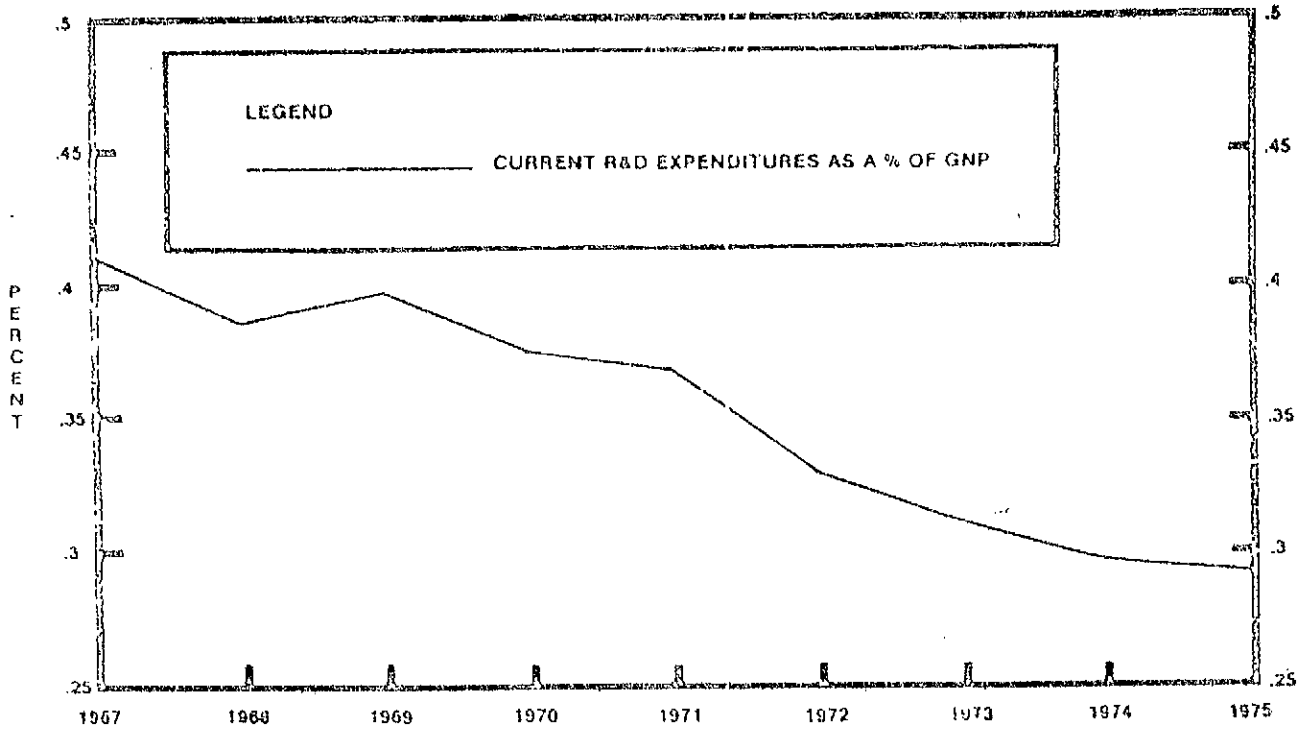
a CANSIM D3646+D3623 UPDATED 06/08/76 MATRIX 203 MERCHANDISE EXPORTS BY COMMODITIES BASED ON THE STANDARD COMMODITY CLASSIFICATION (TOTAL END PRODUCTS, INEDIBLE+TOTAL FABRICATED MATERIALS, INEDIBLE).

b CANSIM D3746+D3761 UPDATED 06/08/76 MATRIX 204 MERCHANDISE IMPORTS, BY COMMODITY CLASSIFICATION (TOTAL END PRODUCTS, INEDIBLE + TOTAL FABRICATED MATERIALS, INEDIBLE).

c EXCLUDES RE-EXPORTS

If one accepts the assumption that national R&D expenditures are a measure of potential international competitiveness,' then Canada can be seen to be headed towards an even greater deficit. Figure 3 summarizes the trend of these expenditures in Canada's manufacturing sector during the past decade. It is clear from this graph that Canada's innovative potential has been steadily declining since 1967.

FIGURE 3 INTRAMURAL R&D EXPENDITURES IN MANUFACTURING(a) AS A PERCENTAGE OF GNP



SOURCE: INDUSTRIAL RESEARCH AND DEVELOPMENT EXPENDITURES IN CANADA 1973-75 STATISTICS CANADA CATALOGUE 13-203. GNP TAKEN FROM CANSIM D 40012 UPDATED AS OF 06-JUL-1976.
(MATRIX 1000 NATIONAL INCOME AND GROSS NATIONAL PRODUCT, BY QUARTERS FROM FIRST QUARTER 1947, IN MILLIONS OF CURRENT DOLLARS UNADJUSTED FOR SEASONAL VARIATION)

A. MANUFACTURING INCLUDES ALL STANDARD INDUSTRIAL CLASSIFICATIONS EXCEPT MINES AND WELLS AND OTHER INDUSTRIES.

The problem of declining innovative capability in Canada's manufacturing sector is further aggravated by the fact that, the importance of the manufacturing sector as a contributor to the Gross Domestic Product has been declining relative to other sectors of the economy particularly with respect to the service sector. In 1965, the product of the manufacturing sector accounted for 26% of GDP. This had diminished to 23% in 1974.

Even though the service sector does include some exportable technology, these statistics suggest a distressing decline in the innovative capability of Canada's manufacturing sector.

An additional problem that affects the export behaviour of our manufacturing goods is our high-cost economy. Statistics completed by the Department of Finance show that Canada's average hourly earnings in the manufacturing sector have exceeded those of the U.S.A. since 1974. When these costs are added to transportation and distribution costs, and the heavy capital burden that has to be carried by the Canadian manufacturing sector, it puts us in a difficult situation indeed. The ratio of capital assets to total output in Canadian manufacturing is about 50% higher than in USA manufacturing. All of these factors together have caused Canada's productivity performance to be poor.

There are a number of things than can be done to increase productivity as, for example, improving education and training. In this report we will focus only on the investment process, particularly as it affects industrial R&D, the creation of new science-intensive companies, and the continuing prosperity of established enterprises in this field.

Evidence from recent studies in the United States indicates that the aggregate contribution of R&D to the improvement of productivity is very high. Some of these studies have

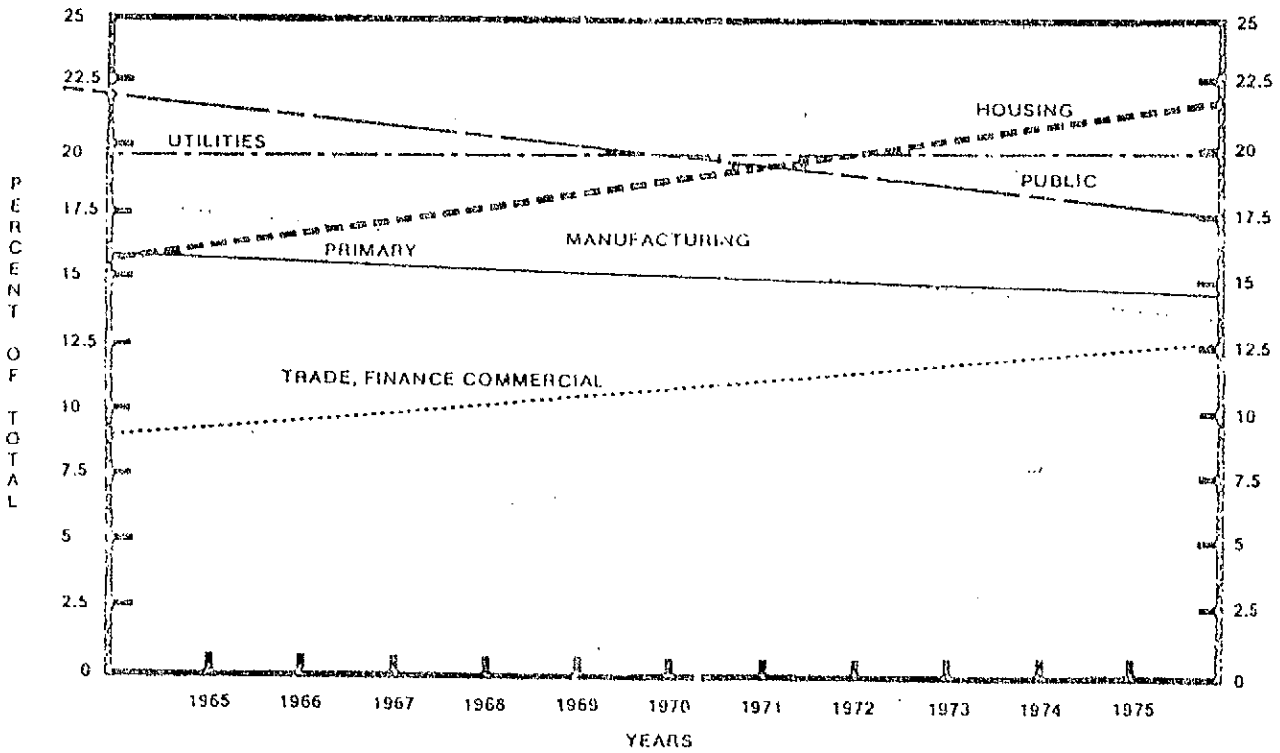
demonstrated that R&D has accounted for 40% of the total increase in U.S. productivity over the years and that industry averages a 30% return on R&D spending. This is about twice the rate that companies get from other business investments.

It is a principal thesis of this report that it is essential to both R&D and the investment process that the manufacturing sector have a healthy cash flow and good profit picture. If there is pressure on cash, as there has been in recent inflationary times, then R&D is one of the first things to be cut back, and with it the company looses its lifeline to the future. Viewed against this background, the general investment trends in Canadian manufacturing shown in Figure 4 and the particular decline in R&D already referred to in Figure 3 are worrisome indeed.

This report examines the reasons for these declines and suggests ways of revitalizing the investment process in Canadian manufacturing.

FIGURE 4

NEW CAPITAL FORMATION IN CANADA
1965-1975



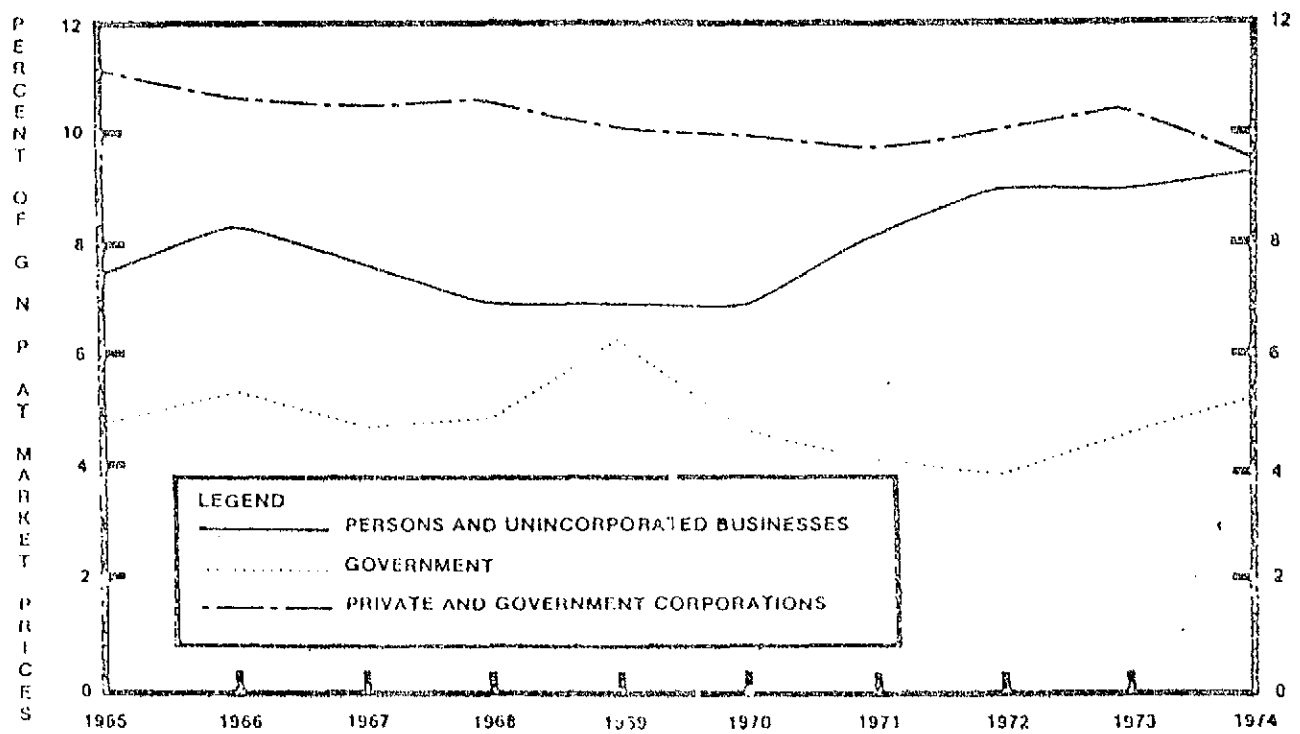
SOURCE: PRIVATE AND PUBLIC INVESTMENT IN CANADA. STATISTICS CANADA CATALOGUE 61-504. AS QUOTED IN THE CANADIAN ECONOMIC REVIEW 1976.

a. EXCLUDES SELLING COSTS (PRICIPALLY REAL ESTATE COMMISSIONS).

CHAPTER II THE SAVINGS AND INVESTMENT PROCESS

Before examining the investment process in Canada, it may be helpful to describe briefly the various kinds of savings that accummulate in our economy. Under the term "savings", we distinguish personal savings, corporate savings (i.e. retained earnings), and government savings (i.e. surpluses). Recent trends in each of these categories, expressed as a percentage of GNP, are shown in Figure 5.

FIGURE 5 TRENDS IN SAVINGS: CANADA 1965-1975



SOURCE: "NATIONAL INCOME AND EXPENDITURE ACCOUNTS 1926-1974" STATISTICS CANADA CATALOGUE 13-531

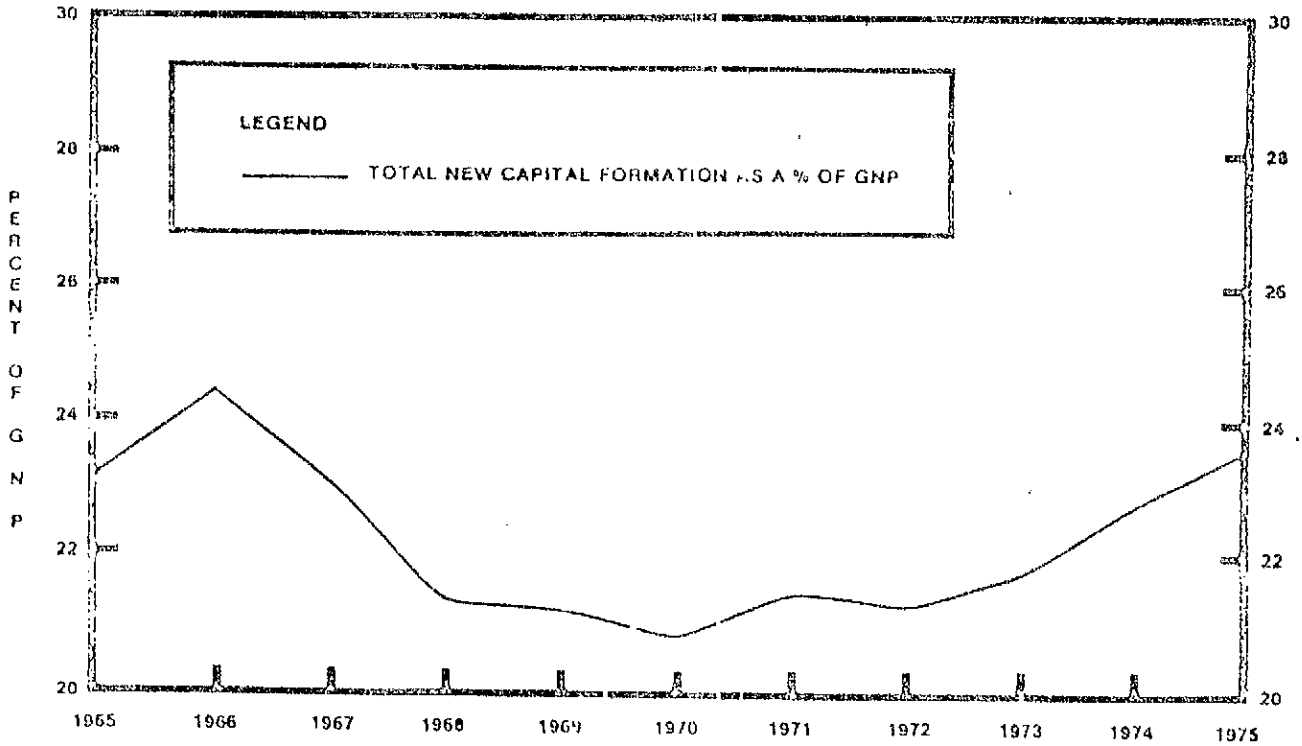
As can be seen, the personal saving rate has been rather high in Canada over the past decade. Recent budgets have included measures to stimulate the personal savings rate, such as the RRSP, the RHCSP and the $1000. deduction for both dividends and interest. The corporate rate of savings, on the other hand, has been declining relative to other sources of savings in spite of substantial profits reported by the corporate sector over the past few years. As will be demonstrated later in this report the cash savings of corporations have been low, and measures may be necessary to improve the supply of corporate savings. Finally, government savings through surpluses will not be possible unless government expenditures grow less rapidly than revenues.

The uses to which savings are applied are generally called investment or "new capital formation". Figure 6 shows capital formation in Canada as a percentage of GNP for the last ten years.

The peak, 1966, was accounted for by the completion of a great number of large projects and much new capacity was built into the economy at that time. The recent upturn is probably related to large energy-related projects but the aggregate statistics do not show where the investments have been made in the economy and to what extent incentives have been put into place which have encouraged or discouraged certain patterns of investment. It is to this question that we now turn.

FIGURE 6

NEW CAPITAL FORMATION IN CANADA
1965-1975



SOURCE: PRIVATE AND PUBLIC INVESTMENT IN CANADA. STATISTICS CANADA CATALOGUE 61-504. AS QUOTED IN THE CANADIAN ECONOMIC REVIEW 1976

a. EXCLUDES SELLING COSTS AND LAND

CHAPTER III SHIFTS IN SOURCES AND USES OF FUNDS OVER THE PAST DECADE

1. The effects of increased wealth

In any relatively free market system, funds tend to flow to the most profitable uses; in fact money is perhaps the most "restless" of commodities. The use of money is governed by the assessment of risk versus reward. In any situation, an investor, makes his own assessment of the risk/reward ratio and moves his funds so as to minimize his perceived risk and maximize his perceived reward. Some of the reward may be psychic and some of the risks may be psychiatric but the investor's choice is always based on his perception of the best of alternative choices.

