CYCLICAL BEHAVIOUR OF CANADA'S CURRENT ACCOUNT BALANCE

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THE CYCLICAL BEHAVIOUR OF CANADA'S

AND R. L. L.

CURRENT ACCOUNT BALANCE OF PAYMENTS

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By

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### A Thesis

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MASTER OF ARTS (1968) (Economics) McMASTER UNIVERSITY Hamilton, Ontario TITLE: The Cyclical Behaviour of Canada's Current Account Balance of Payments

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SCOPE AND CONTENTS: The thesis makes a detailed statistical

examination, from 1870 to the present, of changes in Canada's current account balance of payments relative to swings in the domestic business cycle. It reveals a strong tendency for the trade and current account balances to deteriorate in periods of economic expansion and to improve when the economy is contracting. An hypothesis is developed to explain this pattern of cyclical behaviour, which is shown to be the equivalent of a tendency for cyclical changes in domestic investment to exceed changes in domestic saving. The importance in the Canadian economy of a foreign trade acceleration effect, together with accommodating cyclical swings in the inflow of long-term capital, appear to be the primary causes of this tendency.

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#### PREFACE

This thesis represents an examination of the Canadian current account balance of payments, for the purpose of relating changes in the balance to the domestic business cycle. Although there appears to be general recognition of a traditional inverse relationship between Canada's current account balance and the level of prosperity in this country (that is, a large deficit when the Canadian economy is expanding and a smaller deficit or a surplus when the economy is depressed), the author is unaware of any detailed study of the precise relationships which have existed in the past or of the factors underlying them. The study was inspired in part by the seemingly unusual current account behaviour after 1957, when relatively large deficits persisted in the face of several years of slow economic growth.

The author gratefully acknowledges the assistance of Professor R.W. Thompson, thesis advisor, for the sense of direction which he contributed to the project and for his many comments and suggestions. The author also wishes to thank his wife and family and his employer, The Mutual Life Assurance Company of Canada, for the understanding and encouragement which they gave.

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#### INTRODUCTION

#### Purpose

Our thesis concerning the cyclical behaviour of the Canadian current account balance of payments has three main purposes. First, we shall make a detailed examination of the available statistical data in order to determine whether any significant relationship has existed between the business cycle and the current account balance of payments, and if so, its nature and the consistency of its appearance.

If our statistical analysis should reveal the existence of a reasonably strong and consistent pattern of cyclical behaviour in the Canadian current account balance, our second major purpose will be to determine the cause or causes of such behaviour. In other words, we wish to develop, a priori, an hypothesis which can explain the relationship in Canada between the business cycle and the current account balance.

Finally, we wish to investigate more recent behaviour of the current account balance relative to the business cycle, particularly since 1956, in order to determine whether experience during this period differed from that in earlier years. If so, then we must examine the probable causes of the variation and incorporate them into our previous hypothesis.

Ι

#### Summary of Our Hypothesis and Its Development

Before undertaking a statistical comparison of the business cycle and the Canadian current account balance of payments, we shall describe briefly an hypothesis which, if correct, should enable us to predict the type of relative behaviour one might expect to find. To do so, we shall make three basic assumptions. These propositions and their implications, which are merely outlined at this point, will be analysed more carefully in a later chapter.

Our first assumption concerns Canada's relative factor endowment, in particular its abundance of natural resources relative to other domestic factors vis-a-vis other countries. The result has been a concentration of production due to specialization in relatively few resource products which has led, in turn, to a heavy dependence on foreign trade. Not only must Canada rely on foreign markets to absorb large volumes of resource products, but it must also depend on imports to supplement domestic production of many other goods and services.

In addition, we note that a significant proportion of Canada's known or suspected natural resources have remained undeveloped. A desire to develop these resources implies that, relative to other countries not so endowed, a large part of Canadian national income is usually devoted to domestic investment. Consequently, one might expect to find a tendency in Canada for domestic investment to exceed domestic saving. However, using the national accounts identity 'saving equals investment' it can be shown that if domestic investment exceeds domestic saving, then imports of goods and services must be correspondingly

greater than exports of goods and services. To develop its resources, Canada ordinarily borrows foreign factors of production, which is equivalent to running a deficit on its current account balance of payments. At the same time, the foreign capital required to finance this deficit is attracted by investment opportunities in Canada, particularly in the resource industries.

We believe that few readers will object to this initial assumption that Canada possesses large quantities of natural resources, a sizable portion of which are undeveloped, relative to other domestic factors. Therefore, it provides a good starting point for our hypothesis and establishes the general characteristics of Canada's international economic position, namely a debtor-raw material country dependent on foreign trade.

Secondly, we assume the existence of a foreign trade acceleration effect in the Canadian economy; in other words, any change in exports tends to induce a significant change in domestic investment. We do not wish to limit ourselves to a narrow interpretation of the foreign trade acceleration effect, nor do we suggest even an approximate value for it. We shall refer only to a general tendency whereby any significant swing in Canadian export sales is reflected in a large change in domestic investment. A change in exports will not only directly affect investment in the export industries, but it will also have an induced effect on capital expenditures in other industries because of the accompanying change in national income.

In our third key proposition, we suggest that the desire by non-residents to invest in Canada varies directly with the business

cycle and that cyclical fluctuations in long-term capital inflows are likely to be quite large. During periods of prosperity in Canada, foreign capital will find the attractiveness of Canadian investments greatly increased; conversely, when the Canadian economy is contracting, there will be much less desire by non-residents to invest in Canada. At this point, we are taking for granted the basic underlying attractions which draw foreign capital to Canada.

Assuming the existence in Canada of first, abundant undeveloped natural resources relative to domestic labour and capital, and second, a large foreign trade acceleration effect, we suggest that domestic investment will tend to increase faster than domestic saving during a cyclical business expansion and that domestic investment will tend to decrease faster than domestic saving during a contraction. Furthermore, this tendency will usually be complemented by a cyclical variability in long-term capital inflows which permits cyclical changes in the difference between domestic investment and domestic saving to proceed without significant constraint from either Canada's foreign exchange rate or its exchange reserves. Although it is not essential, we also expect to find that cyclical changes in Canadian imports of investment goods play a major role in the balance of payments adjustment process.

Consequently, a reasonable preliminary hypothesis concerning the cyclical behaviour of Canada's current account balance appears to be as follows: during periods of prosperity, domestic investment in Canada tends to increase both absolutely and relative to domestic saving and Canada's current account position deteriorates; conversely, when the Canadian economy is contracting, domestic investment tends to fall more

rapidly than domestic saving and the current account position improves.<sup>1</sup>

Given the above-mentioned tendency for domestic investment in Canada to exceed domestic saving, we can add the following corollary to the hypothesis: only when Canada experiences a relatively severe and prolonged recession is the improvement in the current account balance likely to be sufficient to move it into a surplus position.

Before outlining the content of subsequent chapters, we should point out that the type of cyclical variation in Canada's current account balance described in the above hypothesis has been observed previously. The Economic Council of Canada noted "a recurrent pattern of large deficits in (Canadian) merchandise trade and current account payments during periods of high-level activity and smaller deficits in payments during periods of slower growth".<sup>2</sup> The Council also stated that "the larger deficits have been associated with high and rising domestic investment and substantial long-term capital inflows".<sup>3</sup>

Professor Edward Marcus, describing Canadian external trade during the depression beginning in 1929, observed a similar type of behaviour---although exports declined, imports fell even more and the trade

Care should be taken to avoid any connotation of 'unfavourable' or 'favourable' in the terms 'deteriorate' and 'improve'.

<sup>2</sup> Economic Council of Canada, Economic Goals for Canada to 1970 (Ottawa: Queen's Printer, 1964), p.79.

3 Ibid., p. 79.

balance moved from a deficit to a surplus position. However, Marcus also suggested that the adjustment process during this period did not operate as one might ordinarily expect "of a typical debtor-raw material country like Canada",<sup>4</sup> implying that rigidities would ordinarily limit the change in imports relative to that in exports. He went on to attribute the outcome to "the intimate relation of money-capital imports, imports of producers' goods and domestic investment".<sup>5</sup>

Therefore, the pattern of behaviour described in the hypothesis has been recognized by others; in most cases however, the observations included a relatively brief period of time, and there seems to have been some doubt whether such behaviour was a normal characteristic of the Canadian economy. By making a comprehensive statistical analysis of the cyclical behaviour of Canada's current account balance from shortly after Confederation to the present time, we hope to determine if, in fact, the balance has consistently behaved according to our hypothesis. Finally, we note that our desire to investigate this particular topic stems in part from the apparently unusual current account behaviour following 1956 when relatively large deficits, which persisted despite economic weakness in Canada, were followed by a foreign exchange crisis in 1962.

Before presenting an outline of the subsequent chapters, we shall anticipate a possible challenge that our hypothesis is a trivial

4 Edward Marcus, <u>Canada and the International Business Cycle</u> <u>1927 - 1939</u> (New York: Bookman, 1954), p. 17.

5 Ibid., p. 19.

It is true that any expansion in aggregate income in Country A, one. whether or not that expansion is initiated by rising exports, is likely to result in higher imports of goods and services. An increase in Country A's imports, however, is equivalent to an increase in the exports of Country B. thereby stimulating income and imports in the latter country. Obviously, all countries cannot simultaneously experience an improvement or a deterioration in their current account bal-Therefore, it does not follow that a country's current account ances. balance must inevitably deteriorate during a business expansion or improve as the domestic economy contracts. In fact, an examination of the experience of various nations will indicate that for some. improvement in the current account balance and cyclical expansion tend to coincide while for others (including, we argue, Canada), a deterioration in the current account balance will accompany domestic economic prosperity.