On this basis, therefore, it is useful to look over the past ten years at where the rewards have been perceived to be in the Canadian economy, and to analyze the factors that caused funds to flow in that direction. We want to assess also to what extent government policy has influenced the distribution of risk and reward and thereby changed the flow of funds in line with national objectives.

There are some problems in doing this, however. Not all the statistics are available to indicate what funds have gone where and what rewards have been obtained for putting the funds to work. Empirical evidence would suggest that, over the past five

years particularly, there have been two fundamental shifts in investment. The first is in favour of quality, particularly by institutional investors. While institutions have continued to buy equities, the focus of their purchases has been on the top grade securities. As yields have increased and the term of debt securities shortened, institutions have moved also into prime corporate debt. The second shift has been in the nature of the investment by individuals. Individuals, by and large, have shifted their investment from securities to bank and trust company deposit receipts. Thus, the national revenue statistics show that dividends as a percentage of individual investment income have sharply diminished from 40 percent in 1965 to just over 20 percent in 1974. Bond and bank interest payments have increased from 40 percent to 70 percent while mortgage income and other investment income have remained relatively stable around 10 percent. What has triggered these shifts in investment patterns?

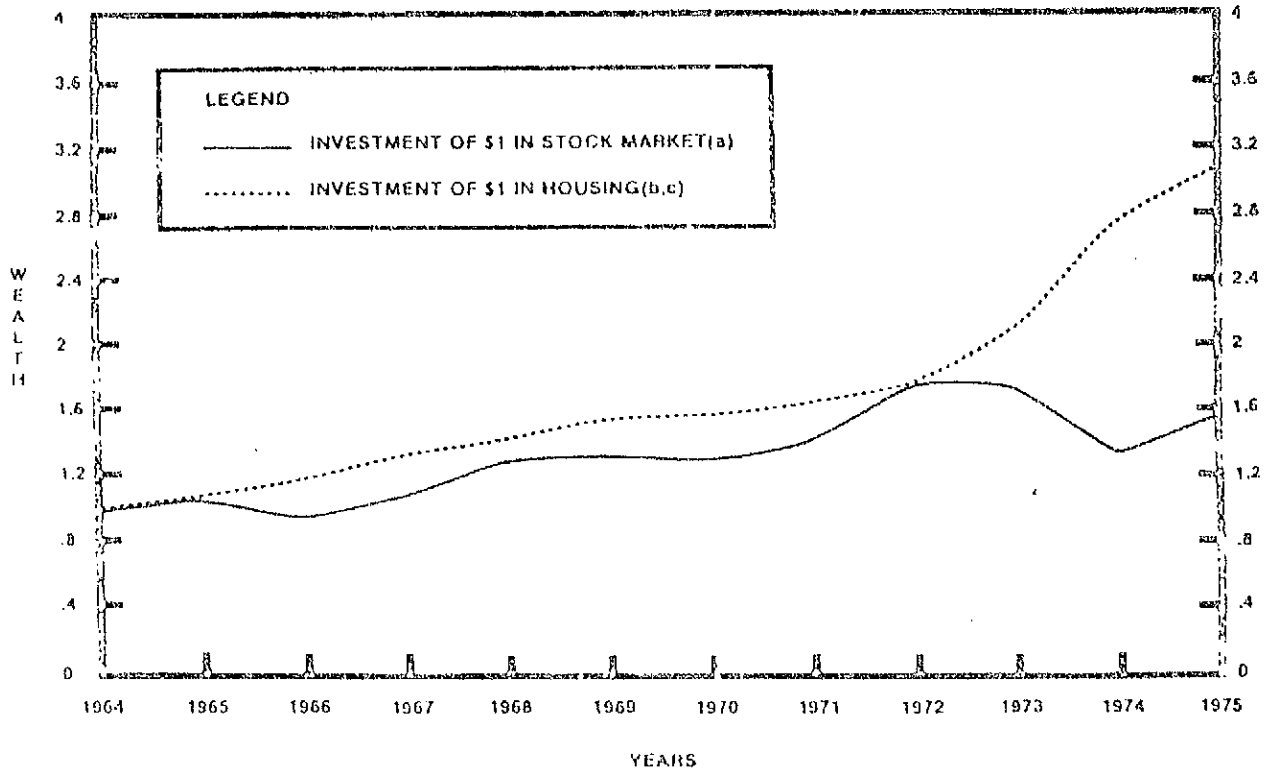
Increased affluence appears to have had two effects; first of all net worth tends to increase and secondly spending and saving patterns tend to change. Accordingly, it is appropriate first to look how individuals have reacted to greater wealth over the past decade, and then to turn to an examination of corporate cash flows. Following this, it is appropriate to look at a comparison of yields and finally to look at the kinds of incentives which have been at work in the economy to affect investment decisions.

2. The Individual Investor

Personal investments are made for both yield and capital gains. The choice between these rests on perceptions of relative reward and on desirability of cash flow. Subjective decisions are made about these but the cumulative effect of these decisions and the shifts in net worth of both institutions and individuals over a time result in a rather stable overall pattern. It is worthwhile, therefore, to examine the changes in individual wealth-insofar as they can be estimated - over the past decade. It must be emphasized that balance sheets of individuals in total are not available. Accordingly we must use certain selected statistics in an illustrative way and also rely upon empirical observation to some extent.

Any investment dealer will say that the increases in individual wealth which have taken place in real estate over the past five years have far exceeded any increases in wealth that have taken place on the stock market. In order to demonstrate what has happened in this respect, Figure 7 shows the effect of investing one dollar in 1964 in a house compared with investing one dollar in the Toronto Stock Exchange index. Even though the two investments are not entirely comparable in that a house bears maintenance costs and taxes, the value of the investment after 10 years differs by a factor of two, even with stock dividends reinvested.

FIGURE 7 VALUE OF INVESTMENT IN STOCK MARKET VERSUS VALUE OF INVESTMENT IN HOUSING



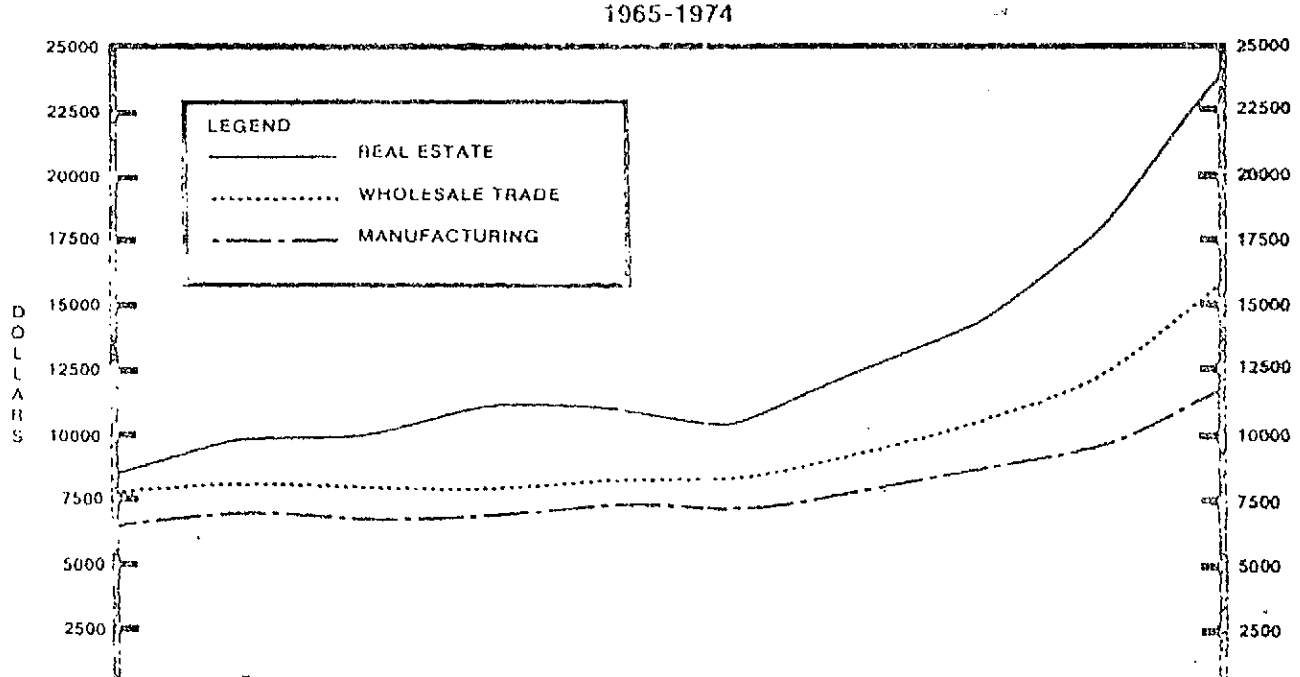
SOURCE: SEE NOTES

a . SOURCE: WOOD GUNDY
b . SOURCE: "CANADIAN REALTOR" CANADIAN ASSOCIATION OF REAL ESTATE BOARDS
c . MULTIPLE LISTING SERVICE INDEX OF SALES PRICE OF EXISTING HOUSES.

Other measures of the same phenomena are illustrated in figures 8 and 9 which show the prominence of the real estate sector as a source of income for individual business proprietors (Figure 8) and the housing price index compared to the Toronto stock price index and the consumer price index (Figure 9). These figures suggest where the gains have been made in the marketplace and who has profited from these gains.

The growing importance of investment by Canadians in real estate has been stimulated by a number of factors. At this point, however, we wish to draw special attention to the taxation of real estate. It has been possible in Canada to accumulate personal fortunes in real estate because the income tax laws for most of the last decade (prior to capital gains taxes) permitted earnings on real estate to be re-invested in new real estate

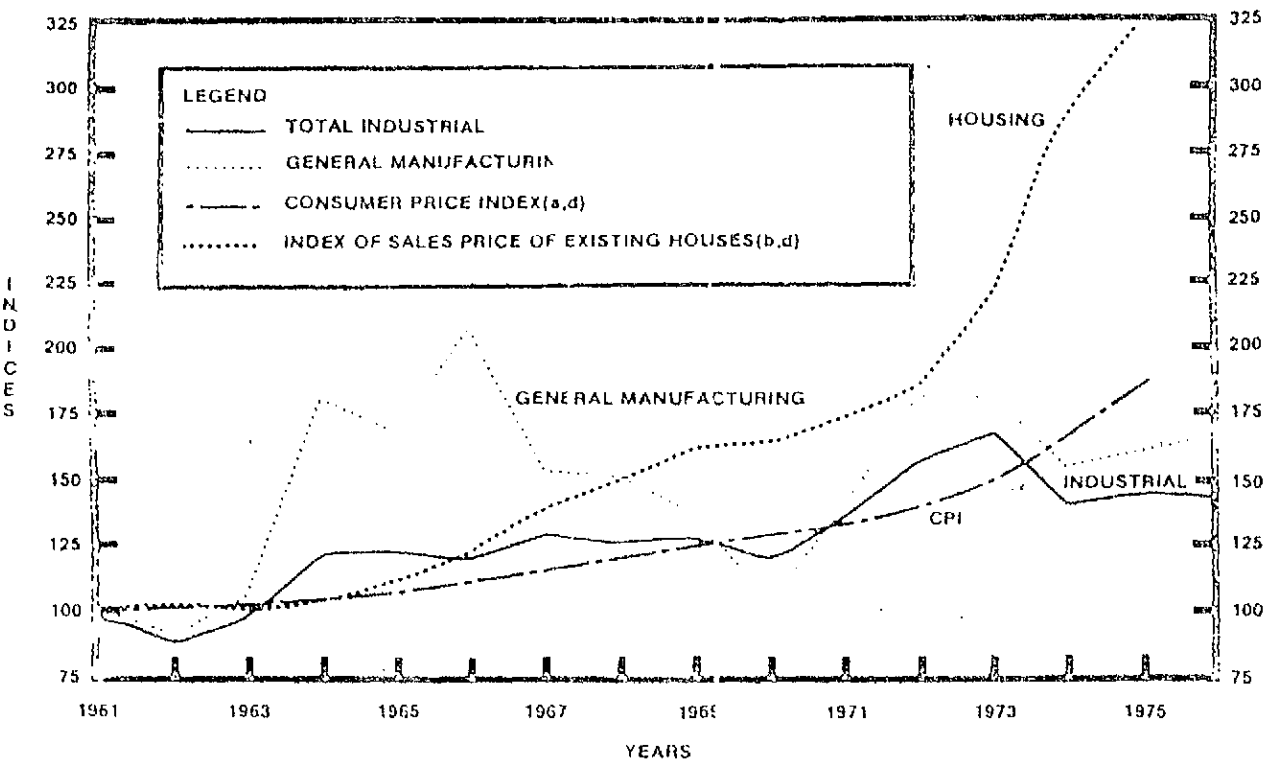
FIGURE 8 AVERAGE INCOME OF BUSINESS PROPRIETORS 1965-1974



SOURCE: DEPARTMENT OF NATIONAL REVENUE 1967-1976 TAXATION STATISTICS (YEARS 1965 - 1974)

FIGURE 9

TORONTO STOCK PRICE INDICES
CONSUMER PRICE INDEX AND
INDEX OF PRICES OF EXISTING HOUSING
1961 - 1975



a CANADIAN STATISTICAL REVIEW, JULY 1976, PAGE 21, STATISTICS CANADA CATALOGUE 11-003E, VOLUME 51 NUMBER 7.

b SOURCE: "CANADIAN REALTOR", CANADIAN ASSOCIATION OF REAL ESTATE BOARDS.

c SCALED TO 1961 = 100

d YEAR AVERAGE

ventures without attracting tax. This was, and is in sharp contrast to the situation in the stock exchange, where reinvestment in another venture can only be made after the tax collector has taken his cut. Even now the incentive system favours investment in real estate.

The difference between an investment of $100,000 by an individual in the stock market in contrast to an investment of the same amount in real estate is shown in Table II.

It will be seen that in the case of real estate, there is a tax sheltered cash flow of $2500, whereas in the case of the stock investment, there is a negative cash flow even after the dividend tax credit. Insofar as capital appreciation is concerned, the evidence cited earlier suggests that real estate will rise more rapidly in capital value than shares. Why - we can ask - would anyone invest in shares, and particularly shares of the manufacturing sector, if the advantages of real estate investment are so clear?

Another important tax measure has been the exemption of the principal place of residence from capital gains tax. A common pattern for a person with a good current income is to invest first in his house. Next, he will transfer his vacation home to his wife as her principal place of residence. He will then invest as much as he can in RRSPs and pension funds, all of which have certain tax advantages, and which - in turn - are largely being invested in real estate, as we will discuss in the next section. This leaves very little free money from individual investors for investments in industry. The significant growth of the Registered Retirement Savings Plans and Pension Funds is shown in Table I and illustrate the substantial power of tax incentives. Canada Savings Bonds have been another repository of substantial individual investment.

Spurred by increasing disillusionment with stocks as a place either to store wealth or to accumulate wealth, the evidence is

that individuals have turned to fixed income investments, such as mortgages, both directly and indirectly through REITS, mortgage funds and trust company deposit receipts. The proceeds of RRSP money are increasingly directed to fixed income funds largely used by the financial intermediaries who handle RRSP's to invest in mortgages.

Real estate investment has become increasingly perceived as the best way to accumulate wealth. Even though mortgage rates are high, individuals have been willing to incur heavy obligations in order to acquire a residence, because the individual perceives the monthly payment not as a discharge of a debt obligation but rather as an increase in the equity of the house.

The shift to investment in fixed assets as a hedge against inflation is a common phenomena of inflationary times. In Canada, this trend has been accelerated by the way the incentive system has worked.

Having examined how the wealth of individuals has increased and how these increases have been stimulated by certain taxation aspects of real estate investments, we will now turn to the institutional investor. Again, we will observe that there has been a significant shift in the investment process towards real estate. Although other countries show similar shifts to

investment in real estate, we believe that the trends in Canada have been accentuated by taxation and other policies which have favoured housing and some parts of the resource and service sector over the manufacturing sector. The conclusions in this section are borne out by the analysis done for Chapter 2 of the thirteenth Annual Review of the Economic Council of Canada.

2. The Institutional Investor

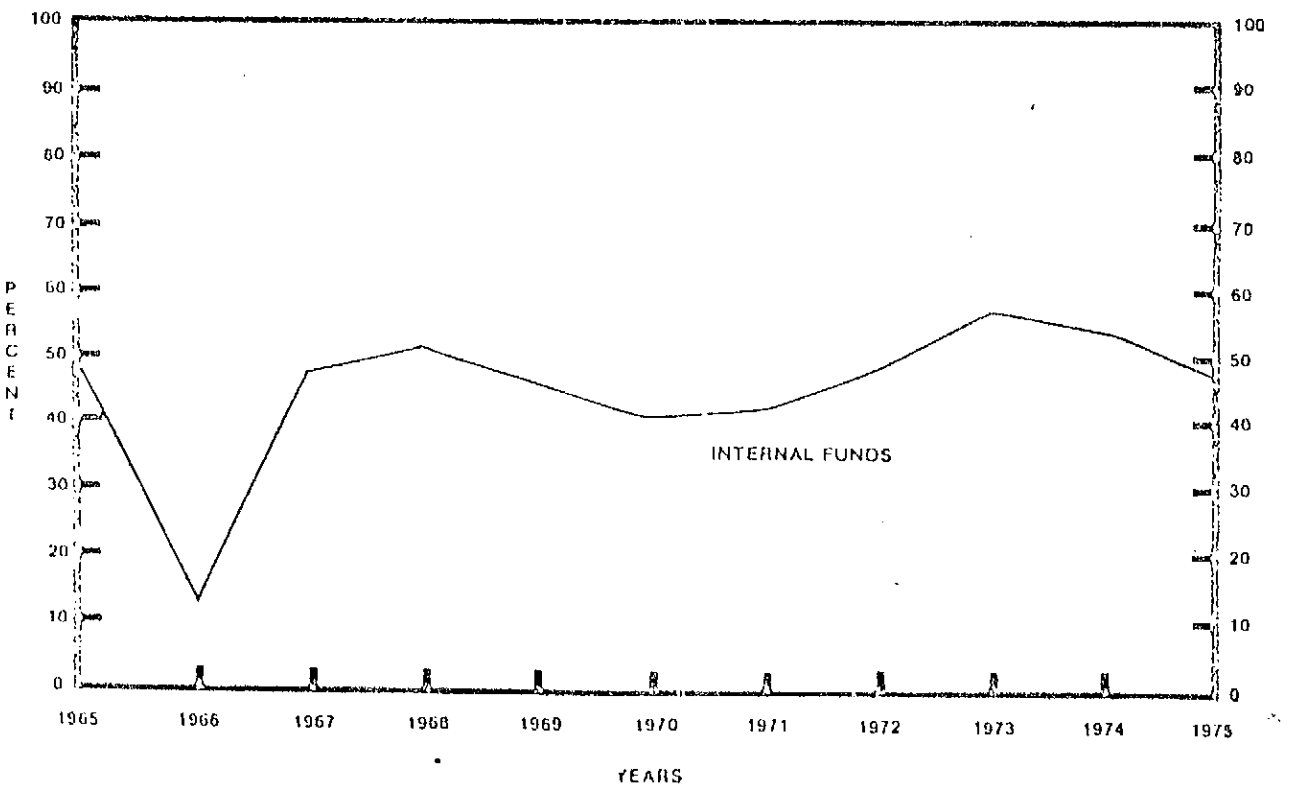
Let us now examine the trends in institutional investments over the past ten years. We will first review the situation within the corporation itself and its power to invest and attract funds.