Finally, we note an important assumption that is used throughout the paper and that will be accepted by a majority of students of the subject---namely, that variations in the Canadian business cycle have generally paralleled changes in business cycles in the United States and Western Europe, particularly the former. There have been certain exceptions, usually during 'minor' business cycles, but the differences have ordinarily been slight. Therefore, cyclical behaviour of the Canadian current account balance as described in our hypothesis could not be the result of a consistently different pattern of business cycles in

Canada relative to other parts of the world.<sup>6</sup>

Outline of Subsequent Chapters

In Chapter II, we shall present the historical record of the cyclical behaviour of Canada's current account balance from 1870 to 1939. In the following chapter, our hypothesis will be re-examined in light of this historical record. In describing the reasons for the cyclical pattern of the current account balance, statistical documentation will be given for the basic propositions mentioned previously in the development of our preliminary hypothesis.

Chapter IV will describe the current account's cyclical behaviour for the years 1946 to 1966, noting in particular any variations during the post-1956 period as compared with earlier periods. Then in the fifth chapter we shall attempt to explain any such differences in the behaviour of the current account since 1956. Finally, the conclusion in chapter VI will summarize our findings as a means of evaluating the preliminary hypothesis.

This matter will be re-examined in Chapter III and will be expanded to include the possibility of relative differences in the amplitudes of Canadian business cycles and those elsewhere.

CYCLICAL BEHAVIOUR OF THE CURRENT ACCOUNT BALANCE, 1870-1939

TΤ

In this chapter, we shall examine the cyclical behaviour of the Canadian current account balance of payments for the period from 1870 to 1939, leaving an analysis of the postwar period until Chapter IV. Our purpose is to investigate the hypothesis outlined in the previous chapter--namely, that as domestic prosperity increases the current account balance tends to deteriorate, and vice versa; and that in most years, Canada experiences a deficit on current account.

The chapter is a relatively long one for several reasons. Most obviously, the period under examination is a lengthy one. In addition, however, the availability and reliability of statistical data for much of the period is not completely adequate. Therefore, we shall have to include in the text numerous references to various isolated happenings in the Canadian economy in order to derive a qualitative judgement concerning the pattern of business cycles in these early years.

### Reasons for Examining the Early History of the Canadian Balance of Payments

In testing our hypothesis, there are several reasons for examining the early periods of Canadian economic history. In the first place, Canada has experienced only four recessions since the end of World War II, and each of the downturns was relatively mild. Since it is important to test our hypothesis during cyclical swings of varying ampli-

tudes, we must examine the response of the current account balance during the more severe depressions prior to 1939.

Secondly, by investigating all of the available balance of payments data, we have at our disposal a wider range of actual experiences which may provide valuable clues for our analysis of the postwar years, particularly the period following 1956. If we are able to detect and explain any earlier deviations between actual and predicted behaviour, it may be of assistance in examining the suspected change in the current account's cyclical fluctuations after 1956.

Finally, one might expect a more accurate study of past rather than current events. Many apparently puzzling incidents can be explained with the benefit of greater hindsight, since it is usually enlightening to view single occurrences in perspective and within the context of related happenings. If historical data can be examined in a more detached and impersonal manner, this too may promote a more objective analysis. Such advantages must be balanced, of course, against the probability that data for these early periods of Canadian economic history are not completely reliable.

#### Statistical Methods

An examination of the cyclical behaviour of the current account balance will require two separate sets of data, one to measure the balance itself and the other to quantify what we shall term for the moment 'domestic economic prosperity'. We shall relate these two variables using a pair of statistical applications called the 'rate of change' method and the 'index' method respectively.

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As the name suggests, the former method compares changes in the current account balance with changes in a selected measure of Canadian economic prosperity. Observation of the year-to-year changes in each of these two variables will clearly focus our attention on any relation-ship which may exist between changes in the current account balance and variations in domestic prosperity. The lack of a continuous statistical time series requires various measures of the 'rate of change' in the business cycle for the several periods which we shall distinguish. By contrast, our method of computation of change in the current account balance from one period to the next is identical throughout the study and is defined as the change in the balance divided by the average of the mean of receipts and payments in the first period and the mean of receipts and payments in the second period.<sup>1</sup>

Although the 'rate of change' method is adequate to identify any existing pattern of fluctuations in the current account balance relative to cyclical swings in the economy, we wish to supplement this analysis with a comparison over time of the absolute value or <u>level</u> of the balance relative to the <u>level</u> of economic activity. Such a comparison can be achieved by means of an 'index' method, so named because it utilizes two time series, one an index of the value of the current account balance and the other an index of economic prosperity as de-

<sup>&</sup>lt;sup>1</sup> Therefore, if current receipts are  $X_1$  in period 1 and  $X_2$  in period 2, and current payments are  $M_1$  in period 1 and  $M_2$  in period 2, then the rate of change is  $[(X_2-M_2) - (X_1-M_1)] \div [(X_1+M_1) + (X_2+M_2)]/4$  (the sign will be positive for an improvement and negative for a deterioration in the balance). The same formula is used for calculation of the rate of change in the merchandise trade balance.

fined by a suitable variable such as national income.

The purpose of this second method is to place in long-run perspective the size of the current account balance relative to varying degrees of prosperity in the economy. We hope that it may be particularly useful for the detection of any <u>persistent</u> deviation of actual from predicted current account behaviour. For example, it might be possible in any one year that special circumstances could cause the current account balance to react in a manner contrary to that predicted by our hypothesis. However, assuming the correctness of our hypothesis, we would expect such behaviour to be relatively short-lived, in which case the balance would soon return to a value consistent with the level of business activity. If any deviation in the current account's behaviour were to persist for several years, as we suspect may have occurred from 1957 to 1962, it would be revealed more clearly by this form of analysis.<sup>2</sup>

Our calculation of an index to measure the current account balance resembles the rate of change computation. For each year, the index will be measured as the current account balance divided by the average of current receipts and current payments.<sup>3</sup> Our index of pros-

<sup>2</sup> We also note that a cyclical adjustment in the current account balance could proceed in the predicted direction, but the magnitude of the change might be considerably more or less than 'normal', given the extent of the cyclical advance or decline in the economy. A persistent deviation of this type can be identified more easily by the index method.

<sup>2</sup> For example, if current receipts in period 1 are X<sub>1</sub> and current payments are M<sub>1</sub>, then the value of the index for the period is  $[(X_1-M_1)] \div [(X_1+M_1)]/2$ .

perity is not continuous for the whole period, but the underlying principle will be to express the actual output of the economy as a percentage of potential output.<sup>4</sup> Finally, where data are available, we shall also derive a single measure of the relationship between the current account balance and domestic prosperity by expressing the balance as a percentage of gross national expenditure.

#### Removal of Non-cyclical Fluctuations in Grain Exports

Since we are concerned with the cyclical behaviour of the current account, we believe it is necessary to adjust current receipts for short-run fluctuations in grain exports. Year-to-year variations in such exports are not related primarily to the Canadian business cycle. Domestic demand for grain is relatively stable and therefore the supply available for export is determined by the size of the annual Canadian crop, which in turn depends principally on the vagaries of the weather.<sup>5</sup> On the other hand, export demand for Canadian grain is determined in large measure by crop conditions in other nations. Changes in grain exports are frequently large relative to changes in total exports; therefore, unless we can in some way isolate our analysis from such fluctuations, a statistical verification of the hypothesis seems practically impossible.

<sup>7</sup> Potential output may be considered as the optimum level of output which is sustainable over a relatively long period of time.

<sup>5</sup> Also available for export, of course, is any grain carried over in storage from the previous year.

On the other hand, we can not ignore entirely Canadian grain exports. Sales of grain abroad have an important influence on all sectors of the Canadian economy, since the income generated constitutes part of the total domestic demand for goods and services. Grain was a major export staple for much of the period under investigation, and such exports were a significant source of domestic income and, presumably, of domestic saving. Consequently, we must be careful that our adjustment for grain exports does not invalidate our analysis of the remainder of the trade balance. For example, several successive years of large overseas grain shipments will probably induce Canadian wheat farmers to make sizable expenditures on heavy farm machinery and equip-Some of the increased demand for these and other goods and serment. vices will be spent on imports, and it is therefore impossible to isolate completely the Canadian current account from fluctuations in grain exports.

Two possible adjustments were considered: first, to remove grain exports completely from current receipts; and second, to include a five year centred moving average of grain exports. The latter adjustment seemed more promising since it would presumably eliminate sharp year-to-year fluctuations while retaining intermediate trends which could have an important influence on total economic activity. After testing both methods, we decided to use a five year centred moving aver-

age of grain exports.<sup>b</sup> Although differences in the results obtained from the alternative adjustments were small in most cases, we found that the complete exclusion of grain exports introduced minor distortions in one or two periods. The moving average adjustment also produced a more realistic measure of the current account balance, in the sense that the adjusted balance was much closer to the actual balance than if grain exports had been excluded.

#### Statistical Sources of Balance of Payments Data

Reliable Canadian balance of payments statistics are unavailable for the period prior to 1900. Estimates have been made back to 1868 but the lack of accurate records in this early period suggests that we should not rely on these data.<sup>7</sup> However, for the period 1869 to 1900, we can study commodity trade statistics taken from official trade records and expanded by K.W. Taylor.<sup>8</sup> Taylor, commenting on the reliability of these statistics, wrote, "in the earlier years even of this modern period methods of compilation and classification left much to be desired; but there has been steady improvement in the quality of the

<sup>6</sup> For particular years at the beginning or the end of a period, we were forced to use a three or four year average of grain exports. In some cases, the required data were unavailable or difficult to obtain; in other cases, a five year average would have overlapped abnormal circumstances such as the First and Second World Wars.