From a corporate view point, there are two sources of investment funds, internal and external. There are marked differences between "all corporations" which includes government, banking... etc. and the manufacturing companies proper as can be seen in figures 10 and 11.

As is demonstrated below, the differences arise mainly because manufacturing is much more affected by inflation than the other sectors of the economy. Internally generated funds fluctuate widely and there are difficulties in attracting external funds.

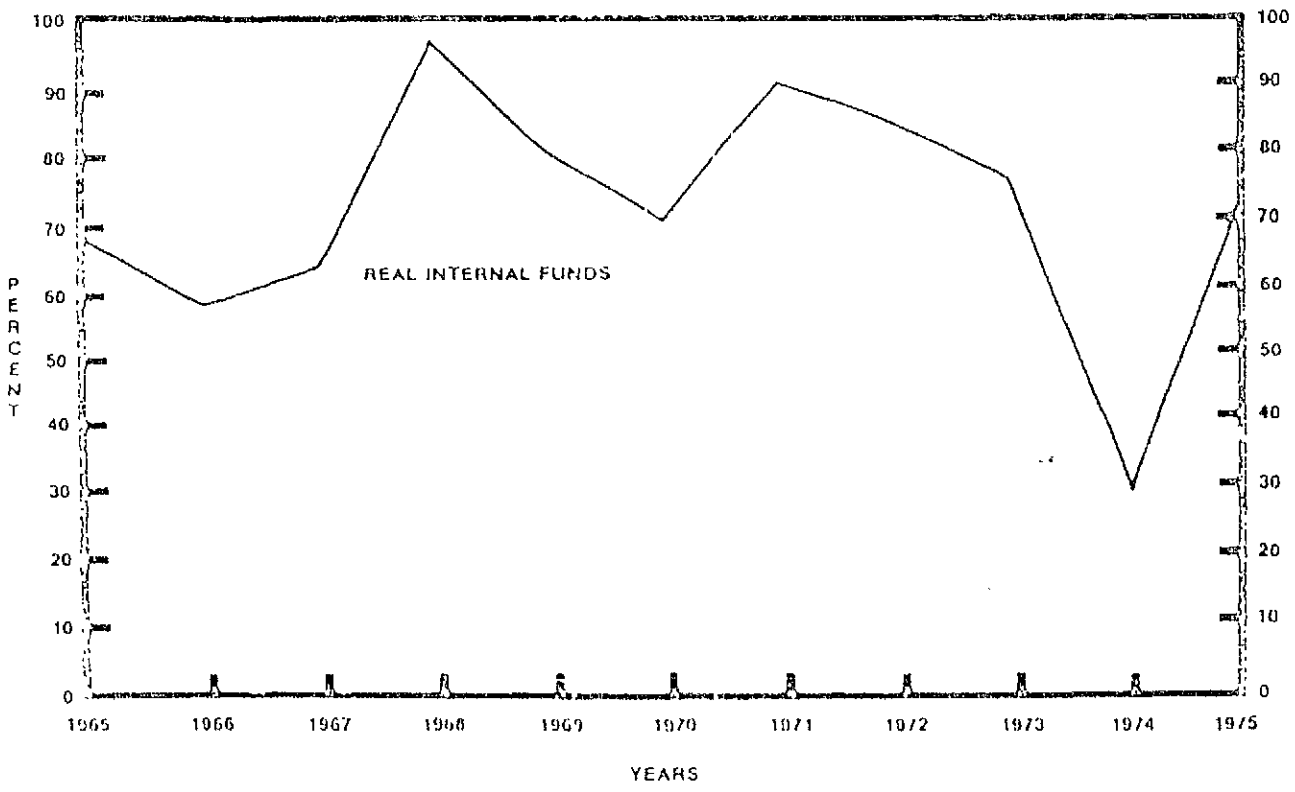
FIGURE 10

INTERNAL AND EXTERNAL FUNDING 1965-1975
CORPORATE AND GOVERNMENT BUSINESS ENTERPRISE



SOURCE: NATIONAL INCOME AND EXPENDITURE ACCOUNTS, INDUSTRIAL CORPORATIONS QUARTERLY 1965-1975

FIGURE 11 INTERNAL AND EXTERNAL FUNDING 1965-1975
MANUFACTURING



SOURCE: NATIONAL INCOME AND EXPENDITURE ACCOUNTS; INDUSTRIAL CORPORATIONS QUARTERLY 1965-1975

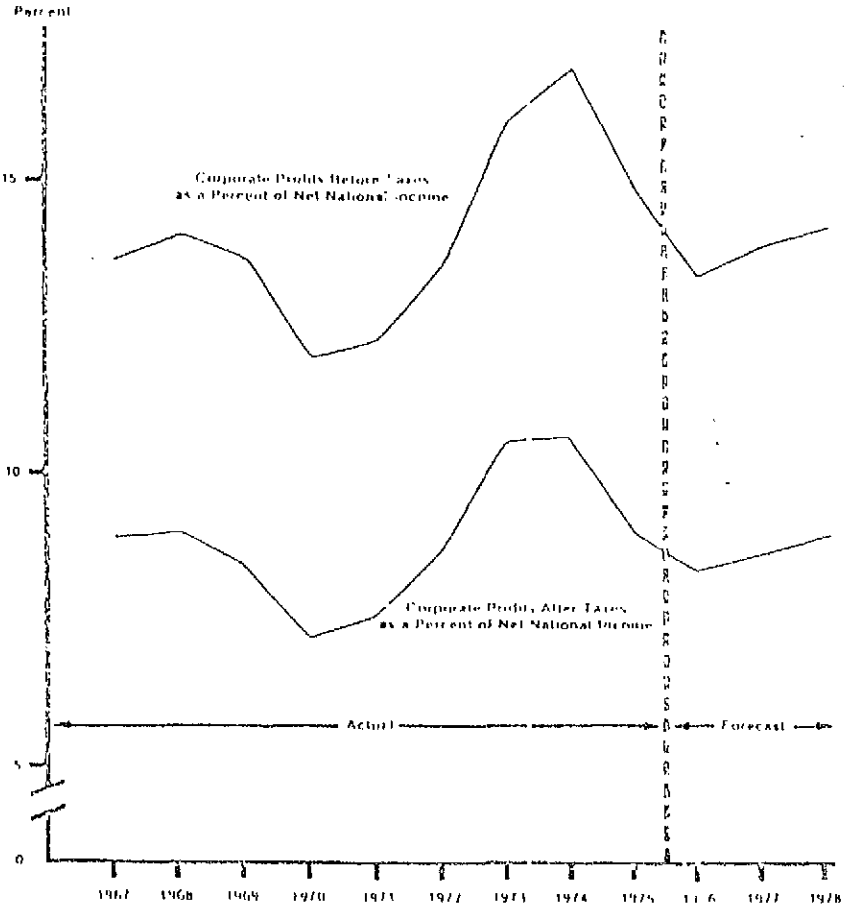
(i) Internal Corporate Funds

An examination of internal sources of funds in the manufacturing sector is important because it indicates choices: choices made by the corporation as to what it should do with its internal funds. It can declare them as dividends or retain the earnings and reinvest them. Under the present circumstances in

Canada, the major factors generating internal funds are capital cost allowances and profits. However, a sharp distinction should be made between <u>profits</u> and <u>cash flow</u>. Let us first examine profits.

Using data from the national accounts, Figure 12 shows corporate profits as a percentage of Net National Income over the last ten years. We would argue that these statistics have some major shortcomings, all of which tend to <u>overstate</u> the actual profit level.

FIGURE 12 CORPORATE PROFITS AS A PERCENT OF NET NATIONAL INCOME



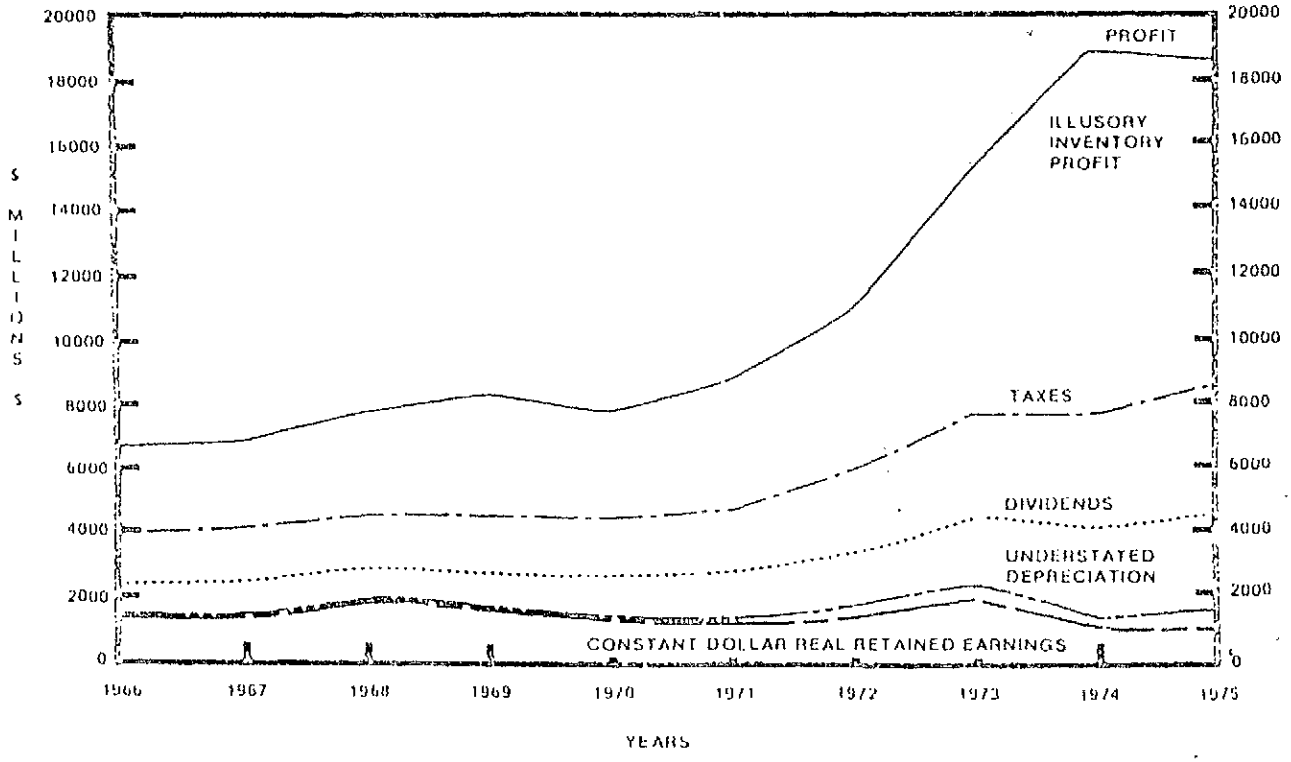
Source: National Income and Expenditure Account, Vol. 1, Cat. No. 13-531 Occasional, March 1976
National Income and Expenditure Account, Cat. No. 13-001 1st Quarter 1976, Statistics Canada
Forecast Basis: September 1976

The so-called "first-in-first-out" (FIFO) basis of accounting for inventory means that profits arising from gains in inventories sold are artificially inflated and therefore artificially taxed, placing further pressure on the cash flow of corporations. Secondly, capital-cost allowances are based on the historic cost of acquisition and not on today's replacement cost. For these reasons, internal sources of funds have been subjected to a number of pressures in the last few years. As a result, short term debt and total debt of the corporate sector has risen sharply.

Yet, because of the importance of yield to the investor in inflationary times, corporations have continued to pay dividends, and even increase them, based on an illusory concept of profit. In some cases they have been paying out what is the real capital of the firm if profits were to be fully adjusted for the inflation in inventories and in replacement costs. There is a real contrast in this respect between business enterprises generally and companies in the manufacturing sector. In the first category, dividends together with internal and external cash flows have not exceeded investment. In the manufacturing sector, however, National Accounts data show that dividends have exceeded the generation of new funds during six of the eight years since 1968. (See Appendix II)

If we allow for the effects of illusionary inventory profits, excessive dividends, and understated depreciation, it can be shown that the real value of corporate retained earnings has diminished in Canada during the past decade. This phenomenon is shown graphically in Figure 13. Thus, while corporations can be a source of savings, the effects of inflation appears to result in manufacturing corporations in particular being a fact of the

FIGURE 13 CORPORATE PROFITS — ADJUSTED



SOURCE: NATIONAL INCOME & EXPENDITURES ACC STATISTICS CANADA AS PREPARED BY THE CONFERENCE BD THE CANADIAN BUSINESS REVIEW VOL 3 NO 3

demand for savings rather than a supplier. This conclusion is borne out by the analysis done by Glenn Jenkins for Chapter 4 of the most recent Annual Review of the Economic Council of Canada. This Chapter reinforces the conclusions reached here. A summary table in the caption reproduced as Table 14 shows the net effect of inflation on manufacturing firms compared to other firms for recent periods.

Figure 14

Effects[1] of Inflation on the Income of Major Business Sectors, Selected Years, 1965-74

	Income changes resulting from:		
	Additional taxes	Transfers to borrowers	Net effect
	(Millions of dollars)		
Manufacturing			
1965	-589	53	-536
1970	-367	126	-241
1973	-1,032	292	-740
1974	-1,657	671	-986
Nonmanufacturing[2]			
1965	-240	151	-89
1970	-101	248	147
1973	-1,088	754	-334
1974	-1,003	1,087	84
Finance			
1965	-200	-32	-232
1970	-69	342	273
1973	-130	509	379

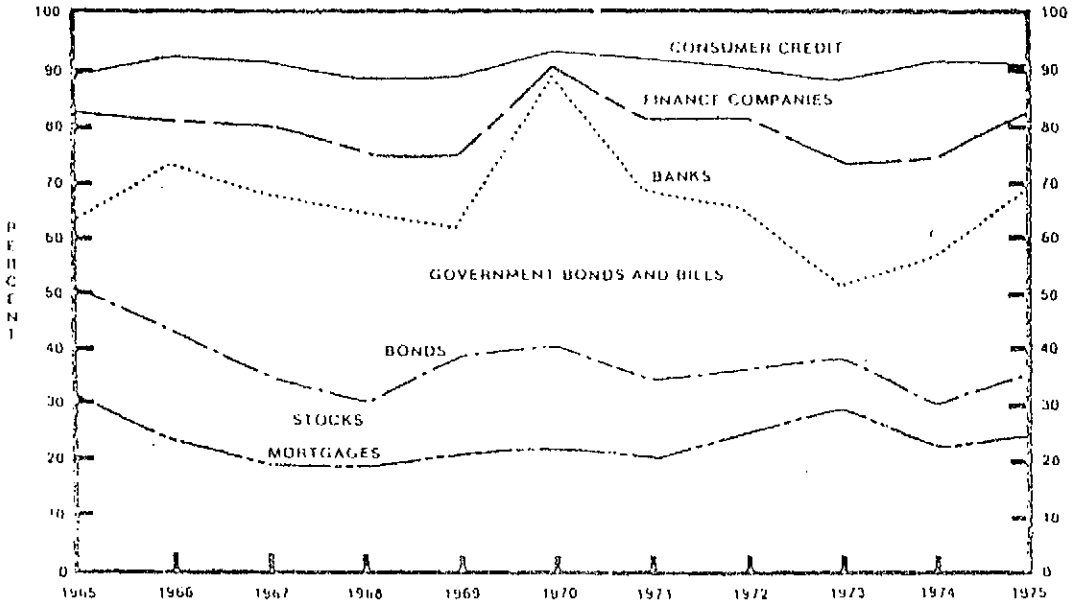
[1] Negative values indicate an income loss for the owners of business firms.
[2] Excluding utilities and finance.

SOURCE Glenn P. Jenkins, *"Inflation, It's Financial Impact on Business in Canada,"* Economic Council of Canada forthcoming In *The Inflation Dilemma*, Thirteenth Annual Review, Economic Council of Canada.

(ii) External Funds

Let us now turn to the sources of investment funds that exist external to a corporation. Figure 15 summarizes the general trends that have taken place during the past decade in external sources. The illustration shows four phenomena:

FIGURE 15 USES OF MAJOR CREDIT FLOWS IN CANADA 1965-1975



SOURCE SUN LIFE OF CANADA CANADIAN CAPITAL MARKETS FINAL FORCAST 1972 CANADIAN CAPITAL MARKETS REVIEW 1973 CANADIAN CAPITAL MARKETS REVIEW 1975 CANADIAN CAPITAL MARKETS OUTLOOK 1976 SEE NOTES

(a) BASED ON STATISTICS CANADA DATA ADAPTED BY MOSST SEE NOTE (B)

(b) ADAPTATION INCLUDES LUMINA FOR OF TRADE RECEIVABLES FOREIGN CURRENCY AND DEPOSITS AND SECURITIES ARE EXCLUDED FROM 1965 TO 1972 DATA BUT NOT ENTIRELY FROM 1973-75 DATA SEE NOTE (C)

(c) DUE TO A CHANGE IN METHODOLOGY BY STATISTICS CANADA

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1. the effect of the government "crowding-out" the market, particularly in the early seventies, and again more recently,

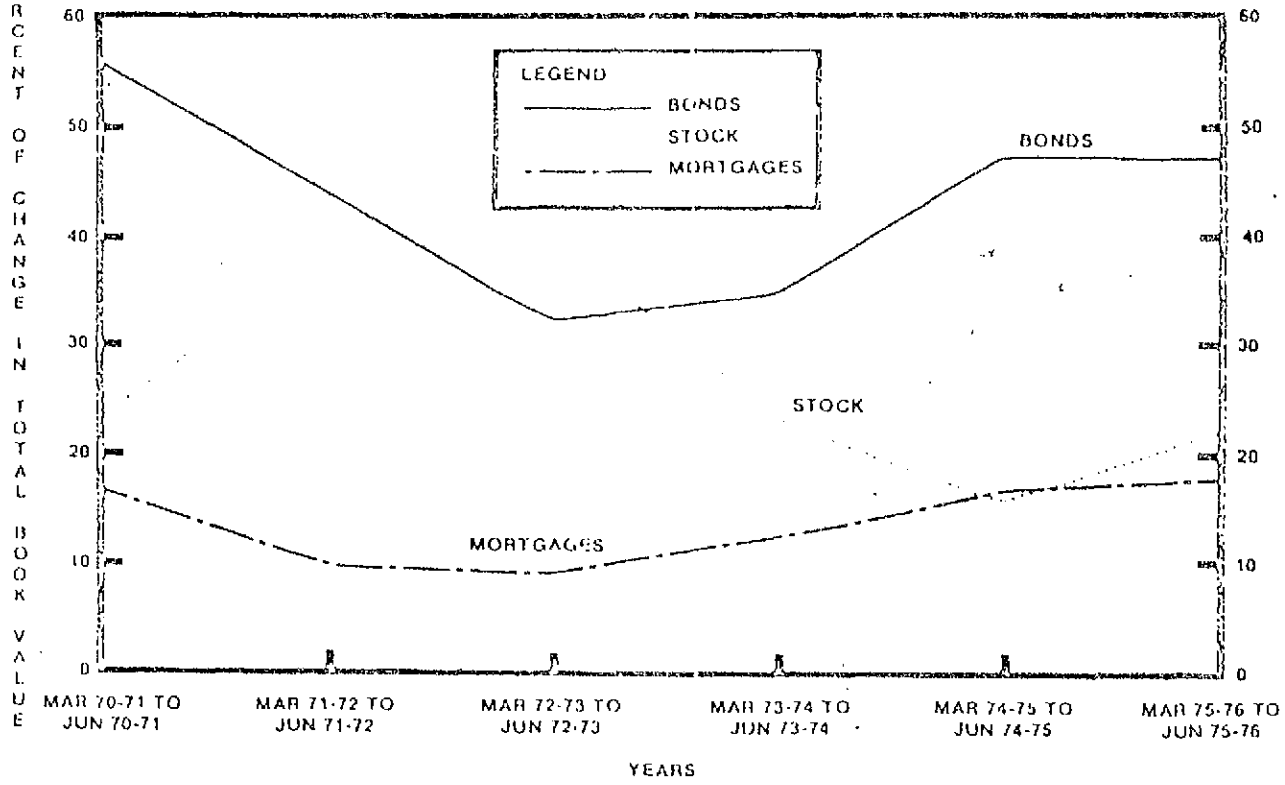
2. the heavy dependence in recent times on bank debt, i.e. short-term debt,

3. the squeeze on equities,

4. the recent increase in funds invested in mortgages (investments in real estate itself are not shown here since they are not available).