Penelope Hartland, "Canadian Balance of Payments since 1868" in Conference on Research in Income and Wealth, <u>Trends in the American</u> <u>Economy in the Nineteenth Century</u>, Studies in Income and Wealth, XXIV (Princeton: Princeton University Press, 1960).

<sup>8</sup> K.W. Taylor, <u>Statistical Contributions to Canadian Economic</u> <u>History</u> (Toronto: Macmillan, 1931), II, 1 - 45.

statistics, and from about 1880 they are substantially satisfactory."<sup>9</sup> The pre-1900 commodity trade statistics, along with numerous other data that we shall use, are found in <u>Historical Statistics of Canada</u>,<sup>10</sup> (hereafter referred to as Historical Statistics).

For the period 1900 to 1926, we shall analyse balance of payments estimates found in <u>Historical Statistics</u> (p. 159) and taken from Frank A. Knox's report to the Royal Commission on Dominion-Provincial Relations.<sup>11</sup> It should be noted that Knox followed closely the estimates for 1900 to 1913 made by Jacob Viner.<sup>12</sup> Beginning with 1926, official Dominion Bureau of Statistics data are available, annually until 1945 and quarterly thereafter.

Our examination of the balance of payments from 1870 to 1939 will be divided into two periods: first, 1869 to 1900; and second, 1900 to 1939 (excluding the war years 1914 to 1918). For the former period, we shall employ annual data on a fiscal year basis, while for the latter period we shall use annual calendar year estimates. As we stated previously, our examination of the third and final period, that

10 M.C. Urquhart and K.A.H. Buckley, eds., <u>Historical Statistics</u> of Canada (Toronto: Macmillan 1965). For a complete breakdown of the 1869 - 1900 trade statistics, see Taylor, <u>Statistical Contributions</u>, II, 22 - 45.

11 Frank A. Knox, <u>Dominion Monetary Policy</u>, 1929 - 1934, a report prepared for the Royal Commission on Dominion-Provincial Relations, (Ottawa: mimeographed, 1939).

12 Jacob Viner, <u>Canada's Balance of International Indebtedness</u>, 1900 - 1913 (Cambridge: Harvard University Press, 1924).

<sup>9 &</sup>lt;u>Ibid.</u>, p. 1.

is from 1946 to 1966, will be left until the fourth chapter.

#### Price Changes and the Terms of Trade

Our analysis of balance of payments statistics will be almost exclusively in value terms. Fluctuations in export and import prices form part of the overall foreign trade picture, and a complete dissociation of price and volume in our study would be unrealistic. However, we must investigate briefly the cyclical behaviour of export and import prices to satisfy ourselves that they do not seriously affect our analysis. In particular, we wish to determine whether changes in the terms of trade could cause a pattern of cyclical change in the current account balance such as that described in our hypothesis.

The price of Canadian imports is determined principally by demand and supply factors in world markets. During an expansionary phase of the cycle in the major industrial economies, demand increases relative to supply and prices of most goods, including those imported by Canada, tend to rise. Canadian demand constitutes such a relatively small proportion of total world demand that cyclical fluctuations in this country have little effect by themselves on the price Canada pays for its imports. Similarly, the insignificance of Canadian relative to world demand suggests that variations in domestic demand have little effect on Canadian export prices, which are again determined largely by demand-supply conditions in world markets. However, for some products Canadian output tends to form a significant part of the world total. Therefore, the domestic business cycle through its effect on domestic costs may have some influence on the price of Canadian exports.

In other words, prices of both Canadian exports and imports are likely to rise during periods of international economic expansion, largely because of increases in demand relative to supply in world markets. In the case of exports, the rise is reinforced by increased domestic costs which usually accompany a period of expansion. At this point, we are assuming that a major international expansion will be transmitted through increased exports to the Canadian economy and that this in turn will induce an increased demand for imports. Consequently, under these circumstances the value of exports and imports will tend to increase for two reasons--first, increased demand in both other countries and Canada will stimulate the volume of Canada's foreign trade; and secondly, prices of both exports and imports will ordinarily be rising.

During a cyclical downturn, shrinking demand in world markets will tend to reduce the volume of Canadian exports and induce a decline in the volume of imports. Prior to the Second World War, prices tended to move relatively freely in both directions and usually there was price deflation in time of depression as well as inflation in prosperous periods. Consequently, falling export and import prices tended to augment a declining volume of foreign trade during periods of slack demand. Over the last twenty years, there seems to be some evidence of a ratchet effect which limits the downward movement of prices during periods of recession, but this does not appear to invalidate our analysis.

If we are correct that both Canadian export and import prices are dependent primarily on demand and supply conditions in world mar-

kets and therefore tend to move in the same direction, at first glance one might expect that changes in Canada's terms of trade would be relatively small and that there would be little correlation between such changes and swings in the business cycle. However, raw materials constitute a larger proportion of Canadian exports than of imports, and raw materials prices have shown a persistent tendency to fluctuate more widely than prices of manufactured or semi-manufactured goods. Consequently, we might expect to find some degree of positive correlation between the terms of trade and the Canadian business cycle (that is, the terms of.trade should improve during a period of expansion and deteriorate during a contraction).

Indexes of Canadian export and import prices and the terms of trade are shown in Appendix A along with several charts relating them to the business cycle.<sup>13</sup> Export prices were not adjusted to include a five year average of grain exports--we felt this adjustment was not sufficiently important to justify the required time and effort. Although the indexes reveal some price changes which apparently had little relationship to business conditions in Canada, in most years swings in both export and import prices followed movements in the level of Canadian prosperity.

Let us examine briefly the changes in the terms of trade as shown in Appendix A. The years from 1869 to approximately 1900 were dominated by a significant long-run improvement in the terms of trade.

13 The sources and method of calculation of the index of prosperity which is shown in the charts will be described later.

This improvement was caused by a secular downtrend in the price of imports, accompanying the general decline in world prices in the latter part of the nineteenth century. On the other hand, Canadian export prices displayed no secular downtrend. Over the short-run, both export and import prices tended to rise during business expansions and decline during contractions as we had expected they would. Given the secular trend in the terms of trade, it is rather difficult to determine the extent to which a cyclical pattern existed. After about 1878, however, the terms of trade appear to have increased during periods of expansion and then levelled out during the following contractions. At the same time, the reader's attention is drawn to the sharp improvement in the terms of trade in 1894 and 1895 when the domestic economy was relatively stagnant.

In the first half of the 1900 - 1913 period, there was also some evidence of a positive correlation between the terms of trade and the business cycle. However, a very sharp decline in import prices accompanying the 1908 contraction led to an improvement in the terms of trade. During the prosperous years from 1909 to 1912, the terms of trade again showed a slight negative relationship with the cycle. In the early nineteen-twenties, prices were extremely volatile, making an analysis of the terms of trade very difficult. We note specifically that in 1923, a large increase in import prices and the failure of export prices to recover with the improved business situation, led to a worsening of Canada's terms of trade. Although prices declined contracyclically from 1925 to 1929, the terms of trade were very stable. In the nineteen-thirties, however, a strong positive correlation existed

between the business cycle and Canada's terms of trade. As was the case after the First World War, prices changed rapidly between 1945 and 1952, though most of the change occurred in an upward direction. Following a marked improvement in 1952, the terms of trade thereafter exhibited a slightly positive correlation with the cycle although fluctuations were very minor.

Our analysis indicates, therefore, that although fluctuations in Canada's terms of trade have usually been relatively small, they have often (though not always) tended to move in the same direction as the level of domestic economic activity. The price data are not strictly comparable with our adjusted balance of payments statistics; nevertheless, we conclude from this part of our study that fluctuations in the terms of trade which, as we have suggested, are determined by worldwide market forces over which Canada has little influence, have frequently promoted a positive cyclical relationship in Canada's current account balance. In other words, as the domestic economy expanded, an improvement in Canada's terms of trade would, by itself, lead to an improvement in the current account balance. On the other hand, during a cyclical contraction, Canada's deteriorating terms of trade would represent a minus factor in its current account balance of payments. Since such behaviour is opposite to the cyclical pattern predicted by our hypothesis, we conclude that changes in Canada's terms of trade could not be responsible for cyclical current account behaviour as described in the hypothesis.

The margin of error in the available price statistics of foreign trade may be quite large, particularly in the periods prior to the First World War. Therefore, price data must be treated with caution, especially

when considering year-to-year changes. In the remainder of our analysis, we shall note annual price changes only when they are large or appear to be contracyclical. Otherwise, we shall consider changes in the values of exports and imports without separating the volume and price components of such changes. Similarly, we shall not attempt to adjust our data for changes in the value of the Canadian dollar relative to foreign currencies. For much of the period under consideration, the Canadian dollar has been at or close to par with the U.S. dollar.<sup>14</sup> Nevertheless, the possible effects that fluctuations in the exchange rate may have on the current account balance must be kept in mind as we conduct our analysis.

### Period One: 1869 - 1900

Tables (i) and (ii) in Appendix B present the statistical data for merchandise trade in this period. As mentioned previously, merchandise exports have been adjusted to include a five year centred moving average of 'grain and grain products' exports.<sup>15</sup> -Unless other- wise indicated, all future references in this paper to merchandise exports, total current receipts, the trade balance and the current account balance will relate to data which have been adjusted in the above manner. All data in Tables (i) and (ii) are for fiscal years ending June 30 of the year given.