One major pool of funds relevant to long-term investment are the pension funds. Figure 16 shows their investment patterns

FIGURE 16 TRUSTEED PENSION PLANS: INCREASES IN SELECTED ASSETS AS A PERCENTAGE OF INCREASES IN TOTAL ASSETS 1970 - 1976



SOURCE: STATISTICS CANADA AS REPORTED BY WOOD GUNDY IN "FORECAST" JULY 1976, "ECONOMIC REPORT: INVESTMENT BEHAVIOR OF TRUSTEED PENSION FUNDS IN CANADA, 1970-1976".

over the past five years. The graph shows that fixed income investments have been the primary focus of investment strategy in the past few years, with mortgage investments showing a steady increase relative to the whole. It is well known that the stock investments held by most pension funds are of Blue Chip, which is

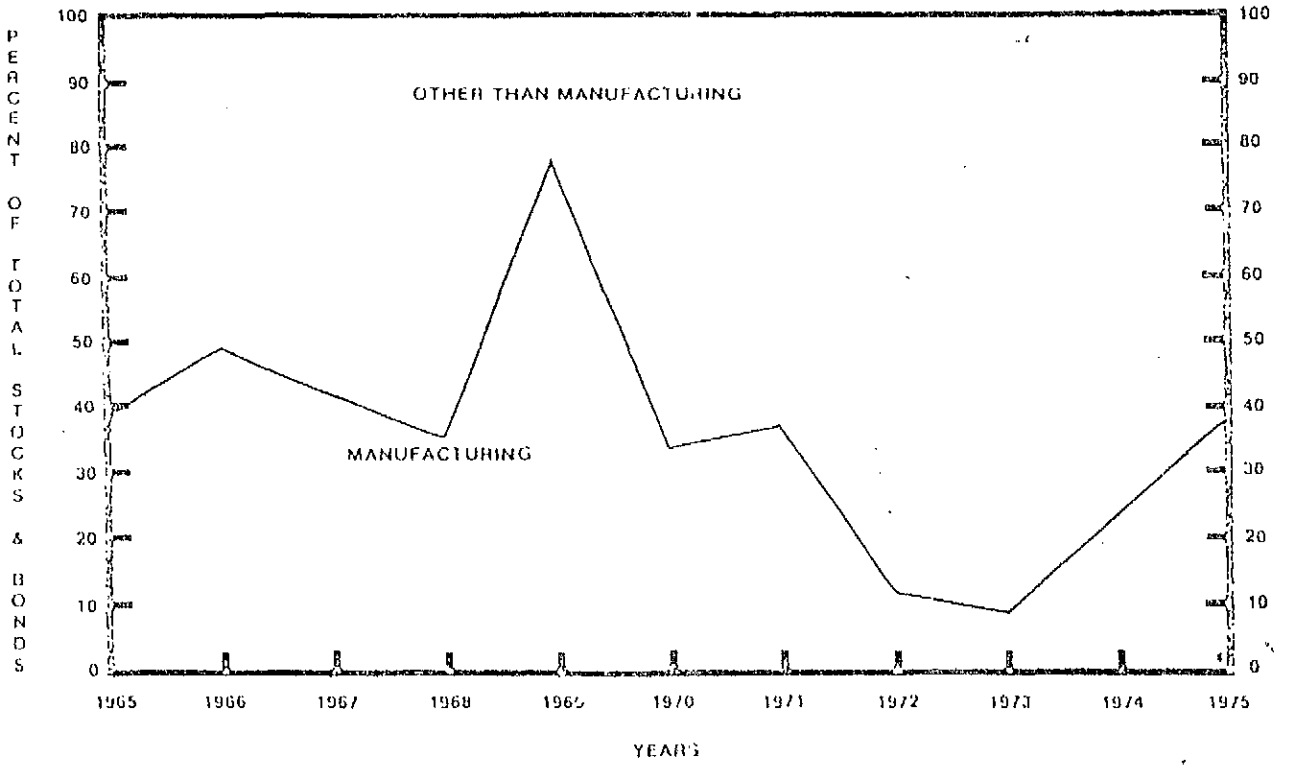
excellent for the pensioners but not so good for junior industrial companies.

As a result, it has become more and more difficult for certain companies to raise equity monies to finance growth.

Figure 17 shows how the manufacturing sector has fared in issuing new securities compared to other corporations.

FIGURE 17

NET NEW ISSUES OF CORPORATE SECURITIES
MANUFACTURING AND ALL OTHER INDUSTRIES
1965-1975



SOURCE: BANK OF CANADA REVIEW, MARCH 1976.

a. MANUFACTURING IRON AND STEEL PRODUCTS, NON FERROUS METAL MINES & PRODUCTS, NON-METALLIC MINES & PRODUCTS, PETROLEUM & PRODUCTS, WOOD, PAPER & PRODUCTS, OTHER MANUFACTURED PRODUCTS

Mortgages as a percentage of total assets held by financial intermediaries have increased from 20 percent in 1967 to 24 percent in 1975. The absolute value of the mortgage holdings, has increased from $13 billion in 1967 to over $41 billion in 1975. As inflation began to affect the decision makers who guide the investment of institutional funds, they moved to shorten the list of eligible equity securities, they strove to index their fixed income investments by shortening maturities and asked for floating rates on as many investments as they could. They also sought out direct investments in real estate.

We conclude this section with the general observation that the manufacturing sector has not been the prime recipient of institutional funds during the last decade. We suggest in the next section that this phenomenon is not only caused by specific tax advantages of investments in real estate, but also by the perceived lack of profitability of the manufacturing sector.

Rate of Return and Yields

The measurement of yields is a difficult one because the statistics which indicate current yields are deficient in two respects. They do not show estimated future yields which is an important part of the consideration making an investment and they do not show risk. Thus figure 18 indicating that mortgages have the highest yield can be somewhat misleading in indicating shifts in investment patterns, because mortgages have always had the

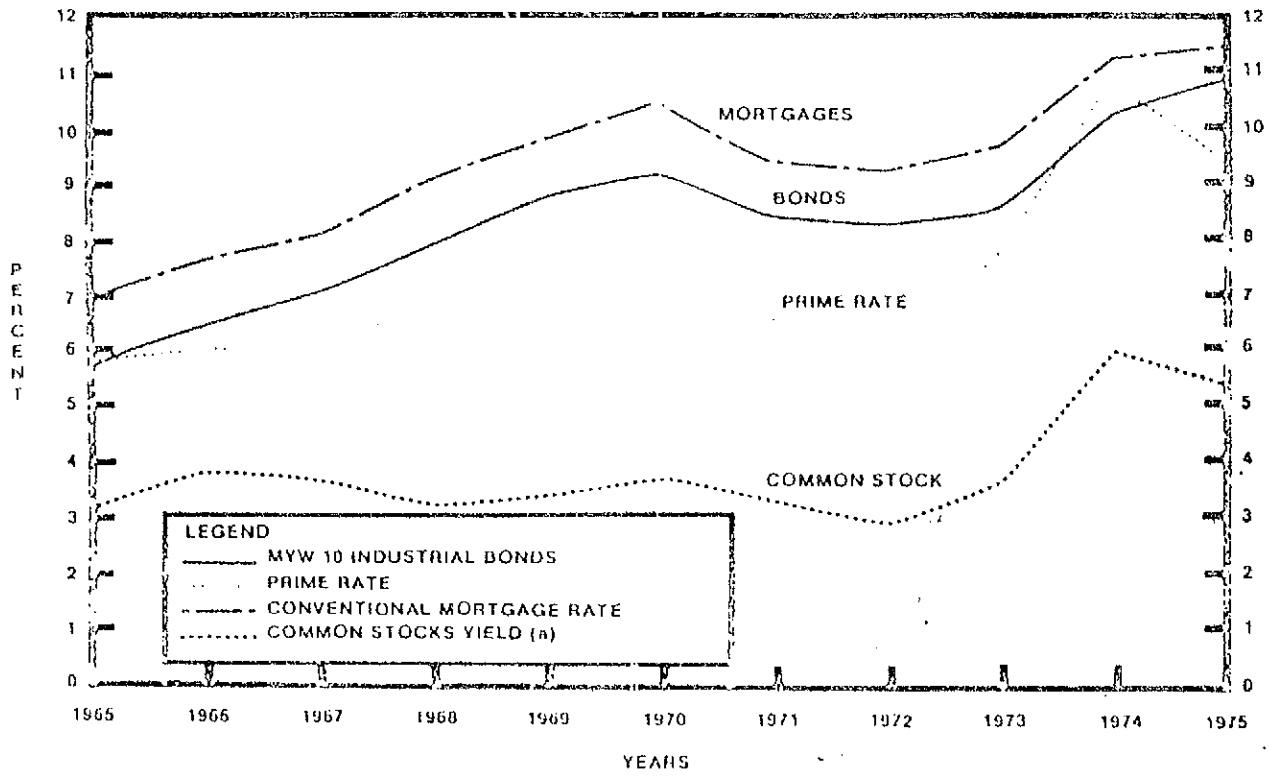
highest yield. It will be noted however, that the spread between the mortgage yield and common stock cash yield has widened. In addition, there are some other investments which are not depicted on this chart. At the moment the highest yields in the marketplace for institutional investors are achievable through medium term corporate loans. In almost all cases these are backed by real estate assets although they are reportedly balance sheet type loans: i.e., loans made on the basis of the balance sheet to assist the company in conducting its general affairs rather than a mortgage of a fixed asset. These loans are mostly made at floating rates several points about bank prime. A glance at figure 18 indicates the implications of this. In addition the loans are perceived to be fairly risk free although somewhat illiquid.

In addition the chart does not include the yield on real estate which has been high until recently, taking the capital gains factor into account.

Looking at the area of common stocks in more detail, it is evident that, as the possibility of capital gains has been perceived to diminish, yields on common stocks and price-earnings ratios have shifted more particularly against those industries which are more penalized by inflation than others. Thus, in figure 19 it will be seen that the price-earnings ratio of merchandising stocks which respond quickly to inflationary influences is higher than that of utilities and the general

FIGURE 18

INVESTMENT CASH YIELDS
PER CENT



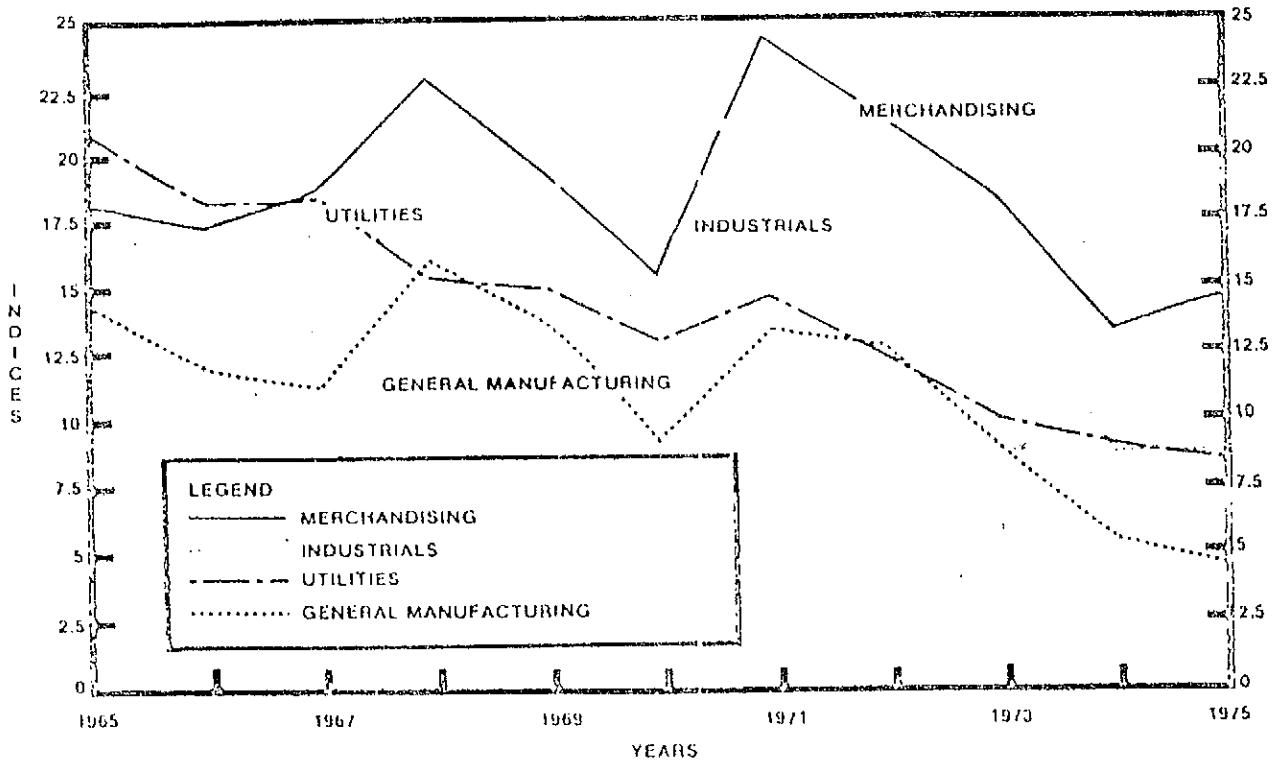
SOURCE: BANK OF CANADA REVIEW, WOOD GUNDY LIMITED, TORONTO STOCK EXCHANGE INDICES

manufacturing sector, which respond slowly and badly to inflation.

Over the past decade there has been very little danger of a downward movement in real estate or in mortgages ("downside risk") and, while the return tables do not directly measure risk, the reader will be aware of the risks that exist in both the bond and stock markets which has been demonstrated in recent inflationary times. The yield tables also do not show what the yield is to an individual investing in a house rather than

FIGURE 19

PRICE/EARNINGS RATIOS
TORONTO STOCK EXCHANGE



SOURCE: THE TORONTO STOCK EXCHANGE INDICES (JULY CLOSINGS)

renting and putting his money into an investment portfolio. The alternative of investing income in one's own house has been a considerable factor in affecting the funds flow of the individual sector over the past decade for reasons that are mentioned elsewhere in this report. An estimate done for the Ontario Government Advisory Task Force on Housing Policy by Peter Barnard Associates in April 1973 indicates that the return on investment on the equity in a home exceeded 7½% after taxes. This is much higher than any yield available at equivalent risk in the

economy. The movement in housing prices subsequent to 1973 would suggest that this is now a low figure.

The Cumulative Effect of Government Policies

There are a large number of government actions which affect the flow of funds; some of these have to do with guaranteeing the downside risk, some of these have to do with tax incentives, some of these have to do with moral suasion. Following is a list of measures which - in our opinion - have channeled the investment process over the past decade or so. It will be seen from this list that many of those measures have been directed to the encouragement of investment in the real estate sector.

1. The passage of the National Housing Act of 1946 which provided government insurance for housing loans to encourage institutional lenders to invest in mortgages;

2. Changes in the Bank Act of 1967 which encouraged shifts of chartered bank assets into mortgages, an expansion of which is currently being proposed;

3. The stimulation of private insurance funds which had the effect of lowering down-payments on housing loans;

4. The tax credits for dividends and interest;

5. The exemption of the principle place of residence from capital gains taxes;

6. RRSPs and widened pension benefits which, as can be seen by a analysis of investments in RRSPs and pension funds, have been largely invested in fixed income investments, mostly prime debt securities of major corporations and mortgages;

7. The stimulation by government of REITs;

8. The stimulation by government of mortgage investment corporations;

9. The stimulation through tax concessions of oil drilling funds;

10. Various housing assistance programs, such as CMHC's Assisted Rental Programs, which create an incentive for private sector builders to put funds into eligible government assistance programs;

11. In addition inflation has caused the value of bond portfolios of many insurance companies to drop. Under the existing regulations affecting insurance companies, this drop in values is reflected in their statutory capital ratios and therefore in their ability to expand their business. The regulations do not apply to mortgages held in investment protfolios which continue to be valued at book. This created an incentive for the insurance companies to invest in mortgages rather than in corporate or other bonds. The same thing is also true of trust companies;

12. The effect of the Foreign Investment Review Act has also altered the market for Canadian companies and decreased investors' liquidity. It is appropriate therefore to lock at other measures to enhance the liquidity of the investor in Canadian corporations. It it is government policy to reduce liquidity in one way, then policies should be introduced which will help overcome the already difficult problem of how a venture capitalist can sell out a successful venture and reinvest in another;

13. The lower tax rate for manufacturing corporations is an attempt to stimulate profitability in this area. As will be seen later however, this has not proven to be all that effective;

14. The rapid two-year write off for capital investments. This is more appropriate for capital intensive industries than others and we will return to this in the next chapter. 15. The write-off of investment in Canadian films.

Summary

This review of the sources and uses of funds has indicated that both inflation and certain government policies have produced an investment shift over the past decade from the corporate sector into real estate and mortgages. The net result has been that there is no better current investment for an individual than his house. The changed attitude of an individual towards his

house is interesting. For many years it was a place to live, a utility and not an investment. Now the individual is conscious of the change in the value of his house and is disappointed if it goes down in value. This attitude is very important in the investment process. Real estate is clearly regarded as the surest investment available, whereas bonds and stocks are regarded as risky. Without a change in this equation, there will be no change in investment attitudes in Canada. It is quite evident that different devices and attitudes must be considered to encourage investment in the manufacturing process as well as in land and real estate.

When one sector of the economy becomes stimulated more than another, this is reflected in the increase in assets of those parts of the corporate sector which participate in the growth. One would expect therefore, that financial intermediaries which are making investments in real estate and housing to show more rapid growth than those corporations which are participating only in the corporate sector. This is indeed the case. Mortgage loan companies and trust companies have shown much greater growth in real estate related assets than in industrial related assets. Sales finance companies have grown slowly and the great growth of the banks has taken place in their assets related to mortgages and consumer credit.

In addition, when a sector is profitable there are a great many subsidiary activities which spring up. As an example there

have been complaints in some circles that there are no merchant banks in Canada; in fact, there are merchant banks, but these deal in real estate and mortgages and they are flourishing. Many new such "banks" have been founded in the past ten years and they are very profitable. The reason why there are few, if any, merchant banks operating in the manufacturing sector is that this sector has not been profitable and funds are not flowing in its direction. Until the flow of funds is redirected towards the corporate sector it is unlikely that there will be new merchant banks in the traditional sense founded in Canada.

Empirical evidence, added to the picture revealed by figure 8, suggests that there are far more real estate millionaires in Canada than there are in any other sector of the economy. The reward seekers have moved to the area with the most immediate returns.

Finally, it should be pointed out that the much discussed shortages of start-up capital, new ventures and supply of entrepreneurs does not appear to have been a problem in the housing construction industry. New builders have entered the market continuously and new supply firms in plumbing, electrical supply and other goods and services relating to the housing industry have had no difficulty in obtaining funds to start operations. Later in this paper, we will comment further on the profitability of the manufacturing sector and what can be done to improve it.

What we have attempted to do in this chapter is to examine the shifts in sources and uses of funds to see what both individuals and institutions have been doing to invest their funds. The review indicates that the incentive system presently in place needs to be reviewed. Inflation and policy actions have resulted in a substantial shift to investment in real estate either directly through mortgages or through the instruments of institutions which invest predominately in mortgages. Each policy action was perceived to be sound in itself, but the cumulation of these has shifted the incentive system so that the balance is real estate oriented. As a result, we have a first class stock of housing in Canada. But manufacturing is a vital sector of the economy and it is important that the balance not be shifted too much against it.

We would like to make it clear that in examining the past and making recommendations for the future, which will shift slightly the flow of funds, we do not mean to downgrade the investment that has taken place over the past decade in residential housing. The rapid growth of population and new family formations has meant that the stimulation of housing has had to be a high priority and this indeed will continue for a few years to come. However, after 1979, population growth is slated to slow up somewhat, and new family formations will decline. It is appropriate therefore to begin to look at ways to shift the balance slightly in favour of other sectors of the economy which

appear to require stimulation and which will be of importance in the decade ahead. In the next sections of this report we turn to some measures to redress this balance.

CHAPTER IV ADDITIONAL FINANCING PROBLEMS

In the course of this study it became clear that the problems of setting free more corporate resources for investment in innovation were particularly relevant to small and medium sized companies. Although there is no empirical evidence that the larger companies have cut back R&D less than small companies, it is clear that larger companies have access to the financial markets and can time their capital investment programs to take maximum advantage of their cash flows and of deferred taxes. While larger corporations are affected by the liquidity squeeze described earlier in this report, and which will be examined more fully in the next chapter, their problems are not as severe as those facing small and medium sized companies.

Accordingly, this report focuses on the problems of financing the smaller and medium sized businesses. This includes but is not limited to the much discussed problem of raising venture capital in this country.

What then, are the perceived problems in the investment process for small and medium sized companies? Judging from statements and publications on this issue, they are the following:

1. Lack of access to funds. This is related primarily to the search for quality by institutional investors and individuals

alike, and a shift of their interest to other areas, notably real estate. For these reasons there has been a lack of funds for innovation in the manufacturing sector. The stock market has been unable tc meet these needs. There has been only one recent stock issue of a truly innovative venture, "Pop Shoppes Ltd". It is significant that even this company which enjoys a good measure of success had some difficulties in marketing its new issue. In terms of private placements and direct investments, it is clear that the only people investing in innovative ventures to any large extent in Canada today outside of the real estate market are a handful of wealthy individuals and a diminishing number of venture capital companies.

2. Venture capital companies are pulling out of the market

Several venture capital companies have become disenchanted with the end results over the past number of years and are reducing their operations or pulling out. As discussed below we believe this is more related to the rate of return and lack of liquidity than to a lack of desire.

3. The perceived conservatism of Canadian investors

This proposition is, of course, a matter of opinion. The proportion of funds flowing through the institutional investment process is much higher in Canada than it is in the U.S. and there are fewer individuals who have funds available

for new ventures. Since institutions are by nature conservative and many of them, such as pension funds, have to observe "prudent man" rules, it seems that this is a better explanation for the problem than the mythology that Canadians are conservative. If there were proportionately more funds in individual hands, then the criticism might be justified. Insofar as individuals are concerned, the history of investing during the booms of the 50's and 60's, (penny mines in the 50's and in junior industrials in the 60's) would not suggest that Canadians are very conservative. It is really the institutionalization of our market encouraged by such vehicles as RRSP's and RHOSPS that creates the overall effect of conservatism.

4. The lack of entrepreneurs

This also is a matter of opinion and we deal with this in some detail later in this report.

5. Lack of liquidity for investors

When start-up situations become successful, it seems to be very difficult for them to either "go public" or for certain types of institutional funds to take over from the venture capitalist who has financed the initial round. Specific measures to improve some of these difficulties will be proposed later on in this report.

CHAPTER V THE CLIMATE FOR INVESTMENT

In this chapter we will discuss briefly some problems related to the general state of manufacturing in Canada today and focus more precisely on the financial aspects.

The problems of the Canadian manufacturing sector are well known. The industry is characterized by a number of highly efficient companies and a number of inefficient ones. The wage rates are generally higher than those in the U.S. as a result of recent labor settlements. We have heavy transportation expenses and, because of our cold climate, we have higher expenses for heating plants in the winter time. There are problems of too many products per plant, short production runs, and declining R&D activities. In addition, it is said that management expertise in Canada is not as well developed as it is in the U.S., for instance, and finally, there is the question of difficult access to foreign markets.

Taking all of these factors into account one wonders why there is any manufacturing industry in Canada at all. In spite of this, the rates of return on equity are equivalent to those in the U.S. in many cases. in the U.S. and higher in many cases. In order to overcome some of the problems mentioned above, there is a very high capital output ratio in the manufacturing sector. This, together with some advantages in access to raw materials

and to cheap energy has helped us to produce goods which are competitive abroad.

There is a great amount of controversy at the moment about how protected Canada's manufacturing industry should be. The Economic Council has suggested that tariff barriers should be substantially reduced to increase the overall efficiency of manufacturing plants but those industries which have difficulties in meeting import competition resist this strongly, mostly on the basis that they are strategic to Canada's independence.

In view of all these negative circumstances, incentives to invest in the manufacturing sector ought be high. The industry starts from a poor base and has to overcome a great number of difficulties. We have shown in the previous chapters, however, that the incentives for investment in the manufacturing sector are lower than they are in some other parts of the economy. We contend that the chief reason for this phenomenon must be sought in the perceived rate of return in the manufacturing sector, and we will demonstrate below that returns in the manufacturing sector are probably more seriously affected by inflation than returns elsewhere in the economy.

CHAPTER VI INFLATION AND THE RETURN ON INVESTMENT

Much of the discussion that has taken place on industrial financing and venture capital has focussed on the problem of supply. This report leans in a somewhat different direction. The analysis of the shifts in investment that has taken place in the recent period has suggested that returns rather than supply are of prime importance. In previous chapters we have suggested that the real estate sector has had the highest perceived rate of return in the economy for quite a long period. This has produced millionaires, merchant bankers and new start-up capital in the real estate sector. In later chapters we discuss various incentives to improve the supply situation, but first we wish to examine in more detail the factors that determine the rate of return on investment. We believe this to be of fundamental importance because, while one might improve the supply of funds, if the rate of return continues to be low, then the amount of funds placed in the sector concerned will continue to be small.

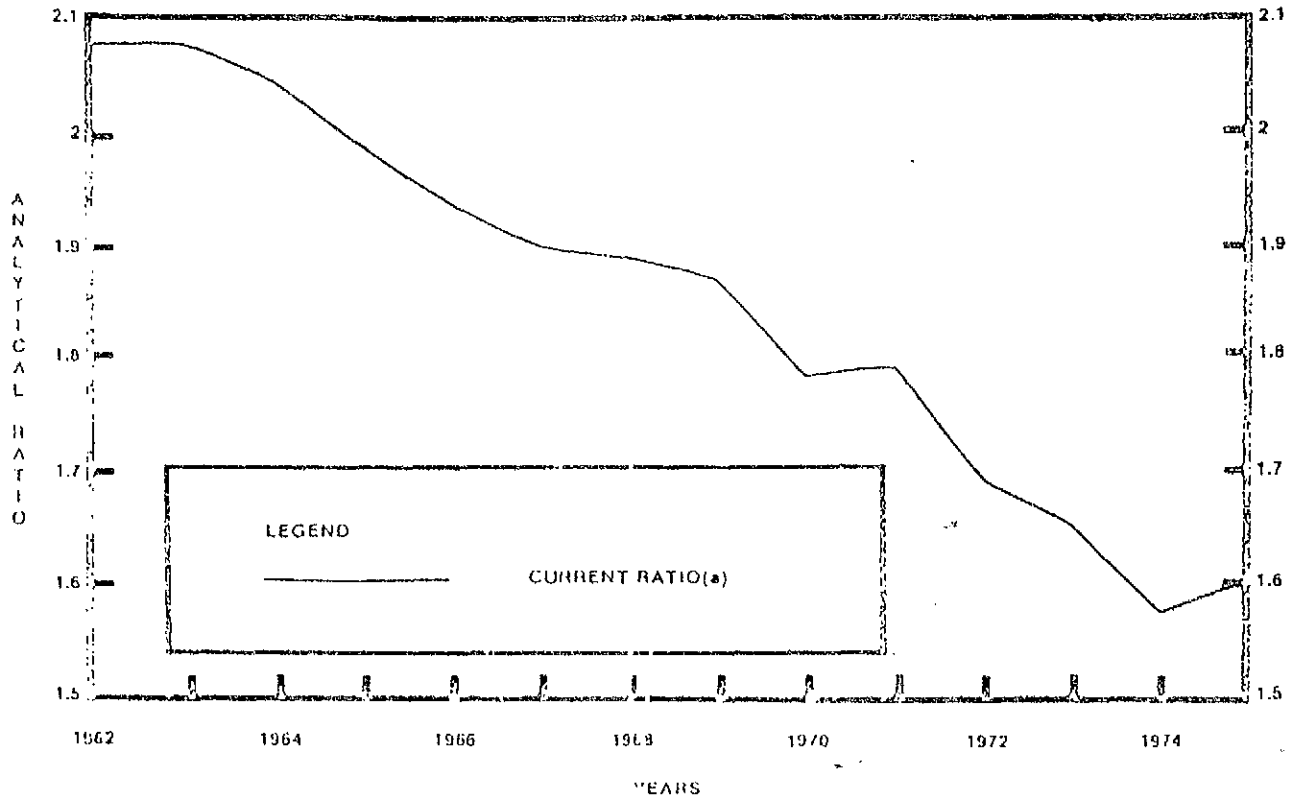
Unfortunately, because of the openness of the Canadian economy and the high built-in cost structure of its manufacturing sector, there is little scope for widening margins so that returns on capital improve relative to other sectors of the economy. In order to improve the rate of return and thereby attract capital, it appears necessary to look to the tax system and improvements in cash flow.

At first glance there would appear to be more stimulants to improve the rate of return in the manufacturing sector than anywhere else in the economy. The more important ones are the lower corporate tax rate (25%) on the first $150,000 of income, the 42% rate on corporation income taxes in the manufacturing sector compared with 48% for all other corporations, the two-year rapid write-off of new capital investments, and the parallel remission of sales tax. While all of these measures add up to a considerable tax incentive for the manufacturing sector, it must be remembered that these measures affect only the internal generation of funds, and are of no direct benefit to the outside investor. In spite of these, however, it appears that the cash flow in the manufacturing sector is much less than the cash flow in other sectors of the economy. The following example illustrates why this would happen.

If a manufacturer buys widgets at $10. and re-sells them at $12. he makes a $2 profit of which about one dollar is returned to the governments in the form of tax. The company then buys more widgets, but inflation has caused their new price to be $12. which means that the original profit is insufficient to cover the new purchase. Even though the company may now sell them for $14. and still make $2 profit, in the process of doing its business the company will have rapidly escalating bank loans, and eventually a liquidity crisis. The extent to which this has happened in Canada over the past year is shown in Figure 20.

FIGURE 20

LIQUIDITY OF INDUSTRIAL CORPORATIONS
1962-1975



SOURCE: INDUSTRIAL CORPORATIONS. STATISTICS CANADA AS PREPARED BY THE CONFERENCE BOARD IN "THE CANADIAN BUSINESS REVIEW VOLUME 3 NUMBER 3".

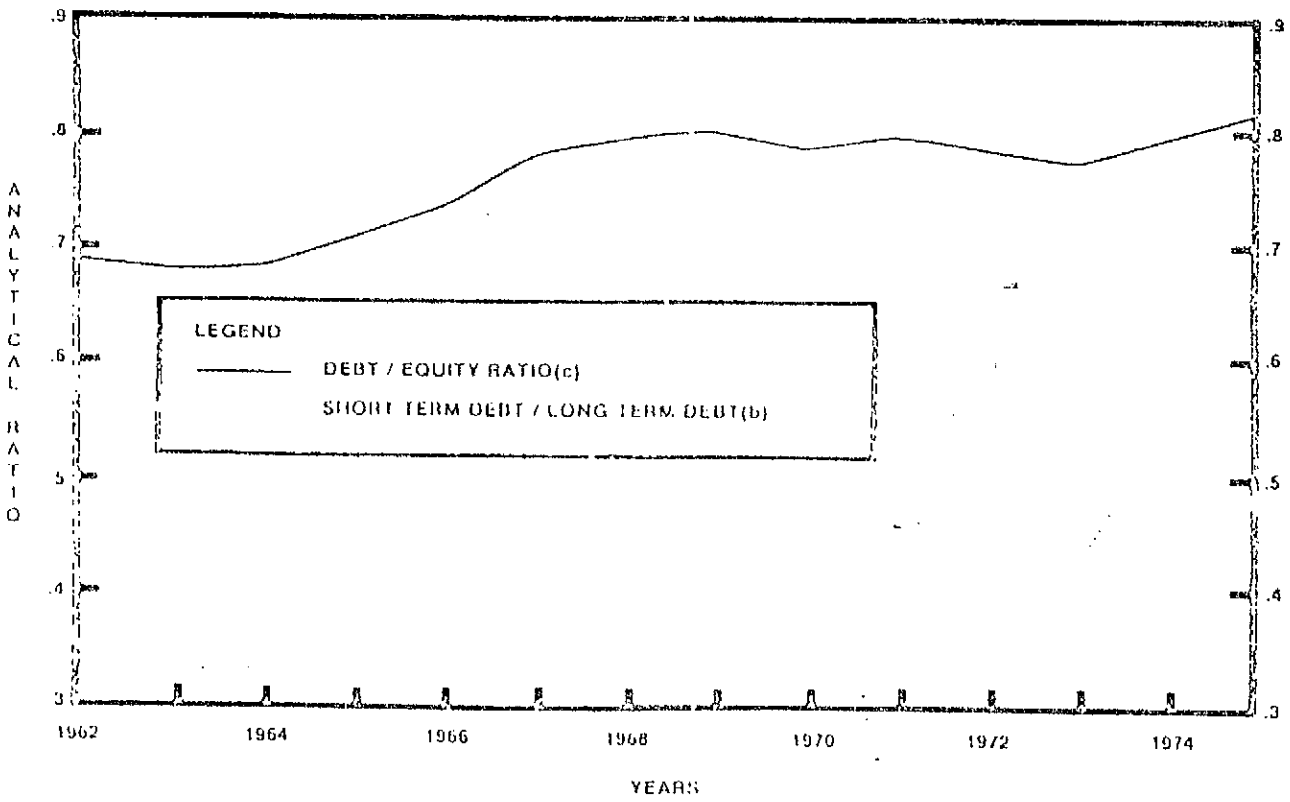
As a result of this heavy demand for cash, the industrial sector has increased its short term debt as can be seen from Figure 21. Thus, we have the ironic situation of a manufacturing sector that appears to be rich in profits but which has no money to carry on its business.

Other factors have contributed to this worrisome state of affairs. Construction costs have risen rapidly as have the costs of machinery and equipment. Normal depreciation has not been

enough to bring about the cash flow necessary to replace the equipment. Thus again there has been pressure on corporate cash flow.

FIGURE 21

INDUSTRIAL CORPORATIONS
DEBT/EQUITY AND SHORT TERM/LONG TERM DEBT RATIOS
1962-1975

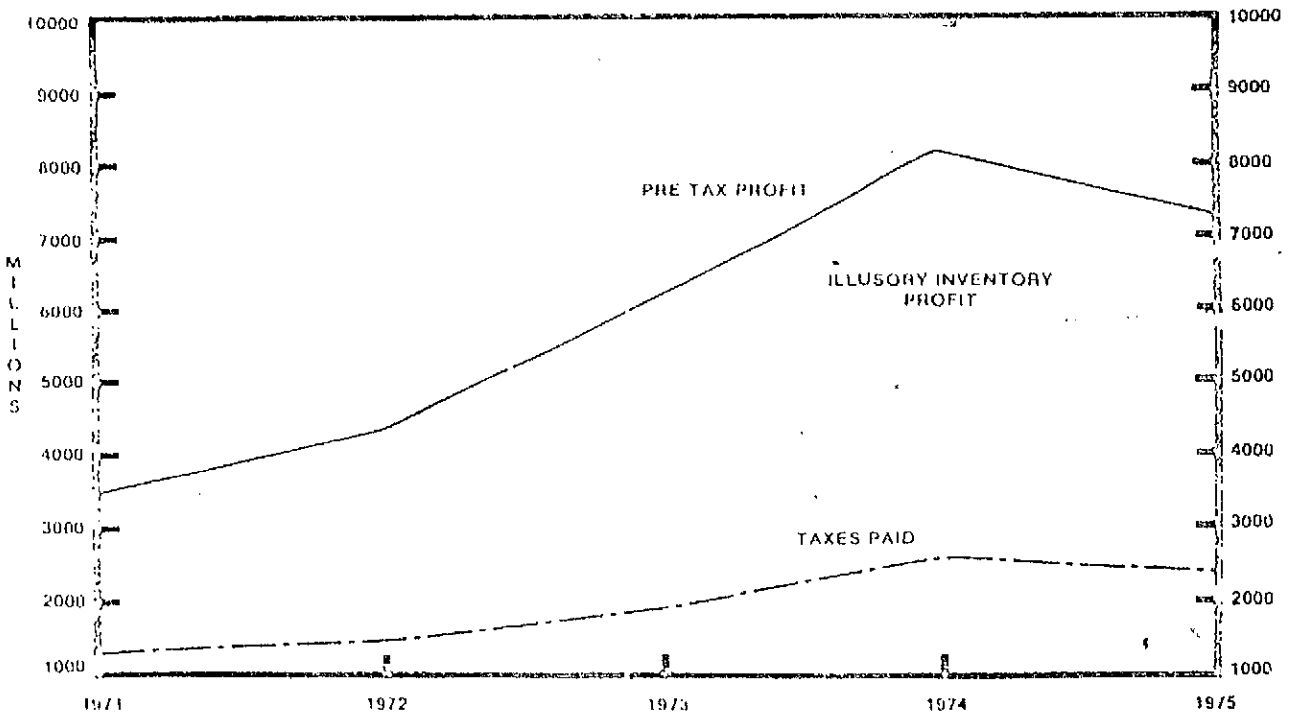


SOURCE: INDUSTRIAL CORPORATIONS: STATISTICS CANADA AS PREPARED BY THE CONFERENCE BOARD IN "THE CANADIAN BUSINESS REVIEW VOLUME 3 NUMBER 3".