14 See Chart 23 - 1, <u>Report of the Royal Commission on Banking</u> and Finance (Ottawa: Queen's Printer, 1964), p. 480.

<sup>15</sup> Taylor, <u>Statistical Contributions</u>, II, 34 - 41.

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For this very early period in Canadian economic history, there is no single time series such as gross national product or the percentage of the labour force unemployed which can provide an adequate and reliable description of cyclical fluctuations in the economy. Taylor has constructed an index of prosperity, <sup>16</sup> beginning in 1872, which is an unweighted composite of several time series such as railway freight traffic, bank loans and bank deposits, and the Ontario marriage rate. Taylor describes it as "a somewhat rough and ready compilation designed to give a general conspectus of the ups and downs in Canadian economic life since 1870".<sup>17</sup> Despite its statistical limitations, we shall employ the index (shown in Table (ii), Appendix C) as an indication of the general level of prosperity in the economy.

However, we shall not use Taylor's index to measure year-toyear changes in the business cycle. Instead, we shall rely on the descriptions of the cyclical variations in the economy found in Willard Thorp's <u>Business Cycle Annals</u><sup>18</sup> and Edward J. Chambers' article, <u>Late</u> <u>Nineteenth Century Business Cycles in Canada</u>.<sup>19</sup> The former book pre-

16 <u>Ibid.</u>, p. 4.
17 Ibid., p. 3.

18 Willard Thorp, <u>Business Cycle Annals</u> (New York: National Bureau of Economic Research, 1926), pp 299 - 307.

<sup>19</sup> Edward J. Chambers, "Late Nineteenth Century Business Cycles' in Canada", <u>Canadian Journal of Economics and Political Science</u>, XXX (August 1964), 391 - 412.

sents a brief narrative of the state of the economy from Confederation to 1889 and a summary of economic conditions for each year from 1890 to 1925. Chambers' approach is "quantitative - historical, linking time series analysis with qualitative evidence drawn from the annals of the period".<sup>20</sup> Table (i) in Appendix C presents, in tabular form, a very brief summary of economic activity for each of the years 1869 to 1900, based on the above two articles.<sup>21</sup>

In Table (ii) of Appendix C we have attempted a partial quantification of the business cycle. The method was to assign one of three values to each year: '+' denoting a reasonably vigorous expansion; 'O' denoting very moderate growth, stagnation or a turning point approximately in the middle of the year; and '-' denoting a recession or depression. Any such assignment of values is rather subjective and therefore may be disputed. However, we have tried to grade each year impartially on the basis of the two sources noted above. After assigning values for calendar years, the same process was repeated for fiscal, years ending June 30 to coincide with the balance of trade statistics.

# 20 Ibid., p. 392.

<sup>21</sup> The only significant point of disagreement between the two articles concerns the years 1893 to 1896. Thorp describes the period as one of continued depression. Chambers suggests that the depression beginning in 1893 was followed by a very moderate and brief revival in late 1894 and early 1895 followed by a similarly moderate recession in late 1895 and 1896. In any event, the matter seems to be of rather minor importance to our analysis.

Before summarizing the results of our analysis for the period as a whole, we shall examine the behaviour of the merchandise trade balance for each of the cycles between 1869 and 1900. The change in the trade balance from cyclical peak to trough (or vice versa) will be presented in tabular form, and a brief narrative will touch on the highlights of that particular cycle and on any abnormalities in the trade balance.

# Expansion: 1869 - 1874

Table II - 1

Summary of Change in Merchandise Trade Balance, Fiscal 1869 - 74 fiscal 1869 fiscal 1874 \$ millions change 55.8 86.0 Merch. Exports +30.2 Merch. Imports 63,2 +60.0 123.2 Merch. Trade Balance - 7.4 -29.8 - 37.2

After enjoying moderately prosperous business conditions in the years immediately following Confederation, Canada experienced a very strong business expansion which continued from 1870 to early 1874. During this time, the adjusted merchandise trade deficit increased sharply, as indicated in the above table, despite a 13% improvement in the terms of trade. Deterioration in the trade balance was concentrated in the three fiscal years, 1871, 1872, and 1873, and during this time a sharp rise in import prices was at least partially responsible. In 1874, however, import prices returned to their level at the beginning of the period, and therefore, the virtual doubling in the value of imports within five years was due entirely to an increased volume of demand. AUGULE 24

0.D. Skelton attributes "the hectic prosperity of the years 1869 - 73" to the finding of new markets for Canadian products both domestically and in the United Kingdom, and to the retention of most of the traditional U.S. market despite increased tariff barriers.<sup>22</sup> Although reciprocity with the United States ended in 1866, the final years of the post-Civil War 'Reconstruction boom', with its large programme of railroad building and other construction, greatly benefited Canada. The resulting heavy U.S. demand for Canadian lumber led to a rapid increase in exports of forest products; in addition, exports of Canadian cattle, dairy products and lumber to Great Britain rose swiftly in these years.<sup>23</sup>

Domestic demand for goods and services was strong during these years. Although conclusive statistical proof is unavailable, investment expenditures apparently rose to a very high level. For example, net capital formation in railway transport and telegraphs increased from \$5 million in 1869 to \$24 million in 1873 as work proceeded on the Intercolonial Railway.<sup>24</sup> K.A.H. Buckley's index of urban building

22 O.D. Skelton, "General Economic History, 1867 - 1912", in Adam Shortt and Arthur G. Doughty, eds., <u>Canada and its Provinces</u> (Toronto: Glasgow, Brook, 1914), IX, 135 - 139.

<sup>23</sup> Exports of wood, wood products and paper increased from \$20 million in fiscal 1869 to a peak of \$29 million in fiscal 1873. Exports of animal products rose from \$10 million in 1869 to \$19 million in 1874.

<sup>24</sup> Urquhart and Buckley, Historical Statistics, p. 512.
activity attained an extremely lofty and short-lived pinnacle in 1871 but continued at a relatively high level to reach a cyclical peak in 1874.<sup>25</sup>

Therefore, the experience during the cyclical expansion from 1869 to 1874 seems to follow closely the pattern of behaviour suggested in our hypothesis. Stimulated by the opportunities arising from extensive foreign and domestic demand for Canadian products, investment rose rapidly and outpaced the ability of the economy to generate increased saving. To fill the widening gap between domestic investment and saving, Çanada was forced to rely on an increasing amount of net foreign investment.

# Contraction: 1874 - 1879

#### Table II - 2

Summary of Change in Merchandise Trade Balance, Fiscal 1874 - 80

\$ mill	ions	fiscal 1874	change	fiscal 1880
Merch.	Exports	86.0	- 2.2	83,8
Merch.	Imports	123.2	-53.3	69.9
Merch.	Trade Balance	- 37.2	+51.1	13.9

<sup>&</sup>lt;sup>25</sup> K.A.H. Buckley, "Urban Building and Real Estate Fluctuations in Canada", <u>Canadian Journal of Economics and Political Science</u>, XVIII (February 1952), 41 - 62. The index was based on building permits issued in major cities (Montreal only from 1867 to 1885, Toronto added in 1886 and Hamilton added in 1890) and adjusted to eliminate the effect of changing construction costs.

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The upper turning point in the Canadian cycle showed no sign of panic or financial crisis. Because the transition from expansion to contraction was so gradual, it is difficult to date precisely the peak of the cycle. Apparently, the expansion began to level off in late 1873 in response to very serious economic disturbances in the United States and Europe.<sup>26</sup> The end of the Franco-Prussian War in 1871 had been followed by severe overspeculation which eventually led to financial panic and subsequent industrial depression in the U.S. and Europe. The principal effect on Canada was to depress the forest products industry, but relatively buoyant conditions in agriculture and construction sustained the Canadian economy through most of 1874.

As a result, Canadian exports fell more rapidly than imports and the trade balance worsened slightly in fiscal 1875. The plateau on which the domestic economy was operating held the decline in imports to 1% in fiscal 1874 and 5% the following year. We noted in the introductory chapter, however, that such a lag in the trade balance at the peak of the cycle is to be expected, not because the turning point of the Canadian cycle necessarily lags behind that of other countries, but because imports of capital goods to complete investment projects usually

<sup>26</sup> For a table showing estimated Canadian, U.S. and U.K. reference cycle dates from 1870 to 1961, see Chambers, "Late Nineteenth Century Business Cycles", p. 362.

continue for some time after the economy has turned down.27

The contraction which followed was protracted but not serious until its final phase. The agricultural sector of the economy was relatively prosperous and this served to moderate the severity of the decline in other sectors. With the exception of fiscal 1877, grain exports were very strong throughout this period. The modest nature of the contraction is reflected in the behaviour of the trade balance. A 21% drop in imports in 1876 from their previous high level caused the trade deficit to decrease from \$39 million to \$17 million, but in the following two fiscal years changes in exports and imports were relatively minor.<sup>28</sup>

The latter stages of the cycle deteriorated into a serious depression in Canada, despite the first signs of recovery in other nations. A cyclical trough occurred in the U.S. in March, 1879 and in the U.K. shortly thereafter, and Canadian exports increased 16% in fiscal 1880. Despite this, the number of business failures in 1879 was very high as confidence crumbled.<sup>29</sup>

Imports of iron and its products, which are largely investment-oriented, support this contention, increasing in value from \$15 million in fiscal 1873 to \$20 million in 1874 and dropping to only \$18 million in 1875. It should be noted, however, that in this instance rising prices were chiefly responsible.

28 In fiscal 1877, significant volume increases in both exports and imports were largely offset by falling prices.

29 See Skelton, "General Economic History", p. 192. His 'Prosperity Chart of Canada, 1867 - 1911' shows the total liabilities of commercial failures. Chambers suggested that Sir John A. Macdonald's 'National Policy' may have added to people's uncertainty at this time.

The large tariff changes associated with the new government's 'National Policy' make it difficult to analyse the sharp decline in imports in fiscal 1879 and 1880. In the former year, much of the decrease was caused by falling prices, but in 1880, imports dropped an estimated 15% in volume. It is probable that both higher tariffs and the depression were responsible for the decline in imports, although a large part of the decrease was concentrated in agricultural products for which the tariff was virtually unchanged.<sup>30</sup>

# Expansion: 1879 - 1882

Table II - 3

Summary of Change in Merchandise Trade Balance, Fiscal 1880 - 83

\$ millions	fiscal 1880	change	fiscal 1883
Merch. Exports	83.8	+10.9	94.7
Merch. Imports	69.9	+52.0	121.9
Merch. Trade Balan	ce 13.9	-41.1	- 27.2

It is difficult to determine the strength of the cyclical expansion in these years. Chambers described it as "far from a smooth, continuous one" and suggested there may have been a brief pause in the expansion in mid-1880, with a gradual strengthening to a peak in late 1882.<sup>31</sup> Buckley's index of urban building activity exhibited no change between 1879 and 1883, and despite the signing of the C.P.R. contract

<sup>30</sup> Between fiscal 1878 and 1880, total imports declined \$20.5 million in value and \$15.7 million in volume. In this period, imports of agricultural products fell \$15.0 million in value and \$8.5 million in volume.

31 Chambers, "Late Nineteenth Century Business Cycles," pp 399 - 400,

in 1880, net railway capital formation did not begin to increase until 1882.<sup>32</sup> On the other hand, Thorp noted considerable activity and speculation;<sup>33</sup> also, exports jumped 16% in fiscal 1880 and 15% in 1881 before levelling out in the following two years.

Despite lack of conclusive evidence of very strong domestic demand, imports showed large increases in each of the fiscal years 1881, 1882 and 1883. Since about two-fifths of the total increase occurred in the first year when the expansion was barely underway, we suspect that the level of imports in fiscal 1880 was abnormally low, probably because of extreme hesitation and lack of confidence. Of the \$52 million increase in imports between 1880 and 1883, \$12 million occurred in agricultural and animal products and the same amount in fibres and textiles, both of which are consumer non-durables. Imports of iron and its products increased \$10 million, as the building of the C.P.R. resumed in earnest in 1882 and 1883; also, imports of miscellaneous products rose \$7 million. Therefore, it would seem that a portion of the increase in imports during this expansion may be attributed to a return of consumer confidence after a long period of subnormal acitivity in the late eighteen-seventies.

32	Urquha	rt and Bu	ckley,	Historica	al	Statistics,	p.	512.	
33	Thorp,	Business	Cycle	Annals,	p.	300.			

# Contraction: 1883 - 1885

# Table II - 4

Sum	mary of Change	in Merchandise Trade	Balance, Fiscal	1883 - 85
\$ mil.	lions	fiscal 1883	change	fiscal 1885
Merch.	Exports	94.7	- 4.5	90.2
Merch.	Imports	121.9	<u>~22.]</u>	29.8
Merch.	Trade Balance	- 27.2	+17.6	- 9.6

By early 1883, the Canadian economy had passed into a state of recession, but despite its length, the ensuing contraction was relatively mild. Once again contracyclical forces were apparent in the economy. The index of urban building activity rose 13% in 1883 and then jumped by 23% in 1884 and 37% in 1885. The completion of the C.P.R. sustained railway capital formation at a high level during the same three years, and although exports of grain and grain products dropped \$10 million in fiscal 1884, other exports showed little change during this period. Although the recession was apparently a mild one, imports fell 18% in fiscal 1884 and 1885. However, declining import prices seem to have accounted for about one-half of the drop.

# Expansion: 1885 - 1887

Table II - 5

Summary of Change in Merchandise Trade Balance, Fiscal 1885 - 87

\$ mill	Lions	fiscal 1885	change	fiscal 1887
Merch.	Exports	90.2	<b>- 4.</b> 0 · ·	86.2
Merch.	Imports	99.8	+ 5.3	105.1
Merch.	Trade Balance	- 9.6	- 9.3	- 18.9

The lower turning point of the cycle occurred in the first half of 1885. The expansion which followed lasted only two years and was not a strong one. The completion of the C.P.R. led to a significant decline in railway construction in 1886; however, the relative weakness of Canadian exports appears to have been most important in moderating business activity, as foreign demand for Canadian products failed to increase. As expected, the growth in imports under these conditions was relatively moderate, although a further 9% decline in prices retarded the increase in the value of imports.

# Contraction: 1887 - 1888

#### Table II - 6

Summary of Change in Merchandise Trade Balance, Fiscal 1887 - 88

\$ mill	lions	fiscal 1887	change	fiscal 1888
Merch.	Exports	86,2	+ 3.6	89.8
Merch.	Imports	105.1	4.4	100.7
Merch.	Trade Balance	- 18.9	+ 8.0	- 10.9

Just as the previous expansion had been relatively brief and mild, so too was the contraction which occurred from early 1887 until early 1888. Chambers suggests that it consisted primarily of inventory liquidation, although there were several bank failures.<sup>34</sup> Rising prices, notably of animal products, were largely responsible for the slight contracyclical trend in exports in fiscal 1888, and the improved

<sup>34</sup> Chambers, "Late Nineteenth Century Business Cycles", p. 401.

terms of trade accounted for most of the decline in the trade deficit.

]	Expansion, Mild	Recession and Expans	sion: 1888 - 1	1893
Sum	nary of Change	Table II - 7 in Merchandise Trade	Balance, Fisca	al 1888 - 93
\$ mil:	lions	fiscal 1888	change	fiscal 1893
Merch.	Exports	89.8	+22.5	112.3
Merch.	Imports	100.7	+14.5	115.2
Merch.	Trade Balance	- 10.9	+ 8.0	- 2.9

During the 1880's, the Canadian economy experienced a series of cyclical swings which were moderate in amplitude but, nevertheless, readily distinguishable. From about 1888 to 1897, however, countervailing tendencies and conditions resembling continuous stagnation make accurate delineation of cyclical fluctuations very difficult. During this period the North American and European business cycles displayed marked differences. Both reached cyclical peaks in 1890, but for the former, the downswing was very mild and continued for less than a year, whereas the latter slid into a severe depression which persisted until 1895. The North American economy turned down once again in early 1893.

The expansion which began in 1888 was not robust. Business failures remained relatively high, crops in 1888 and 1889 were poor and construction peaked in 1889 to begin a decline which continued until 1897. The economy became increasingly stagnant in 1890 and about midyear, passed into a state of very mild recession which persisted for about a year.<sup>35</sup> Rising import prices in fiscal 1889 led to a temporary increase in the trade deficit, but this was offset by a 15% jump in exports in the following two fiscal years. Exports of 'animals and their products' registered the largest increase.

With the return to moderate expansion after the middle of 1891, the fiscal 1892 volume of imports rose substantially, but declining prices limited the increase in value to about 3%. The trade deficit in fiscal 1892 was approximately the same as it had been in fiscal 1888, corresponding with the relatively stagnant business conditions in Canada during this period. In fact, since fiscal 1884 the trade deficit had fluctuated within the relatively narrow range of \$9 million to \$20 million. In fiscal 1893, however, continuing strength in exports caused the deficit to break out of this range and decline to \$3 million.

Contraction, Mild Expansion and Contraction: 1893 - 1897

Table II - 8

ary of Change in M	erchandise Trade	Balance, Fiscal	1893 - 97
ions	fiscal 1893	change	fiscal 1897
Exports	112.3	+25.7	138.0
Imports	115.2	- 8.6	106.6
Trade Balance	- 2.9	+34.3	31.4
	ary of Change in M lons Exports Imports Trade Balance	ary of Change in Merchandise Trade lons fiscal 1893 Exports 112.3 Imports <u>115.2</u> Trade Balance - 2.9	ary of Change in Merchandise Trade Balance, Fiscalionsfiscal 1893changeExports112.3Hoports115.2- 8.6Trade Balance- 2.9+34.3

<sup>35</sup> See the address of the general manager, Merchants' Bank of Canada, 1891 Annual Meeting: "There is prosperity - great prosperity in some districts of the country, in some industries, and in some branches of trade; and the reverse in others." <u>Monetary Times</u> (June 19, 1891), vol. 24, p. 1554.

Despite evidence suggesting that Canada experienced a brief and incomplete expansion from mid-1894 to mid-1895, coinciding with a similar revival in the American economy, we shall consider the entire four year period to be one of subnormal economic growth. After the peak in early 1893, a rather serious contraction spread rapidly throughout the economy. The index of urban building activity fell 6% in 1893 and 33% in 1894, and crops were poor in the latter year. Exports were roughly unchanged in fiscal 1894 and 1895, whereas rapidly falling prices cut the value of imports by almost 13%. Prompted by the resulting large improvement in the terms of trade, Canada's trade balance swung to a surplus of \$13 million in fiscal 1895.

The contraction following the weak revival of 1894-95 was less severe than the previous one, but it dragged on throughout most of 1896. The continued dullness of business activity in the latter year makes an identification of the lower turning point very difficult, but it probably preceded the American reference trough of June, 1897. The lead of the Canadian cycle relative to that of the U.S. is understandable, considering the strong European expansion which began in early 1895 and which resulted in significant increases in Canadian exports. A 21% jump in exports in the fiscal years 1896 and 1897 was concentrated in lumber, reflecting a sharp upturn in residential construction in the U.K.; in gold and silver, associated with the beginning of the Klondike gold rush and initial development of Northern Ontario's mineral riches; and finally, in meats and dairy products. We also note that in fiscal 1897, grain exports entered a period of rapid increase which was reflected in a 26% jump from fiscal 1895 to 1897 in our five year moving average.