All of these phenomena have led to a search for some new accounting principles with regard to inventories and to the depreciation of fixed assets in times of inflation.

The effect of such inflation adjustment is shown in Figure 22, which is based on figures supplied by Statistics Canada. If we examine the actual taxes paid in terms of profits adjusted only for the inflation effect on inventories, it appears that the effective tax rate is just over 40 percent, which is considerably higher than the stated tax rate of 32 percent. (Figure 23). A recent study by Touche Ross and Company concluded that, for

FIGURE 22 TOTAL MANUFACTURING INDUSTRIES
PRE TAX CORPORATE PROFIT, ILLUSORY INVENTORY PROFIT AND TAXES PAID

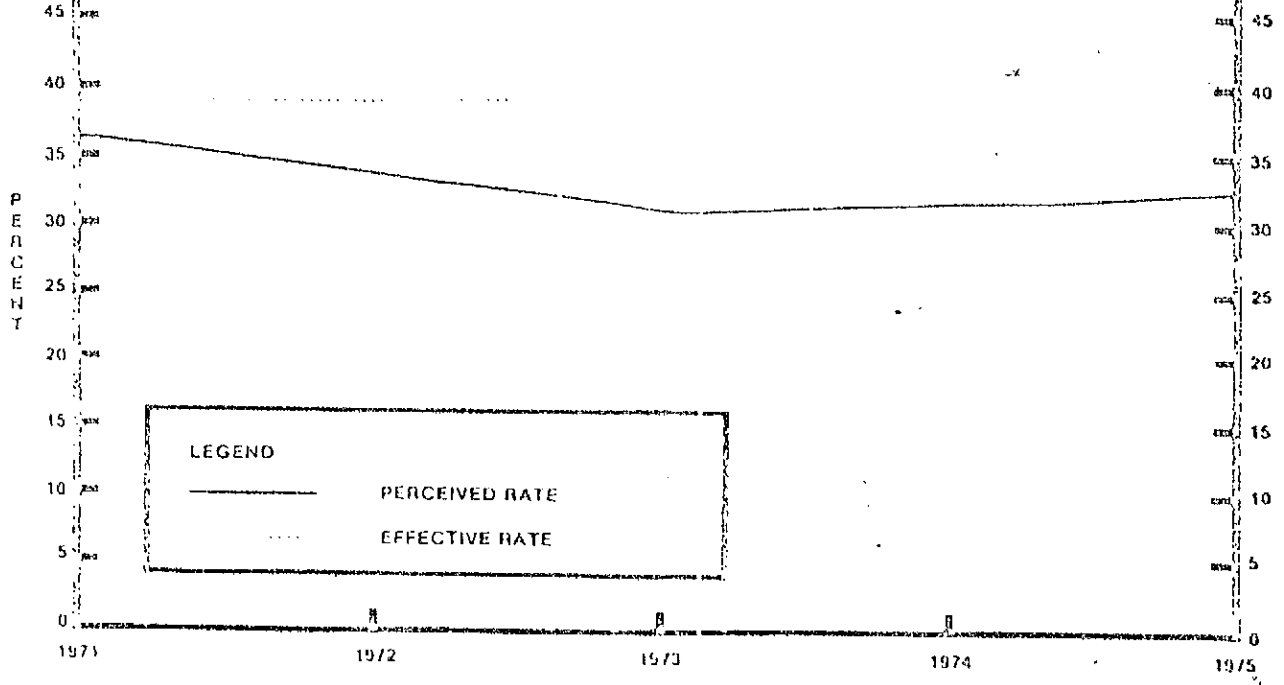


SOURCE: INDUSTRY TRADE AND COMMERCE, POLICY ANALYSIS DIVISION, BASED ON STATISTICS CANADA DATA

certain companies, the effective tax rate could be as high as 80 percent (Table III). Such differences between individual companies reflect, differences in the rate of price escalation between commodities and differences in inventory turnover.

FIGURE 23

TOTAL MANUFACTURING INDUSTRIES
CORPORATE TAX RATE ADJUSTED FOR INVENTORY PROFITS



SOURCE: INDUSTRY TRADE AND COMMERCE, POLICY ANALYSIS DIVISION, BASED ON STATISTICS CANADA DATA

What then is the real rate of return? Much of the picture is fuzzy and uncertain. The indicated profit is not the true profit; while profits increase, companies are more heavily in debt than ever. Investors are shying away from uncertainties of this kind. It appears to us that the first emphasis, particularly for small and medium sized companies ought to be on the improvement of cash flow. The proposals that are presented in the next chapter have been made with that emphasis in mind.

What appears to have happened is that, in the manufacturing sector, stated profit and cash flow have moved further and further apart, mainly because of the effects of inflation. Returns in real estate are almost always described in terms of cash flow rather than profit. Inflation adjusted accounting is really an attempt to restore the cash component to corporate profits. Because of the inherent characteristics of Canadian manufacturing mentioned in Chapter V (not to mention AIB), it is difficult to contemplate increased dollar profits. However, if the cash flow of the manufacturing sector is substantially enhanced, investment will be stimulated. This can be seen in the stock markets, where analysts now rely much more heavily on cash flow rather than stated profits, in order to analyze corporations and make investment recommendations.

CHAPTER VII MEASURES TO IMPROVE CASH FLOW

The measures that are being proposed in this section all aim towards improving the cash flow of companies. We present six specific recommendations dealing with the following subjects:

- taxes based on replacement corts of inventory
- taxes based on replacement cost of capital assets
- transferability of losses
- capital cost allowances related to leasing
- tax rate of small and medium-sized corporations
- credit against Federal tax for research and development.

These proposals are discussed in sections 1 to 6 below.

1. Taxes based on replacement cost accounting for inventory

There is little question that, during 1974, inventory intlation was the largest drain on corporate liquidity. Since the inflation rate in commodities has now slowed up somewhat, some may say that the time to introduce replacement-cost accounting has already passed. It is our view, however, that it will be some time before the inflation rate declines below 6%, and 6% compounded annually can have a marked effect on cash flows. We therefore propose that corporations in the manufacturing sector (i.e. those that currently qualify for the 40 percent corporate tax rate), be free to choose between treating their inventories on either the basis of replacement

cost accounting or historic cost accounting for tax purposes. Such a choice will impose great discipline on both management and the government making it quickly aware of the effects of its policies vis-à-vis inflation.

2. Taxes Based on Replacement cost account of capital assets

Under this Leading we propose that the present two year rapid write-off for capital equipment be maintained so that the inflationary factor in the replacement of capital assets can be appropriately provided for in the tax returns of manufacturing corporations.

This still does not deal with the problem of the capital intensive industries which normally replace capital assets very slowly. Often these are in low profit sectors of the economy and their cash flows are not sufficient to cover replacement costs under normal accounting for tax purposes. There are several important points of the Canadian manufacturing sector which have these characteristics and replacement costs accounting for tax purposes on capital assets may be the only way of solving their problems.

3. Transferability of losses between subsidiaries permitted for tax purposes.

Under current tax regulations, each part of a corporation's activities which operate through a separate company, is "sui

generis", that is, on its own, and losses in one part of the corporation cannot be used to the benefit of another part which is in a profit position. It was mentioned earlier in this report that this kind of tax incentive has been very effective in the real estate sector as developers could transfer losses - without being taxed - from one side of their operation into profitable parts of their corporation. The general philosophy behind the current provision in the Income Tax Act is based in the notion that there is a success for every failure. However, it is probably more realistic, particularly in technological enterprises, to assume one success against five failures. The overall benefit to society of being permitted to shore up the five failing propositions from the one successful company is probably higher than the additional tax revenue that can be derived from the one profitable enterprise. The experience from the real estate sector shows that this provision, with the proper safeguards, is a strong incentive indeed.

4. The reinstatement of the transferability of the capital cost allowance under leasing so that leasing income can be written off against other income.

This privilege was abolished in the last budget thereby ending an important tax incentive to investors in the manufacturing sector. There is no question that there is real hardship intlicted on small and medium sized companies by the abolition of this provision in the Income Tax Act. The Minister

of Finance has admitted this but has said "there are other ways to solve these companies' problems". We do not know of any others. This provision probably arises out of the proposed revisions in the Bank Act which would permit the chartered banks to go into leasing. If the banks were enabled to write-off capital costs on lease assets against other income it would have a substantial effect on Government revenues. One possibility is to make the transferability available for individuals but prohibit corporations from transferring the capital cost to another corporation. We return to this thesis later in the discussion of improvements in the taxation system to improve the incentive for individuals to invest in ventures.

The all important principle behind this particular piece of legislation is that the outside investor can "pierce the corporate veil" and take advantage of the tax considerations available directly to the corporation. In a sense the investor becomes the direct owner of an earning asset of the corporation. As has already been mentioned earlier, this is in effect the difference between the current incentive system for real estate as compared with investment in securities. This was exemplified by the table on page 17A of this report. The point is that some way must be found for investors to be as equally well off in investesting in a manufacturing company as he is in investing in real estate. The provision to permit the utilization of the

capital cost allowances by outside investors in leased assets in manufacturing was in fact an attempt to do this.

5. Lower the basic tax rate on small and medium sized companies.

While the tax rate on small manufacturing companies is already low, consideration should be given to re-defining small business to bring in more firms which are presently excluded by size. Data are not readily available in this area, and it is suggested that the Departments of Finance and Industry Trade and Commerce might pursue this analysis further.

6. Credit Against Federal Tax for Research and Development

In order to increase the innovative potential of firms and at the same time improve their cash flows, it is recommended that a credit against federal tax payable amounting to 25% of Research and Development expenditures be permitted for all firms engaged in R&D in Canada. Firms operating in a loss or low tax liability position could carry forward the credit indefinitely. There would be no "base year" for the program and the tax credit would be dependent only upon R&D expenditures in the tax year in which they were made.

This recommendation is based on the assumption that the R&D activities which are of most value to industrial companies are those which are both decided upon and carried out by the firms themselves.

While there is much evidence supporting the hypothesis that a high aggregate level of R&D produces high returns to the economy, it is difficult, if not impossible for the government to determine which specific projects are worthy of support. The best judgements on which projects to support are made by firms themselves, when they have their own resources at stake.

There are precedents for tax based incentives for R&D. From 1962 to 1965, under Section 72A of the former Income Tax Act, companies were permitted to deduct from their taxable incomes, 150% of all R&D expenditures in Canada which exceeded those made in 1961 - the base year. There were a number of criticisms of this provision. In particular it was felt that linking the incentive to taxable status would result in an inequitable distribution of benefits: firms with no (or little) taxable income and firms in a loss position would not be able to take advantage of the provision. In addition, there were difficulties in administering the act: at that time, the Department of National Revenue felt that it was not in a position to make technical judgements as to what should be included as research and development. This difficulty may have been compounded somewhat by the eagerness of firms to classify all possible expenditures as R&D in order to take advantage of the extra allowance. A preliminary analysis of the impact of the 1962 measure resulted in the conclusion that it was effective, particularly in encouraging capital expenditures, which, in turn,

may be assumed to have increased current expenditure in the longer term.

Effective in the 1966 income tax year, however, the tax based program under section 72A was replaced by a grant based program, the Industrial Research and Development Incentives Act (IRDIA). The incentive provided by IRDIA amounted to a cash grant of 25% of capital expenditures in the current year and 25% of the excess of current year, current expenditures over a five year base. The cash grant could be paid to the firm or applied against its tax payable. The program was administered by IT&C, who effectively audited corporate R&D claims.

While there was some enthusiasm for IRDIA when it was first introduced, the base year provision was criticized as was the different treatment of capital and current expenditures. While it is not possible to definitively analyze the results of the program, expenditures under it were level for the years 1970-1975. Over that period aggregate industrial R&D declined as a percentage of GNP which is synonymous with a decline in innovative potential. IRDIA was cancelled effective December 1976, without a program to replace it.

The 25% credit against federal tax payable has a number of advantages. It would provide a significant incentive to R&D, it would leave the R&D initiative and decision making to the firms themselves, it would encourage continuity in R&D efforts, it

would be more easily accessible than a grant based program, it would improve corporate cash flows, and it would provide potential benefits to corporations which were in a loss or low tax position.

It is suggested that the program be administered by National Revenue - Taxation, who could, when necessary, refer to the Department of Industry, Trade and Commerce perhaps through the IRDIA Office, or to other government departments if problems of definition were to arise. The program should be controlled by post audit, rather than by pre-approvals, although there should be provision for firms to obtain, at their request, advance rulings. Overall, in the absence of a "base year" provision and with resort to concerned government departments, the administration should be relatively straight-forward, and should be based on the current definition of Research and Development in the income tax regulations.

Of the six recommendations made above, we believe that the tax incentive for research and development, inflation accounting for inventory and the transfer of losses are the most powerful measures to improve cash flow. The measure of primary appeal is that related to R&D, since it serves the dual purpose of cumulating innovative potential and improving cash flow.

CHAPTER VIII MEASURES TO INCREASE THE SUPPLY OF FUNDS

Funds generated in the manufacturing sector over the past three years from internal sources have been about $2 1/2 billion per year on the average and from external sources about $1.2 billion. What kind of an increase in funds would have an impact? To come up with a figure that is appropriate is purely a matter of judgment, but let us say that it would be appropriate to stimulate the manufacturing sector to the extent of an additional $500 million of new investment per year. The aim would be to develop policies that would encourage both individual and institutional investors towards additional investment of that magnitude. In looking at the total funds flows for all businesses, internal fund generation of corporate and government business enterprises was nearly $14 billion in 1975 with external funds contributing nearly $10 billion. Thus $500 million represents a relatively small shift and seems certainly within the realm of possibility.

We have discussed the low rate of return in the manufacturing sector. In turning now to the recommendations to facilitate the supply of funds, and some alterations in the intermediation process, we would like to reiterate that, without some improvement in the rate of return, the following changes will be irrelevant. Unless the investment itself is perceived to be more

profitable than alternatives, no amount of tax incentives on the supply side will induce the investor to make an investment.

We will deal with supply of funds from both individuals and institutions. The individual can be both a user and a supplier of funds. Individual entrepreneurs are very important in this process, and we discuss them in the first section below. We indicated above the order of magnitude of the shift of funds that was needed and we now suggest that some $50 million might come from individuals and $450 million from institutions. What we propose to do is to revitalize the interest of the individual investor and redirect the funds of the institutional investor. We propose different sets of measures to do this because we think the motivations of each are different.

The individual entrepreneur

What stimulates an individual to go into business for himself? Or to raise funds from his friends to put money into his business? What would prompt his friends to put their money at risk? In contrast with the real estate sector the barriers to doing this in the manufacturing sector are enormous. The inequity is that many real estate fortunes have been made through the passive holding or trading of land in contrast to the risks of starting a manufacturing operation. In manufacturing the rewards do not seem to have been commensurate with the risks. If a person is to be attracted to take such risks, a significant

change in the system must be brought about, and it will only be brought about if the anticipation of rewards in the manufacturing sector can be made substantially higher than they are now.

There have been many profiles of the Canadian entrepreneur and some of them leave one with the feeling that they belabour the obvious. Attention is drawn to the large number of bankruptcies which take place and conclusions are drawn about the poor state of management education in the country. However, it would appear that the well-trained people stay in the large corporations and do not become entrepreneurs. Accordingly, one might argue that training programs will train the untrainable, while the well-trained will not leave the large corporations because the anticipation of rewards in new enterprises is simply not good enough. Thus, the lack of quality management becomes self-perpetuating and the well-trained entrepreneurial individuals end up in large corporations. Those less adept, or only those who are exceedingly clever and courageous, are the ones who start new companies.

What can be done to break out of this vicious circle and attract the well-trained manager to new enterprises? This does occur in the United States particularly in thos instances where the inventor has taken the company as far as he can, but professional management is needed to expand its market capabilities. This mechanism appears to be lacking in Canada.

In order to improve the situation, rewards must be adduced to provoke the well-trained manager to leave the large corporations. The proposals in this regard are related to the tax system and they are as follows:

(i) Changes in the law respecting stock options.

At present gains made from the exercise of stock options are taxed as income. There are several proposals available to change the rules governing stock options. One put forward by the Canadian Venture Capital Association is that options be taxed at capital gains rates for so-called start up situations and smaller corporations. Large corporations have other alternative available to them to create incentives for managers. On the other hand options have a substantial effect on attracting managers to smaller corporations. It should not be too difficult to devise some rule which would permit options to be taxed at a capital gains rate, or even more generously, for new ventures and for small and medium size companies.

There is another line of argument to justify stock options for large companies, i.e. that even managers of large companies should have an ownership stock in the companies for which they work. We agree with this but suggest it may appropriately be handled by stock purchase plans.

(ii) Changes in the law respecting employee stock purchase plans.

At present, there are several barriers which inhibit the development of employees owning stock in the companies they work for. Tax changes to encourage this form of investment will provide another source of liquidity as well as aiding the entrepreneurs in obtaining financing for his venture. The important element of ownership and a ssense of propritorship can be provided by widening the share participation of employees. The best known advocate of this concept is Louis Kelso and as a result of his efforts ESOPS or Employee Stock. Ownership plans are becoming widespread in the United States and are being stimulated by legislative changes.

The individual investor

So much for the entrepreneur himself; but what about his friends? It is very difficult for individuals to invest in enterprises in Canada today. As we explained earlier, any one with a bit of money will prefer to invest it in his principal place of residence, a summer cottage, and a fund for retirement. There is no question that the tax system militates against investment in the manufacturing sector. The following measures are proposed to encourage individual investors:

(i) A provision to deduct 150% of the investment in new ventures against other income.

This provision should be able to be taken indefinitely in the future and in any amount in one year. It will be remembered that the normal ratio of successes to failures in new ventures is not on a one-to-one basis. Under these circumstances a deduction of 150% is not as much a privilege as otherwise might seem. It is believed that this provision would have a substantial effect on revitalizing the individual investment process in new manufacturing enterprises. Qualifications could be put on the eligibility of such investments such Canadian ownership, or that they have certain research or technological attributes. (see "Definition of Venture" below). While no statistics have been made available to the writer, a number of people have indicated that West Germany has had considerable success with a 152% write-off.

Definition of "Venture"

At this point it is appropriate to make some comments about the definition of the word "venture". It is used here and several other places in this report.

In a report of this kind, it would be assumed that the word venture would be defined as a start up of a new enterprise in high technology goods. It is not certain that the definition should be so narrow. Generally this report has taken the view that the whole process of investment or innovation in the manufacturing sector has slowed down in Canada and that there are

barriers in the incentive system which have prevented investment from taking place. We have taken the view that, if the investment process is stimulated, then research and development will be stimulated. Following this analogy therefore, we are of the belief that the definition of the word "venture" should be quite wide. One extreme would be the start up of a general store in a small town, which might be financed by the local doctor and other well paid citizens. Should these qualify for special tax considerations? First of all, we think that the definition should be confined to the manufacturing sector. It has been the main thrust of the arguments put forward by the Canadian Venture Capital Association that small businesses are employment creating and manufacturing small businesses are exceptionately employment creating. This definition will mitigate somewhat against those kinds of valuable service businesses which have a part in technology content and which can be exported but that is as may be.

The word "start up" is also capable of several definitions. It normally does not mean the revival of a company which has been struggling along undercapitalized and on the verge of bankruptcy. One of the key turning points in a growing enterprise is, in fact, the stage where the new product has been developed and it is beginning to win market acceptance. At this particular time there is often a need for substantial injection of new capital and management. We believe that the definition of the word

"start up" should include these cases and that "start up" should be defined as encompassing the injection of new capital in an enterprise not less than 50% of the existing capital in the company.

In other words the definition of "venture" would include cases where in effect a company is being set up again to launch into a new stage of growth by a substantial injection of new capital.

ALTERNATIVE DEFINITION OF "VENTURE"

For the purpose of final recommendations, a "venture" could be defined as having the following characteristics:

- It is a commercial enterprise at the pre-startup, startup, early expansion, or turnaround stage.

- The enterprise offers products, processes or services which incorporate a high degree of technological or engineering skill. The company's organization typically includes a number of people with advanced competence in more than one technological area.

- The company's technological capability applies to products or services which have relatively large markets. A significant share of these markets can reasonably be expected to become available to the company, due to product or service superiority, uniqueness or lower cost.

- The company can reasonably be expected to achieve a size which would permit a public issue of its stock within 10 years.

(ii) Exemption from capital gains tax on the sale of an investment if the monies are reinvested in another venture.

Another variation of this would be to permit income averaging or to the purchase of annuity out of the gains. At the moment, if a profit is made from the sale of a venture, it is fully taxed. We believe that the profits should be not taxed if they are reinvested in another venture, i.e. another eligible investment as defined. This could be a temporary measure to stimulate the process of innovative investment. It certainly has a great effect on liquidity which is one of the major problems.

(iii) Increased write-off allowances for individuals

At the present time, an individual is allowed to write-off $1,000 of capital losses against his other income. If an individual investor is permitted to write-off all of his failures against his current income he will be stimulated to take more risks. He knows that the one or two ventures in which he has gains will take a long time to realize particularly if there is a lack of liquidity in the marketplace. Thus, he could have a situation where he takes one loss of $50,000 and has to write-off half of that at $1,000 a year while his gain on a second $50,000 is not realized for 10 years and he has not really received the benefit of any sheltering of his risk taking.

What is needed is a revitalization of the individual investment process so that individuals can become more stimulated to make investments of fairly modest proportions in the ventures or their friends. In all parts of Canada, high income earners in

towns and cities presently seek out the tax shelters described elsewhere in this report. We believe that the tax measures proposed will provide a sharp stimulation to the process of investment for innovation by individuals and we recommend that they be implemented by the government.

There are various proposals to create vehicles or intermediaries for individuals to invest such as mutual funds for innovation and for the Canadian Investment Fund put forward by the Investment Dealers Association. We discuss these further below when we are dealing with the intermediation question.

3. Institutional Investors

There are three major institutional pools of funds in the country: the conglomerates, the large industrial companies and the financial institutions such as banks, pension funds, and life insurance companies. In this section we will concentrate on the financial institutions. The conglomerates and the large industrial companies have their own reasons for investing in innovation and their policies are being examined by the Bryce Commission. It would be superfluous for us to deal with them further here.

In dealing with the supply problem, we must revert to something that has come up at various times during this report, and that is the question of size. At a certain size, a Canadian corporation commands the attention and the respect of the

investment community and it can go to an investment dealer and have that dealer underwrite a bond issue or an equity issue. Its stock is usually bought by the largest institutional investors such as we are now discussing. Broadly speaking, these kinds of companies might be described as those eligible under the Canadian and British Insurance Companies Act i.e. those which have paid dividends of more than 4% of capital over a 5 year period. Perhaps the category is a little narrower than that because some companies can qualify under the Canadian and British Insurance Companies Act but will not have an institutional following and therefore will have difficulty in funding themselves. We would suggest, however, that these are not innovative companies, otherwise they would probably be bought by the pension funds.

The problem seems to lie in the smaller to medium size companies and the so-called start-up situations. Therefore the following section deals particularly with these types of companies. Broadly speaking we believe that the demand (excluding companies whose securities are traded on the market) is divided into three sizes of companies: from a start-up and negligible investment up to say around $200,000; those whose fund needs are from $200,000 to $1,000,000 and a third group of companies whose financial needs go from approximately 1M to $10M. The reason for segregating the latter is that these are the types of companies which in earlier times obtained their funds from the market place. Up until 1969 they were able to fund themselves

through investment dealers. Since that time however, as a result of the decline in the activities of mutual funds as major investors and as a result of the concentration on "blue chips" on the part of the pension funds, it has been difficult for these types of companies to obtain funds.

At this stage, we must signal the existence of a third group of companies which are becoming particularly important in the United States, where venture capitalists are saying that, unless the new entity can be quickly brought to the New York Stock Exchange, there is no point in making the investment in the first place. Accordingly, they have been funding companies in start-ups with amounts of $10M to $20M in order to bring them to sales of $100 million as soon as possible. This has not happened in Canada, with the exception of Microsystems. Examples of such new ventures in the USA are Amdahl and Federal Express.

Institutional investors, such as pension funds, are risk averters rather than reward seekers. This is quite proper, due to the kinds of funds that they are investing but it means that they are not so much attracted to yield as they are opposed to risk. In addition, they are not particularly interested for institutional reasons in becoming involved in a large number of small individual investments. It appears appropriate, therefore, to encourage the creation of Venture Investment Companies (VIC,s) to act as intermediaries between the pension funds and the investment. This is particularly relevant for those companies

whose fund requirements are between $200,000 and $1000,000 - too large for the individual and too small for the pension funds. The experience in the United States suggests that venture capitalists do not operate successfully unless they are small themselves, and that it is difficult to institutionalize them. The largest U.S. venture capital company has just cut its staff from 16 to 8. What may be needed in this country is a multiplicity of small venture capital companies each administering between $5 to 10 million together with a few larger ones which deal with more mature corporations and deal also in the debt side.

However, the creation of a multiplicity of venture capital companies poses two problems. First, how are the funds to be obtained? Secondly, how are they to dispose of their investments so that they can invest their funds again? Of the two, the liquidity problem is probably the more important one, because, with the introduction of FIRA, an important source of liquidity (through foreign capital) has been reduced for Canadian ventures.

The following proposals are meant to redirect the institutional flow of funds into the manufacturing sector by:

(a) enhancing the rewards,

(b) improving the risk protection,

(c) increasing the freedom of the institutional investor.

Each one of these will be discussed in detail below.

(A) MEASURES TO ENHANCE THE REWARDS

Most of the changes that have been proposed in the past to stimulate the supply of funds have been of a tax incentive nature. They fall into two broad groups. The first set of proposals deal with measures to stimulate the first investment to be made and deal with the process of investing the initial capital. The second set of proposals have to do with tax measures to improve the return on the capital once invested. Let us deal first with the measures to improve the incentive to make the original investment.

(1) Measures to stimulate the original investment

The following are the most commonly proposed measures:

(i) Write-off the original investment in a venture against other income

The write-off would be provided either directly, or indirectly through a venture capital company. The suggested amount of the write-off and the conditions attaching to it varies from place to place. If the investment is made through a venture capital company, Ontario, Quebec and Alberta have now passed legislation which, in effect, proposes a 130% write-off against other income taking both Federal and Provincial taxes into account. We do not think that it is necessary to

go so far with corporations and with institutional investors as with individuals. It will be remembered that we have earlier proposed that an extra $450 million could conceivably come from institutions. In our judgement this could be achieved with a lesser tax incentive than the 150 percent write-off which might be appropriate for individuals. However, a straight 100% write-off against other income of the original investment is probably not enough. Furthermore, we do not think it is enough to do it through a VIC. If the word "eligible investments" could be broadened somewhat it will permit taxable companies to have some incentive to invest in corporations directly whose size is a little larger than those dealt with by the VIC. We return to this scheme later but we believe that the taxable financial institutions should have an incentive to make a direct investment (rather than through a VIC) and should be incouraged to do so through a 150% write-off against other income. Another alternative is to permit the amount invested to be used as a credit against other taxes paid.

(ii) Exemption from capital gains tax on the sale of the investment

An alternative to the exemption would be to defer or average the gains, with such exemption or determent to apply only for

monies realized or reinvested in another venture. This is different than is currently being proposed under the VIC legislation of the various Provinces but it is heavily emphasized by those in the industry because of the problems of liquidity.

(iii) Extension of tax write-offs for losses in venture type situations

Financial institutions should be given generous write-offs for losses, again taking into account that the ratio of successes to failures is greater than one-to-one.

(2) Measures to improve the cash flow from the investment once it is made

One of the problems in making any kind of investment in a venture operation, particularly a venture capital company, is that there are a number of tax inhibitions to the "flow through" of profits. A number of measures are proposed below to change the tax laws to permit flow through of income to the original investor and again to consolidate and offset losses against profits in a number of investments in a venture capital company. These are well worthy of consideration. Specifically, these are as follows:

(i) Adoption of flow through of interest on a non-taxable basis for venture capital companies

At the present time if a venture capital company makes a debt investment in a company which is either a subsidiary or

an investment, it is taxable in the hands of the VIC. The tax practice should be changed so that for certain types of companies designated as VIC's or venture capital companies, cash can flow through to the original investor without being subject to corporate income tax.

(ii) The adoption of consolidation of accounts for income tax purposes

At the moment, a venture capital company operates as a holding company. Therefore if it has one successful operation it has to pay taxes on that operation whereas in its unsuccessful operations, the losses thrown up will not be able to be used to offset the taxes paid by the profitable operations. As we have mentioned earlier, the tax provisions surrounding the operation of venture capital companies do not give recognition to the normal success ratio and assume that for every loss there is a success, or a one-to-one ratio. Some tax relief should be granted in this respect to such companies.

(iii) Profits and losses in venture capital companies should be treated as capital gains

This part of the law is uncertain and everyone agrees it should be clarified. National Revenue says that it should be clear but no one in the business feels that it is clear. If an investment is made by a venture capital company and then

sold, it is very likely that the profits will be reinvested in another venture operation. If this is the case, then the gain should be exempted from tax entirely. If the gain is to be paid out to the shareholders, on the other hand, it should be subject to capital gains tax. We do not think this would be difficult to regulate.

(B) MEASURES TO IMPROVE THE RISK PROTECTION

It will be remembered that the National Housing Act arose from the fact that the institutional lenders, particularly the chartered banks, were not inclined to make mortgage loans after their very bad experiences in the thirties. At the moment institutions are generally not willing to make long-term loans in the manufacturing sector for some of the same reasons. Some of these reasons have been outlined previously and are related to the basic health of the Canadian manufacturing sector. However, other reasons may be merely those of habit, since it has been so easy and so safe to make money in real estate. In addition mortgages have been such excellent hedges against inflation that funds managers have felt no need to seek out new areas for investment.

In discussing this issue with pension fund managers, they expressed the view that the fear of risk was a greater deterrent than the appeal of reward. Accordingly, it would seem more fruitful to do something about risk rather than reward. The

kinds of improved protection can be visualized in this regard are: general risk insurance and a more specific risk insurance.

General risk insurance would not deal specifically with any one investment. Under this kind of proposal the entire basket clause of the investing entity would be insured against losses. Therefore, in order to qualify, investments would have to be of a specific kind as defined under the legislation, e.g. they might have to be Canadian owned manufacturing firms with an appropriate budget in research and development or perhaps a "venture" as defined earlier in this report. It is important that there be an element of co-insurance in the proposal and accordingly there ought not to be a 100% guarantee insurance.

Specific risk insurance would be similar to that presently practised by CMHA and the GAAB. Under this arrangement, specific financial instruments would be taken to a designated agency to be validated for a guarantee or insurance. Again there should be some form of co-insurance.

Either of these possibilities should be considered in relation to debt and equity. The difference between the two is not always distinct because there are some instruments which have been developed during recent times which are a mixture of debt and equity, and some arbitrary decisions would have to be made. Our recommendations are that the individual guarantee be made available for debt instruments but that a generalized insurance

for the basket clause as a whole is appropriate for equity. To be specific our recommendations are as follows:

(1) General Insurance

Insofar as equity is concerned, there should be no specific insurance. However, because the institutional supply of funds is so large, it would be inappropriate to insure the basket clause as a whole. The insuring corporation should agree to insure "designated investments" in the basket clause against losses to the extent of say 40%. A "designated investment" might be a Canadian owned company in the manufacturing section with a certain percentage of sales going to R&D. The definition needs to be carefully thought through in policy terms. The definition of "losses" also would have to be carefully thought through since these are often difficult to define.

(2) Specific Insurance

If a loan of any kind is made by a financial intermediary to a designated company (if there are only a few Canadian-owned manufacturing companies, all of them can be designated that are Canadian owned), the loan would be insured by the government and the investing institution would then acquire a specific piece of paper which would be specifically guaranteed or

insured. We believe that this is the most appropriate way to deal with debt instruments because the instrument would thereby tend to become more marketable. If, for instance, the debt instrument was acquired by a pension fund who later on felt that it did not fit its desired maturity schedule, it could market the debt paper more easily if it carried a specific government underwriting.

Discussion

Under this kind of program a good supply of institutional funds might become available for the manufacturing sector. This proposal has been discussed with a number of large institutional investors and pension funds and their reaction is encouraging. It is important that investments be made not on the basis of patriotism which is now the case in many instances but for good investment criteria, and this would become more so under this proposed scheme.

However, the proposal will only work if the manufacturing sector itself is prosperous. The National Housing Act guarantee system worked because the rise in housing values was such that the guarantee system in fact never had to be exercised on a broad scale. When one thinks of the difficulties that would have arisen had Central Mortgage and Housing Corporation been forced to make good on its guarantees on a widespread basis, one realizes that it is essential that the sector to be guaranteed is

prosperous. This is important because it is our view that the manufacturing sector at the present is not prosperous and we have recommended, therefore, parallel measures to improve the profitability of the corporate sector. If these measures are not taken and a guarantee system is instituted, many administrative problems would arise. It is extremely important the the corporate sector should be profitable and healthy for a guarantee system to work properly.

Another potential problem is that any guarantee system might result in a government-owned company being formed to provide the guarantees. A bureaucracy would be created which would have the effect of slowing down the investment process and adding to the intervention of government in the investment sector. This is a serious matter because it is quite clear that the National Housing Act guarantee system is no longer required and yet there is a vast bureaucracy still guaranteeing mortgages. Many participants in this analysis were strongly opposed to the creation of a further government bureaucracy to oversee the investment process. One possibility would be the expansion of the authority of the GAAB.

Another solution would be for the existing mortgage insurance corporations to expand their operations to cover guarantees of corporate paper. Legislative changes might be made which would encourage this. There are three large mortgage insurance corporations in the country. This proposal should be discussed

with each of them. Their reaction may be that they are highly skilled in mortgages but they would have extreme trepidation about venturing into the manufacturing sector.

(C) MEASURES TO INCREASE THE FREEDOM OF THE INVESTOR

In this section we will deal with the rules of the so-called "basket clause" which refers to the discretionary funds an institutional investor may invest by law. An analysis of the basket clauses of the general and life insurance companies indicate that they were utilized to the extent of 3.6% out of a total eligible of 7% in 1973. A closer examination of these averages however, indicates that individual institutions either use the facility fairly close to its legal limit, or do not use the clause at all. For those who do not use it at all, it is unlikely that any measure could be taken which would stimulate them to make use of higher limits. On the other hand there appears to be value in increasing the size of the basket clause for those institutions who are willing to take advantage of it. There are several institutions who invest aggressively and who would increase funds out if the basket clause was increased. We would therefore, be inclined to double the basket clause from 7 to 14%. No data are available as to the utilization of the basket clauses of pension funds. The total amount in trusteed pension plans at the moment is $18.3 billion. 7% of this would be $1.3 billion and obviously doubling the basket clause could potentially bring into use a considerable quantity of money.

Some have advocated that the direction of basket clause investments be legislated, i.e. that it should be compulsory for a certain portion of the basket clause to be used for certain kinds of investment. Others feel that financial managers should be left free to respond to the directions and opportunities of the market. It is our view that, subject to the stimulants outlined in this report, the market should be left to decide and the individual investment manager should make his judgement as to how much of the basket clause he is inclined to use and which risk investments we should make.

It is our recommendation, therefore, in order to widen the institution's freedom of choice, that amendments be introduced to the Canadian and British Insurance Companies Act and to the Trust Companies Act increasing the size of the basket clause from 7% to 14%.

CHAPTER IX INTERMEDIARIES AND INTERMEDIATION

The role of the financial intermediary is to transfer funds from the savings process to consumption or investment. Thus banks take the savings of the individual and invest them in mortgages, consumer loans or business loans. An intermediary may be a principal, such as a bank, or an agent, such as a merchant banker or investment dealer. The investment dealer does not take a position but acts as broker between sources of funds such as individuals and institutions such as pension funds, and users of funds.

In the previous chapters we have attempted to outline some measures to revitalize the investment process for individuals and redirect the funds of institutions. This process is handled through intermediaries and it is worth while to review the roles of the various intermediaries in the growth process of investment for innovation.

In this chapter we conceptualize that a company goes through four stages of growth.

1. the start-up situation - here the initial investment is made to begin an enterprise. Fund requirements are usually up to $200,000.

2. first stage company - at this point the company has overcome its initial starting difficulties and has begun to

penetrate its market. It has by no means reached its market potential, however, and the company is usually still in the hands of the initial inventor or entrepreneur. Experience tells us that start up situations encompass companies with funds needs of roughly up to $200,000 with sales up to $2,000,000. At that point there seems to be some change in the process of growth. First stage companies often have sales between $2,000,000 and $5,000,000 and sometimes up to $10,000,000. They have fund requirements of $200,000 to $1,000,000.

3. "on the brink" companies - these are companies which have gone through the initial growth process and have been successful. They are on the brink of becoming substantial enterprises. Sales are between $5,000,000 and $25,000,000 and fund needs go from $1,000,000 to $10,000,000. Formerly the stock market used to be able to supply the needs of these kinds of companies. However, in the shift of the investment process which we have described earlier in this report, the institutional investor is not interested in taking debt or equity in this type of company, and, at the moment, this is the area of most difficulty in Canada. Individuals who may have supported the company through its startup and through the first stage now do not have enough funds to supply the company of this size. One must look to institutional investors for the kinds of funds to keep these companies going. It is to these types of companies

that the guarantee system which we have described earlier is really directed.