Imports rose slightly in fiscal 1896 and 1897 but not enough to prevent the surplus on trade from climbing to a nineteenth century peak of \$31 million in the latter year. Several factors appear to have contributed to this situation. First, relative stagnation in the Canadian economy limited import growth between fiscal 1893 and 1897 to about 5% in volume. In addition, import prices fell by an estimated 13% in this period. Secondly, economic activity in Europe beginning in 1895 was strong relative to the level of prosperity in Canada. We shall discuss these points more fully in our summary of the period.

# Expansion: 1897 - 1900

#### Table II - 9

Summary of Change in Merchandise Trade Balance, Fiscal 1897 - 1900

\$ millions		fiscal 1897	change	fiscal 1900
Merch. Exports	5.	138.0	<b>+</b> 48 <b>.</b> 6	186.6
Merch. Imports	5	106.6	+66.1	172.7
Merch. Trade I	Balance	31.4	-17.5	13.9

With the return of prosperity in the last years of the nineteenth century, the trade surplus shrank considerably. The index of urban building activity jumped 45% in 1898 and almost 20% in 1899. Export increases in fiscal 1898 and 1899 were restricted chiefly to meats and dairy products and to grain products, but in fiscal 1900, an \$11 million jump in gold shipments and continued overseas demand for Canadian agricultural products led to a 20% rise in exports. As we might expect, imports rose more rapidly with increases of 18% in fiscal 1898 and 1899, followed by a 15% increase in 1900, although the latter rise was pri-

marily due to higher prices.

Summary of the Period 1869 - 1900

The preceding narrative has shown that with few exceptions, Canada's balance of trade followed the cyclical pattern suggested in our hypothesis---that is, the traditional deficit increased during times of prosperity in the domestic economy and decreased during periods of recession. Only in fiscal 1880 and 1881 and from fiscal 1894 to the end of the period was the trade balance in a surplus position.

To complete our rate of change method of analysis, we shall compare changes in exports, imports and the trade balance (shown in Table (ii) of Appendix B) with our quantitative approximation of changes in the business cycle (found in Table (ii) of Appendix C). For the former three series, a percentage increase of 5% or more was designated '+', a percentage decrease of 5% or more was termed '--', and a percentage change between plus 5% and minus 5% was given the value '0'. If our hypothesis is correct, we will find that frequently a plus value for the business cycle coincides with a minus value for the balance of trade; that a minus value for the cycle coincides with a plus value for the trade balance; and that '0' values for the two series occur simultaneously. Seldom, if ever, should two plus values or two minus values coincide.

The results of various combinations of calendar year-fiscal year, lead-lag relationships are given in Table II - 10. The three numerals in each set denote respectively the number of years for which a plus and a minus or two '0' values coincide, values differ by one

degree, 36 and two plus values or two minus values occur simultaneously.

Table II - 10

Relationship Between Changes in Balances of Trade and Changes in Business Cycle, 1870 - 1900

- (a) business cycle on fiscal year basis, trade balance (15, 15, 1) coincident with business cycle
- (b) business cycle on fiscal year basis, trade balance i. (11, 14, 5) leading business cycle by twelve months
- (c) business cycle on fiscal year basis, trade balance (18, 12, 1) lagging business cycle by twelve months
- (d) business cycle on calendar year basis, trade balance (16, 20, 5) leading business cycle by six months
- (e) business cycle on calendar year basis, trade balance (22, 8, 1) lagging business cycle by six months

These results are encouraging, supporting our hypothesis that the current account balance deteriorates during domestic prosperity and improves when the Canadian economy is contracting. As a supplemental observation, we note that the trade balance tended to lag the cycle by an interval of less than a year.

In Table II - 11 we have recorded, for set (e) above, the expected and observed frequencies. The former, which are shown in parentheses, describe the number of times that plus, minus and 'O' values for the two variates could be expected to coincide if no relationship existed between them. The expected frequency for each cell equals the product of the number of observations in its particular row times the number of observations in its column, divided by the total observations

That is, either a plus or a minus paired with a '0'.

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in the study. For example, the expected cell frequency for a '+' change in the trade balance coinciding with an expanding business cycle is equal to (11 x 12)  $\div$  31 = 4.3.

# Table II - 11

Expected and Observed Frequencies for Changes in Balance of Trade Related to Changes in Business Cycle, 1870 - 1900

		Change in Bus	iness Cycle		
		Expanding (+)	Neutral (0)	Contracting (-)	
Change in	   	1 (4.3)	1 (2.8)	8 (3.9)	11
Balance	i o	2 (3.9)	6 (2.6)	3 (3.5)	10
of Trade	••=	9 (3.9)	1 (2.6)	0 (3.5)	10
	•	12	8	11	31

Note: Business cycle on a calendar year basis, trade balance lagging business cycle by six months.

In the absence of any relationship between changes in the business cycle and changes in the trade balance, we would expect set (e) in Table II - 10 to be (10.4, 12.8, 7.8) instead of the actual (22, 8, 1). Technically, the individual expected cell frequencies are too small to permit use of the chi-square test.<sup>37</sup> Despite this, we made the necessary calculations and derived a value for  $\chi^2$  of 24.6 which is far in excess of the critical value of 11.14 for  $\alpha = 0.05$ . The contingency

37 Various texts state that the individual e, should have a minimum value of between 4 and 5.

coefficient  $\begin{pmatrix} C = \sqrt{\frac{\chi^2}{\chi^2 + n}} \end{pmatrix}$  equals 0.67, which is close to the maximum

possible contingency coefficient of 0.82 for a three-by-three table.

In order to overcome the problem, we recalculated set (e) in Table II - 10 using only two values (that is, plus or minus) for changes in the business cycle and trade balance respectively. Table (ii) in Appendix C indicates this simplified approximation of change in the business cycle. Using this procedure, opposite values coincide in twenty-five years whereas like values coincide in only six years; if no relationship existed between changes in the business cycle and changes in the trade balance, we would expect opposite values to coincide on 15.2 occasions and like values to coincide on 15.8 occasions. The value of  $\chi^2$  in this case is 12.8 which is significant for  $\alpha = 0.02$ .

Modification of Expected and Observed Frequencies for Changes in Balance of Trade Related to Changes in Business Cycle, 1870 - 1900

		Change in Business Cycle			
		Expanding (+)	Contracting ()		
Change in Balance	+	5 (9.9)	13 (8.1)	18	
of Trade	-	12 (7.1)	1 (5.9)	13	
		17	14	31	

Note: Business cycle on a calendar year basis, trade balance lagging business cycle by six months.

A similar type of analysis was then made for exports and imports. In this case, we expect that like values will frequently coincide. Each

Table II - 11(a)

set indicates the number of years for which the two values are similar,

different by one degree, and opposite.

# Table II - 12

Relationship Between Changes in Exports and Imports and Changes in Business Cycle, 1870 - 1900

	• • • • • • • • • • • • • • • • • • •	Exports	Imports
<b>(</b> a)	business cycle on fiscal year basis, exports and imports coincident with business cycle	(16, 12, '3)	(20, 11, 0)
<b>(</b> b)	business cycle on fiscal year basis, exports and imports leading business cycle by twelve months	(16, 12, 2)	(12, 15, 3)
(c)	business cycle on fiscal year basis, exports and imports lagging business cycle by twelve months	(13, 15, 3)	(19, 12, 0)
(d)	business cycle on calendar year basis, exports and imports leading business cycle by six months	(14, 13, 4)	(15, 14, 2)
(e)	business cycle on calendar year basis, exports and imports lagging business cycle by six months	(9,19,3)	(23, 8, 0)

Our comparison of fluctuations in exports and imports with changes in the business cycle tends to support the general statements made in the first chapter. In the case of changes in imports, there is a strong positive correlation with the business cycle, particularly when we assume a lag of six months. In part (e) of Table II - 12, the expected result in the absence of any relationship between changes in the cycle and fluctuations in imports would be (10.2, 13.8, 7.0).

The relationship between exports and the cycle is less regular, since each comparison yields at least two pairs of opposite values. Exports are dependent primarily on economic conditions in other countries; therefore, if there is a major difference between the Canadian business cycle and that in one of our principal customers, exports could move contracyclically for a time. As we noted, this happened in fiscal 1896, one of the years in which we encountered opposite values. Price fluctuations may also cause contracyclical swings in the value of exports. In addition, fluctuations in exports are only one of several key determinants of the Canadian business cycle. Nevertheless, the observed frequencies in part (b) of Table II - 12 do indicate a positive relationship between export fluctuations and the cycle when compared with the expected frequencies (11.2, 14.7, 5.1).

Chart II - 1 graphs the results of our rate of change method of analysis for the period from 1869 to 1900. The rate of change in the trade balance has been drawn to reflect a six month lag relative to the business cycle; for example, the rate of change in the trade balance for fiscal 1872 was placed at the end of calendar 1871. Chart II - 2 presents a comparison between our index of the trade balance and Taylor's index of prosperity. The trade balance index has also been drawn to reflect a six month lag relative to economic conditions. In both charts, the general behaviour of the trade balance from 1869 to 1900 confirms our hypothesis.

Chart II - 1 indicates that a surprisingly close relationship existed in this period between changes in the trade balance and cyclical swings in economic activity. Only two serious discrepancies between the variables appear in the chart. In fiscal 1893, the trade balance improved significantly whereas the moderate expansion which lasted thoughout 1892 might have led one to expect at least a small deteriora-



Chart II - 1 Changes in Merchandise Trade Balance Related to Changes in Business Cycle, 1869 - 1900

tion. The improvement in the balance in fiscal 1900 also was contracyclical, but we have already noted that this change was caused primarily by a very large jump in gold exports.

A similarly strong correlation between the indexes of business activity and the trade balance is revealed in Chart II - 2. The closeness of fit in this case is perhaps even more surprising since Taylor's index of prosperity is probably not very accurate. If we compare the prosperity index with descriptions of the cycle in the literature, we find several instances in which there appear to be significant variations. The principal differences occur at the peak in 1874, at the cyclical trough in 1885, at the peak in 1893, and finally in 1898 - 99 where Taylor's index reveals no recovery in business activity. We have indicated in the chart those years in which we believe there may be errors in the prosperity index.

After making allowances for inaccuracies in the index of business prosperity, there remains one period in which we observe a large and consistent difference between our indexes. We observed previously the improvement in the trade balance in fiscal 1893 despite moderate prosperity in at least the first half of the year. Stability in imports was perhaps understandable given the apparent lack of buoyancy in the expansion, but the \$7 million increase in exports was unusual considering the depressed state of the European economy and the cyclical peak in the U.S. in January, 1893. Lumber (up \$4 million), and dairy products and meats (up \$2 1/2 million) were responsible for the increase. No explanation is readily apparent, but we should note that around 1890, exports of dairy products and meats began to increase





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steadily, a trend which continued until about 1905. Chambers attributes this growth to "the settlement of more productive grain growing areas in the American west (and) .... decline of the British dairy industry."<sup>38</sup>

In each of the four following fiscal years, the trade balance registered a further sizable improvement. Some improvement was to be expected, given the relatively depressed state of the domestic economy, but Chart II - 2 suggests that the magnitude of the improvement may have been somewhat greater than normal. In addition to rising exports of animal products, several other possible explanations can be mentioned. In fiscal 1894 and 1895, rapidly falling import prices caused an 11% improvement in the terms of trade. In the next two fiscal years, 1896 and 1897, the relatively rapid rate of expansion in the U.K. and other European countries led to a sharp increase in Canadian exports.

The preceding factors all arise from circumstances originating outside the Canadian economy. There is one other influence, operating within Canada, that we must also consider. Business activity had been relatively stagnant since the mid-1880's and presumably investment was depressed under these conditions. Buckley's index of urban building activity originally indicated the level of physical construction in Montreal only, but by 1890 when it included Toronto and Hamilton as well, it probably gave a reasonably good picture of changes in total non-farm investment expenditures. After remaining approximately con-

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Chambers, "Late Nineteenth Century Business Cycles", p. 410.

stant at 115 from 1888 to 1891, the building activity index dropped almost continuously to a low of 55 in 1896. Since imports of investment goods were an important share of total imports, declining domestic investment undoubtedly limited import growth and contributed to the continuous improvement in the trade balance from fiscal 1892 to fiscal 1897.

# Period Two: 1900 - 1939

The basic balance of payments statistics for this period are presented in Tables (iii), (iv), (v) and (vi) of Appendix B. Breaks in the continuity of the data occur during the war years, 1914 to 1918 and again in 1926, due to a switch from Knox's estimates to official Dominion Bureau of Statistics data. The variation between the two sets of estimates in 1926 is minimal for merchandise trade, but the substantial difference in non-merchandise trade suggests certain inadequacies in Knox's estimates.

Merchandise exports in Table (iii) were adjusted to include a five year centred moving average of grain exports, shown separately in the same table. The classification 'grain and farinaceous products'<sup>39</sup>

<sup>&</sup>lt;sup>39</sup> For the years prior to 1926, see Dominion Bureau of Statistics, <u>Canada Year Book</u>, (Ottawa: King's Printer, annual 1901 - 1927) Fiscal year estimates were adjusted to a calendar year basis by a simple linear method. For example, if the fiscal year ended June 30, then we calculated the calendar year figure as the sum of one-half of grain exports for the fiscal year ending in that calendar year plus one-half of the total for the following fiscal year. For the years 1926 to 1939, see Dominion Bureau of Statistics, <u>Canadian Statistical Review Historical Summary</u> (Ottawa: Queen's Printer, 1963), p. 94. Grain exports equal the sum of the three categories 'wheat', 'wheat flour' and 'other grain products'.

which we employed is not as inclusive as Taylor's 'grain and grain products' series.<sup>40</sup> Receipts from and payments for freight and shipping were included in merchandise exports and imports respectively because of the close relationships between them. One further adjustment was made in Knox's estimates for the years 1900 to 1926. Neither Viner nor Knox distinguished between monetary and non-monetary gold transactions. Since official balance of payments data after 1926 consider only non-monetary gold as part of the current account, we have used John Stovel's estimates<sup>41</sup> to include net non-monetary gold transactions.

Our calculation of the index of the trade balance shown in Table (iii) and the index of the current account balance in Table (iv) employed the formula that was described previously. Similarly, calculation of the rates of change in the trade and current account balances in Table (iv) followed the method described earlier in the chapter.

Details of the non-merchandise balance from Knox's statistics for 1900 to 1926 are supplied in Table (v) of Appendix B and include the balances for travel, interest and dividends, and other current items as well as total non-merchandise receipts and expenditures and the non-merchandise balance itself. Since the accuracy of some of

40 For the fifteen fiscal years 1900 to 1914, the Taylor estimates exceeded our series by an average of 15%.

41 John A. Stovel, <u>Canada in the World Economy</u> (Cambridge: Harvard University Press, 1959), pp 338 - 341.

these statistics is questionable, rate of change computations and index computations were not made for the non-merchandise balance. In Table (vi), however, we present official data for the years 1926 to 1939 giving receipts, expenditures and balance for each of the above three non-merchandise accounts; in addition, Table (vi) shows the index of the total non-merchandise balance and annual changes in total receipts, expenditures and the balance.

To provide a starting point for measuring cyclical fluctuations in this period, a brief year by year description of the cycle from 1900 to 1925, based on Thorp's <u>Business Cycle Annals</u>,<sup>42</sup> is listed in Appendix C, Table (iii). Reference was also made to a recent article by K.A.J. Hay.<sup>43</sup> For the years after the First World War, we consulted another article by Chambers.<sup>44</sup> However, our principal measure of cyclical swings in the economy will be a diffusion index constructed for the entire period 1900 to 1939. Although reliable national accounts statistics are available beginning in 1926, the diffusion index covers the whole period, in order to check its reliability against official data. A reasonable degree of similarity for the years 1926 to 1939 will inspire confidence in the accuracy of the index prior to 1926.

42 Thorp, Business Cycle Annals, pp 303 - 307.

<sup>45</sup> K.A.J. Hay, "Early Twentieth Century Business Cycles in Canada," <u>Canadian Journal of Economics and Political Science</u>, XXXII (August 1966), 354 - 365.

44 Edward J. Chambers, "Canadian Business Cycles Since 1919", Canadian Journal of Economics and Political Science, XXIV (May 1958), 166 - 189.

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Nine time series were included in the diffusion index, five value series, three volume series and one price index. The series cover a reasonably wide range of business activity---three are financial, two are related to construction, two reflect primary manufacturing, one estimates transportation activity, and the final series measures wholesale prices. Each of the nine series is presented in Table (iv) of Appendix C with base 1926 = 100. Next to the annual value of each series, we have indicated the contribution which that series makes to the value of the total diffusion index in that year. Our method of assigning such values was similar to that used previously. In each case, the value '1' was given for a 'significant' increase, '½' for a 'marginal' increase, and '0' for a decrease. The criterion for distinguishing between a 'significant' increase and a 'marginal' increase was 4.0% in the case of the value series, 2.4% for the volume series, and 1.6% for the wholesale price index.<sup>45</sup>

Our diffusion index portrays cyclical fluctuations which are quite similar to those described by Thorp and illustrated by Hay<sup>46</sup> and Chambers<sup>47</sup> in their diffusion indexes. It also parallels changes in gross national product after 1926, and we are therefore satisfied that

Hay, "Early Twentieth Century Business Cycles", p. 380.
Chambers, "Canadian Business Cycles Since 1919", p. 179.

<sup>45</sup> The Economic Council of Canada estimates that the average real growth in GNP from 1901 to 1929 was 3.6% per annum. Our 2.4% criterion for 'significant' real growth represents two-thirds of this average. Excluding the abnormal price fluctuations from 1914 to 1921, the wholesale price index grew at approximately 1 1/2% per annum in this period.

the index provides an accurate representation of the business cycle for the entire period. We shall use the diffusion index as a basis of comparison of the annual rates of change in the trade balance and the current account balance and of changes in exports and imports.

For an index of prosperity prior to the First World War, we must be content with a continuation of Taylor's index employed in the previous section. However, we shall have to make certain adjustments to the index which will be described later. Beginning in 1919, we have attempted to construct our own index of prosperity. For our purposes, the best single measure of business activity appears to be real gross domestic product excluding that originating in the agricultural sector (hereafter termed real non-agricultural gross domestic product). The Dominion Bureau of Statistics has published a quantity index of this series beginning with 1935;<sup>48</sup> we have extrapolated back to 1919 by linking it with 'gross national product less net farm income' for the years 1926 to 1935,<sup>49</sup> and with estimates for the years 1919 to 1926 of 'total net domestic income less agriculture'.<sup>50</sup>

The first step was to construct a continuous series for total non-agricultural output, which is shown in Table (v), Appendix C in index form with 1926 = 100. Next, it was necessary to remove the effects of price changes by valuing the index in terms of prices in the

48 Dominion Bureau of Statistics, <u>Indexes of Real Domestic Pro-</u> <u>duct by Industry of Origin, 1935 - 61</u> (Ottawa: Queen's Printer, 1963), p. 71.