4. Public company - in this stage the companies have usually gone public and can raise money through investment dealers in the traditional manner. Fund needs are in excess of $10,000,000.

In the light of this process it is worth reviewing the part that is played by the various financial intermediaries as they participate in growth. Accordingly, we will describe the role of each financial intermediary pointing out how the recommendations in this report can effect the process of growth and investment for innovation. Finally we will deal with several new intermediaries which are now being proposed.

The main source of financing for business in Canada is the chartered banks. There have been various proposals made to diversify the investment process of the chartered banks. We agree with the thrust of these recommendations for the most part, but we also think that it is important to create a diversity of financial institutions. Therefore many of the recommendations in this report will be aimed at strengthing the role of other financial intermediaries and creating a new set of intermediaries. The chartered banks are mainly sources of short term credits. The needs of growth are centered around long term debt and on equity. There is a limit to the amount of term debt

a chartered bank should prudently take on and, in addition, equity investments in any size are inappropriate for a company whose main source of monies is deposits which can be withdrawn on demand. It is inappropriate therefore to look to the chartered banks for large amounts of money in this respect and policy actions should concentrate on pension funds, insurance companies and trust companies who operate with rather longer term liabilities. However, certain changes are appropriate for chartered banks. We believe that they should participate in VIC's which are described later in this report and in addition we endorse the proposals for changes in the Small Business Loans Act which are currently being put forward by the Canadian Federation of Independent Business.

With that kind of background let us now turn to a detailed review of the stages of growth that we have already described and look in detail at the role of the various participants in the process of investment for innovation.

A. THE PROCESS OF GROWTH

1. THE START-UP SITUATION

In a so-called "start-up situation" it is usual that funds come from a variety of sources. These are:

(a) Individuals by way of debt and/or equity

This report has recommended that losses can be totally written off in the year in which they are incurred so that the individual investor or the entrepreneur will be encouraged to make second investments. That is the only change we recommend for the debt side.

As for equity, the need for certain stimulative measures is much greater and we have recommended a 150% tax credit.

(b) Banks

Both the Department of Industry, Trade and Commerce and the Canadian Federation of Independent Business have recommended changes in the Small Business Loans Act to revitalize the participation by banks in small businesses.

Three changes are recommended:

1. increase the size limit to $150,000.00
2. widen the purpose of the loans as stated in the legislation.
3. remove the limitations on interest rates so that the banks regard the loans as profitable investments.

The thrust of the Bank Act revisions is that venture capital operations of banks should be set up as separate companies. If the VIC legislation is passed we believe this is the route that most bank equity participations will take. We believe that this is appropriate.

(c) The medium term lenders Foreign banks, finance companies and trust companies.

We believe that loans from these institutions should be eligible for the guarantee program that has been outlined in chapter VII. We think that it is appropriate that guarantees be available for these institutions rather than banks because banks tend to confine themselves to medium term lending which is sufficiently encouraged by the Small Business Loans Act and the GAAB. The general thrust of this paper is to widen and diversify the sources of funds available to the small and medium sized companies. The availability of the guarantee to these particular groups of lenders will strengthen their position vis-a-vis the banks in lending to the small and medium sized companies and make them more aggressive in this market.

There is a question as to whether there are enough medium term lenders. It has been proposed that a government guarantee plan be available to guarantee the "street paper" of newly formed Canadian owned lending operations. The proposition is put forward that the foreign banks are doing a good job and can expand very rapidly because of the fact that they have the guarantee of the parent bank available for the purpose of marketing their finance paper on the street. Thus, their assets can grow very rapidly. Growing is much more difficult for a Canadian owned entity, unless it has a

substantial parent or sponsor. It is possible that there would be a special entity whose commercial paper the government might guarantee. This might induce some more kinds of companies like Roynat. In that case the major institutional investors sponsored the paper until the company could stand on its own. The idea of a government guarantee program for less well sponsored lenders is a reasonably good idea. However, it is our view that the VIC legislation, if properly drawn, will have the desired result without such a special guarantee program. Therefore, we are inclined to let this idea rest for the moment.

(d) Pension funds

It became clear in our consultation with pension funds, that they would prefer to handle start-up situations through an intermediary such as a VIC or a special type of investment trust, both for debt and equity. We discuss this preference more fully later in this report. However, as a company grows out of start-up and into a larger type of company, we believe that the pension fund should be eligible to buy paper directly subject to the guarantee system which has been outlined earlier in this paper.

(e) Insurance Companies and Trust Companies

Trust and insurance companies could be a source of supply of debt paper with some tax incentives as have been

recommended in this report. It would seem that they would need some kind of guarantee to stimulate them to take equity in start-up situations, or alternatively that they would prefer to deal through VICs. However, because of the nature of their funds we do not expect them to be very active in start-ups but more in the later stages of a company's growth. I would think that they would be prime prospects for sources of funds for VICs, however.

(f) VICs, SBICs, etc.

To the extend that VICs are important sources of start-up capital, they will be discussed in the context of the need for new intermediaries.

2. FIRST STAGE COMPANIES

Let us turn now to the so-called "first stage companies". These are companies which have grown beyond the start-up but which may still be struggling financially. The full range of permanent markets are not yet available to them. However, banks are more generous since the companies have developed a history and some working capital. It is likely that the medium term lenders will also be more generous to them. While they probably can begin to talk to the insurance companies, trust companies and life companies about private placements. Their fund needs are often still too small for such placement. This should be the main area of activity of the VIC and the investment trust which

is described later. We elaborate on the financing process of these companies further below in the section on "New Intermediaries".

3. "ON THE BRINK" COMPANIES

The third stage of a company is on the brink of long term success. It is not quite large enough to go public but is nearly there. Here merchant bankers do private placements with institutions. There is a role here for all the intermediaries in one form or another but hopefully the guarantee system will stimulate direct investment by the pension funds.

4. PUBLIC COMPANIES

Finally the company reaches the stage of a public company where an investment dealer can bring it to the financial market. We do not believe there are any special tax changes or other changes required at this time. When a company "goes public", all of the institutions which have been described earlier in this section can be either funded out or remain in depending on their wishes. It is to be hoped that they will decide to fund out through the public issue and reinvest their money back into new situations. One of the necessary factors is to change the tax provisions to permit this. It a VIC, trust company or pension fund has a start-up which is going to be taxed at income rates when it realizes its profit through a company going public, it is not going to be terribly anxious to put the money back into

another venture. As has already been recommended, there is a strong reason for deferring the gains or giving some kind of consideration to letting the original investor reap more than ordinary benefits from his gains through the tax system. Again, it must be reiterated that the tax system in this respect is based on a 1 and 1 success ratio. If the real success ratio is worse than that, then obviously the capital gain that is made can normally be divided by the number and dollar amount of the losses. This is important to remember in discussing the whole procedure of taxation of venture capital gains and losses.

SECTION B NEW INTERMEDIARIES

During the course of this study, reference was made to three different types of intermediaries, that would be needed in Canada. These are (1) Mutual funds for innovation sold to the general public, (2) an investment trust, (3) the venture investment company and/or SBICs.

(a) Mutual Fund for investment for innovation

Various proposals have surfaced over the years for the creation of a mutual fund for innovation which should be sold broadly, as are Canada Savings Bonds. The Alberta Energy Corporation was marketed on this basis. A related proposal was made by the Investment Dealers Association last year with its suggestion for a Canadian Investment Plan. While there are some attractions to this, all of these approaches have severe

limitations; particularly with respect to risk. These limitations are twofold: If one examines carefully the conditions under which individual investment plans succeed, it is apparent that they are governed by the following conditions:

(i) the issuing entity is so substantial that the risk is low: e.g. Alberta Energy Corporation, Canada Development Corporation, Canada Savings Bonds. This means that the investor is really investing in an institution rather than an individual enterprise;

(ii) the investment is perceived as low risk in itself. Under the structure that has been set up in Canada for investment in mortgages on a mutual fund basis, individual investors often desire a Government guarantee, such as under the National Housing Act. They wish to buy mortgages on properties that are virtually riskless and which are products of a major developer which has substantial financial resources standing behind it to back up the investment. This kind of attitude is characteristic of mutual fund type investing.

(iii) the Canadian Investment Plan has some attractions, but it benefits only listed companies. While it makes much good sense it is not so relevant to the problems of start-up and emerging companies which have been the main

subject of this report. The Canadian Investment Plan is a plan proposed by the Investment Dealers Association, whereby Canadians may make tax-sheltered investments in listed securities.

It is our view that the tax changes proposed earlier in this report are the most effective way of stimulating investment for innovation. Until it is clear that the investment process is working properly on its own, a mutual fund specially created and (say) government sponsored could be asking Canadian investors to take inordinate risks. It would be better to let the investment process work under the revised tax system suggested in this report and if a mutual fund arises sponsored by private interests, so much the better. If the return is perceived by the investor as being equivalent or better than other opportunities, he will make the investment. If it is not perceived to be better, he will not. The market should decide.

(b) Investment trusts

Several pension funds have proposed the formation of a kind of REIT or mutual fund in which they would all participate for the purpose of making venture investments. This is not quite the same as a venture capital company as it is traditionally thought of but is more a trust arrangement or mutual fund with a limited number of participants. In discussing the problem with several of the institutional investors, they indicated that it is

important for new forms of intermediation to spring up, as it is difficult for a pension fund of size to make investments smaller than $1,000,000. and in some cases smaller than $5,000,000. Thus, they wish to make such investments through some kind of venture capital intermediary. Secondly, they like to feel themselves behind a pool of risk money in order not to be associated directly with losses or ventures in general. Trustees of pension funds have to observe the "prudent man" requirement and it may be more prudent to invest with a number of other pension funds in a "junior capital" or "investment for innovation" fund rather than do it directly. At the present time, there are legislative barriers to this kind of fund, and appropriate legislation would have to be passed to facilitate this pooling of interest.

(c) The VIC

The Venture Investment Corporation proposal has come from a number of sources. The Grasley report strongly advocated such a proposal and it has also been backed by the Investment Dealers Association and the Association of Venture Capital Companies in Canada. This has resulted in initiatives by three provinces, Ontario, Quebec and Alberta. On April 6, 1976, the Treasurer of Ontario introduced Bill 44 proposing a system of the registration and control of new financial intermediaries to be known as Venture Investment Corporations. In June 1976, the National Assembly of Quebec passed Bill 6 legislating new rules for

similar financial intermediaries to be known as the Sociétés de Développement de l'Entreprise Québecoise. ("SODEQ") The activities of this particular VIC are confined to manufacturing corporations. In 1975, the Alberta Government advanced a similar concept called the Investment Inventive Corporation. All three proposals are presently being studied by the Federal Government as a result of the request by the Minister of Finance in his budget of May 25 to put forward submissions on the subject. It is not proposed, therefore, to go into them in much detail in this study. It is sufficient to say that we believe that they represent a substantial contribution to the system. We believe that the aim should be to create an environment where there would be a considerable number of VICs formed in Canada each with say $10 - 20 million under management directing activities to the sponsorship of start-up situations and carrying on and nurturing start-up situations until they can be brought to some kind of maturity.

In our scheme outlined above, you will note that we think that the VICs only serve some part of the problem and they are not the answer to revitalizing the individual investment process nor do they meet the real needs of pension funds. We think that the tax measures and guarantee plan described earlier will be more important in doing this than VICs. Equally, we do not see it appropriate for individuals to invest through the VIC unless

it is a way of using his own funds. This may be the case in some instances of very wealthy individuals.

Finally, we do not see the VICs as the answer as companies grow and become medium sized which is a most desirable aim for the Canadian economy. As companies expand, their investments needs will outgrow the VIC and use up all the funds available. It is important through this form of intermediation that a total system of financing be created so that other more traditional institutions will take over from the VICs. It is for this reason that we have suggested the guarantee plan so that a pension fund may help to start off a company indirectly through its VIC but, as the corporation grows in size, the pension fund may wish to have a direct participation in it, and buy the investment from the VIC, also on a guaranteed basis. As the company grows in size it will come to the attention of the merchant bankers and private placements will take place until eventually the company ends up the hands of the regular investment dealers and an issue to the public or the institutions can be marketed without any special aids.

In this report we have not dealt with the SBIC (Small Business Investment Corporation). This is a device used in the United States to stimulate small businesses. This is the subject of a separate study by the Department of Finance. We leave the question of whether such a program can contribute to the overall

system we have described in this report until the Finance study is completed.

CHAPTER X CONCLUSIONS

The purpose of the recommendations that have been put forth in this report is to revitalize the individual investor and to redirect the institutional investor. We believe that it will not take much to stimulate risk-taking investment in new ventures. If there are incentives to bring well trained entrepreneurs out from the large companies and to enable companies to grow from the first stage up to the brink and into public companies, we will have an ever increasing supply of medium sized companies which will increase our competitive ability and will enable us to contend with foreign competition. Without this kind of development, the Canadian industrial scene may eventually consist of very large companies and a group of very small companies that will lack the nourishment to grow.

The measures are not aimed at any specific technological innovation or any specific sector of industry, but are directed at changing the incentive system to improve the climate of innovation in Canadian industry in general. More specifically, the measures are intended to provide rewards commensurate with the risks taken by those who are critical to successful technological innovation; the entrepreneur, the individual investor, and the institutional investor. The measures minimize direct government involvement in resource allocation and leave the private sector free to make its own decisions.

Specific proposals are directed towards increasing corporate cash flows and increasing the supply of funds. The increased corporate cash flow resulting from replacement cost accounting, coupled with the extra R&D deduction, would be particularly important to stimulate the innovative potential of the larger corporations while the specific incentives to increase the supply of funds from individuals and institutions will mainly be to the benefit of small and medium-sized companies. The attached report has no final definition of a "venture" yet, but the definition should stress start-up or revitalized situations, the intensity of science and technology, the high degree of risk, the high potential pay-off, and the likelihood of the enterprise becoming of national significance.

Keeping in mind that direct government support for research and development has diminished during the past five years, keeping in mind also that industry has diminished its own R&D effort in Canada as a result of a general deterioration in the investment climate, and keeping in mind that Canadian investors are thought to be conservative, the thrust of our proposals is to encourage private industry to increase its innovative potential and to encourage individual entrepreneurs as well as individual investors to start new science-based enterprises. Our emphasis on science and technology reflects, of course, the principle interests of the Minister of State for Science and Technology for whom this report was prepared but also our conviction that, at

least in the short run, the technology-base throughout Canada's manufacturing sector ought to be strengthened.

In view of all of these considerations, we arrive at a package of 12 measures, some of which are tax incentives and some of which have to do with new forms of intermediation and general risk insurance. The list below shows our initial priorities, broken down under the three headings: increased cash flow, increased supply and other measures.

I. TAX MEASURES TO IMPROVE CORPORATE CASH FLOW

- replacement cost of inventory
- 25% tax credit for R & D expenditures

II. TAX MEASURES TO INCREASE THE SUPPLY OF FUNDS

Individual Entrepreneur

- changes in law respecting stock options
- changes in law respecting employee stock purchase plans

Individual Investor

- deduct 150% of investment in new ventures against income
- exemption from capital gains tax on the sale of an investment if the monies are invested in another venture

Institutional Investors

Enhancing the Rewards

For start-up situations:

- write off against other income original investment in venture

For existing establishments:

- consolidation of accounts subsidiaries permitted for tax purposes

III. OTHER MEASURES TO STIMULATE THE SUPPLY OF FUNDS FROM OTHER INSTITUTIONS

Improving Risk Protection

- general risk insurance
- specific risk insurance

Increase Investor Freedom

- increase basket clauses

New Forms of Intermediation

- encourage the concept of venture investment corporations as is proposed by Ontario

The prespective outlined in this report would not seem to be in accord with the current situation when there appears to be over capacity in the Canadian manufacturing industry and when the housing sector is weak and has been weak for some months. To a large extent we regard these as cyclical influences whereas this report deals with secular trends. We are not sure that the overcapacity is in the right places and the changes in the incentive system recommended in this report will stimulate additions to investment which will be in new areas, rather than adding capacity in existing areas. Insofar as housing is concerned, there is a strong need to continue growth in the housing sector in Canada and this report merely highlights the importance of making the incentives for other sectors equal to those of the housing sector.

TABLE I

AFTER-TAX CASH FLOW ON ALTERNATIVE INVESTMENTS MADE BY AN INDIVIDUAL

	MORTGAGE	SHOPPING CENTRE	CANADIAN SHARES
INVESTMENT REPRESENTED BY			
— PERSONAL FUNDS	$ 25,000	$ 25,000	$ 25,000
— BORROWED FUNDS	75,000	75,000	75,000
TOTAL INVESTMENT	$100,000	$100,000	$100,000
CASH INCOME BEFORE INTEREST AND DEPRECIATION			
10% ASSUMED CASH YIELD	$ 9,000	$ 10,000	
9% ASSUMED CASH YIELD 4% ASSUMED DIVIDEND YIELD			$ 4,000
INTEREST EXPENSE @ 10%	(7,500)	(7,500)	(7,500)
DEPRECIATION (5% ON VALUE OF BUILDING BUT LIMITED TO CASH INCOME INCOME	NA	(2,500)	N/A
INCOME BEFORE TAX	1,500	0	$(3,500)
TAX SAVINGS DUE TO DIVIDEND TAX CREDIT (ONTARIO RESIDENT, 61% TAX BRACKET)	N/A	N/A	1,392*
AFTER-TAX INCOME	$ 975	0	($ 2,108)

*$1,000 dividend deduction not used

TABLE II

PERSONAL FUNDS IN PENSIONS, RRSPS RHOSPS 1966-1976

YEAR ($MILLIONS)

	PENSION	RRSP	RHOSP
1966	455	10*	—
1967	507	115	—
1968	572	143	—
1969	643	179	—
1970	728	225	—
1971	817	318	—
1972(A)	964	645	—
1973	1,093	923	—
1974	1,310	1,244	200
EST 1975	1,400	1,600	375
EST 1976A	1,550	2,000	425
TOTAL	10,039	7,497	1,000

Source: For 1966-1974: Revenue Canada, Taxation Statistics, Years 1968-1976. For 1975, 1976: MOSST estimates.

(a) Increased ceilings for RRSP

TABLE III

EFFECTIVE TAX RATE OF SELECTED COMPANIES

COMPANY	(IN THOUSANDS)			
	INCOME TAX EXPENSE	EFFECTIVE TAX RATE ON INCOME %	TAXES PAID ON ADDITIONAL WORKING CAPITAL IN INVENTORIES	EFFECTIVE TAX RATE ON ADJUSTED EARNINGS %
A	40,800.	44.	12,200.	62.
B	21,000.	46.	6,000.	65.
C	65,100.	42.	11,700.	51.
D	22,600.	45.	10,000.	80.
E	15,900.	46.	5,500.	66.
F	66,800.	48.	15,700.	62.
G	19,300.	44.	2,600.	51.
H	41,200.	34.	7,500.	42.

Source: Touche Ross and Company
Inflation: Its Impact on Business
May 7, 1976