49 Urquhart and Buckley, Historical Statistics, p. 130.

<sup>50</sup> Ibid., p. 138.

base period 1926. The Dominion Bureau of Statistics publishes implicit price indexes for gross national expenditure; the total price index for GNE applying, of course, to total GNP. To derive an implicit price index for 'GNP less net farm income', we valued net farm income in 1926 prices, employing a price index of commodities and services used by farmers, <sup>51</sup> and deducted the result from total constant dollar GNP. For the years 1919 to 1926, the price index shown in Table (v) is simply an average of the consumer price index and a producers equipment price index, <sup>52</sup> weighted three to one in favour of the former. To test the accuracy of this method, the weighted index was continued until 1939 and it was found to follow very closely the implicit price index of 'GNP less net farm income'. Finally, we linked the output index which we had constructed with the index of real non-agricultural gross domestic product using as a base period the years 1935 to 1939.

One method of calculating an index of prosperity would be to fit a trend line to our time series by the least squares method, and then compute for each year the deviation from the trend. As mentioned earlier, however, we attempted to calculate actual output as a percentage of potential output for each year. The first step was the selection of all the years in the period 1919 to 1939 in which actual and potential output were approximately equal, or in other words, years in which the economy was operating at or very close to sustainable capa-

<sup>51</sup> Urquhart and Buckley, <u>Historical Statistics</u>, p. 358.

<sup>52</sup> <u>Ibid.</u>, p. 304 and p. 296. The consumer price index is Series J147 on page 304 and the producers equipment price index is Series J66 on page 296.

city. The selection of 1928 was relatively simple, but because the economy had not yet returned to full employment by 1939, we were forced to proceed into the war years to choose a year in which actual output reached potential output. Our choice of 1941 was based on a belief that most idle capacity appeared to have been taken up for the war effort by that time. Between the full employment years, 1928 and <sup>1</sup>1941, potential output grew at a rate of 3.2% per annum according to this method of analysis:<sup>53</sup>

Since we felt that actual output did not equal potential output in any year from 1919 to 1928, we had to extrapolate using 1928 as a base. The growth rate of potential real output in this period was presumably somewhat greater than the 3.2% rate after 1928. Our analysis employed a rate of 3.6% per annum, equal to the Economic Council's estimated actual growth rate for the period 1901 to 1929. The resulting 98.3% level of the index of prosperity in 1919 seems not unreasonable, since the economy was probably operating fairly close to capacity. Before examining the period as a whole, however, we shall briefly study

<sup>&</sup>lt;sup>53</sup> If we assume that this 3.2% growth rate in potential output continued from 1941 to 1948, then the ratio of actual to potential output in the latter year would also be 100. Since 1948 is generally regarded as a full-employment year, our choice of 1941 appears justified. Suppose for a moment that we felt average output in 1941 - 42 represented full-employment. Then our potential growth rate would be approximately 3.6% and the ratio of actual to potential output in 1939 would be 72.6 instead of 75.6. Therefore, we can see that the selection of differing full-employment outputs is not likely to have a significant effect on the results and should not materially affect our conclusions concerning the level of business activity.

the behaviour of the current account balance during each cyclical swing.

### Expansion: 1901 - 1907

# Table II - 13 Summary of Changes in Merchandise and Non-Merchandise Trade Balances, 1900 - 07

\$ millions	1900	change	1907
Merch. Exports	192	+ 75	267
Merch. Imports	186	+192	<u>378</u>
Merch. Trade Balance	6	-117	<u>-&gt;]]]</u>
•			
Non-Merch. Receipts	22	+ 43	65
Non-Merch. Expenditures	49	+ 68	117
Non-Merch. Balance	-27	- 25	- 52

Following a very moderate recession in the latter part of 1900, the Canadian economy entered a period of prosperity which lasted until late 1907. The expansion was somewhat uneven, however, with financial dislocations threatening from time to time to undermine real growth. A recession in the U.S. from September, 1902 to August, 1904 brought tight money, a declining stock market and reduced exports but failed to throw the economy into recession. Certain industries such as lumbering and fishing were relatively depressed. The Canadian Annual Review of Public Affairs commented "on the whole, it may be said that the past year has been a prosperous one for Canada, though there have been special industries which did not participate".<sup>54</sup> Our diffusion index also

54 <u>Canadian Annual Review of Public Affairs, 1904</u> (Toronto: Annual Review Publishing Co., 1905), p. 505.

indicates the probability of a slower rate of growth in 1903 and 1904;<sup>55</sup> in the following two and one-half years, however, the Canadian economy enjoyed great activity and expansion.

During this period, the merchandise trade balance behaved approximately as predicted by our hypothesis. Merchandise imports rose each year except one, with the largest increases occurring in 1903 and in 1906 - 07. Reflecting 1904's uneven prosperity, imports recorded a marginal decline in that year. The expansion in imports from 1901 to 1907 was spread fairly evenly among the various commodity groups, but the largest dollar increases were in iron and its products, fibres and textiles, and non-metallic minerals (principally coal). An index of investment,<sup>56</sup> (shown in Table (vi), Appendix C) stood in 1907 at two and three-guarter times its 1900 level. Much of this investment was associated with the development of Western Canada's potential wheat production and took the form of railway construction and agricultural buildings, machinery and livestock. A sizable proportion of investment goods tended to be imported so it is understandable that imports of iron and its products rose rapidly. Increases in investment of 18% in 1906 and 20% in 1907 were accompanied by jumps of 18% and 16% respec-

<sup>55</sup> Hay recognized a recession beginning in December, 1902 and continuing until June, 1904. However, his diffusion index was based on fourteen series which did not, we believe, constitute an adequate representation of the overall economy. Six related to exports which declined sharply in 1904 and six others were based on financial and credit conditions which deteriorated badly in the fall of 1902 and throughout much of 1903. We should also recognize, however, that his diffusion index was monthly, and therefore more able to have recognized turning points in the cycle.

56 Dominion Bureau of Statistics, <u>Canada Year Book, 1937</u> (Ottawa: King's Printer, 1938), p. 480.

tively in merchandise imports. As expected, a large part of the increase occurred in imports of iron and its products.

Exports had dropped rather sharply in 1904, offsetting a small decline in imports and causing a further increase in the trade deficit. In 1905, however, the trade balance was unchanged since rising exports balanced a relatively small increase in imports. Almost one-half of this period's \$117 million deterioration in the trade balance occurred in 1907, when Canada's strong demand for imports was aggravated by a drop in exports to the U.K. In non-merchandise trade, Knox's estimates reveal little change in the balance between 1900 and 1904, but the deficit doubled within the next three years as rapid growth in expenditures on interest and dividends and other current items outpaced an increase in receipts.

# Contraction: 1908

Table II - 14 Summary of Changes in Merchandise and Non-Merchandise Trade Balances, 1907 - 08						
\$ millions	1907	change	1908			
Merch. Exports	267	<b>-</b> 6	261			
Merch. Imports	378	- 81	297			
Merch. Trade Balance	-111	+ 75	- 36			
Non-Merch. Receipts	65	0	65			
Non-Merch. Expenditures	117	+ 26	143			
Non-Merch. Balance	<b>•</b> 52	- 26	- 78			

The Canadian economy experienced a short but relatively severe recession which began in late 1907 and continued throughout 1908. As expected, the decline in business activity was accompanied by a decrease in the value of imports. The magnitude of the drop was very large (21%), but sharply falling import prices accounted for roughly one-third of the decline. Despite a further small decrease in exports, the merchandise balance displayed a significant improvement; however, this was offset to some extent by net interest and dividend payments which jumped from \$51 million to \$71 million.

#### Expansion: 1909 - 1912

### Table II - 15

Summary of Changes in Merchandise and Non-Merchandise Trade Balances, 1908 - 12

\$ millions	1908	change	1912
Merch. Exports	261	+102	363
Merch. Imports	297	<u>+357</u>	654
Merch. Trade Balance	- 36	~255	-291 `
Non-Merch. Receipts	65	+ 31	96
Non-Merch. Expenditures	143	+ 92	235
Non-Merch. Balance	- 78	- 61	-139

By the summer of 1909, the economy had returned to a high level of business activity and the ensuing expansion lasted almost four years. With all sectors enjoying boom conditions, the Canadian economy experienced its most rapid rate of growth since 1869 - 73. Highlights of the boom included an approximate doubling of the index of investment from 1908 to 1912, rapidly rising grain exports, widespread speculation

and record levels of immigration.

Merchandise imports increased at an extremely rapid pace, more than doubling in the four years 1909 to 1912. Most major commodity groups approximately doubled but imports of iron and its products practically quadrupled. In dollar terms imports of these products jumped from \$45 million or 15 1/2% of total imports in 1908 to \$164 million or 24 1/2% of the total in 1912.<sup>57</sup> Between 1908 and 1911, non-grain exports achieved only minor gains--shipments to the U.K. were almost level, and the United States economy was relatively stagnant throughout 1910 and 1911.

As a result, in 1910 our index of the merchandise balance approximately equalled its 1875 peak deficit position and substantially exceeded it in 1911 and 1912. The non-merchandise as well as the merchandise account was weak during this period. Large inflows of foreign capital plus a high level of profits caused net payments of interest and dividends to rise sharply, and the large number of recent immigrants sending funds back to their homelands was probably responsible for an increasing deficit on other current items.

# Contraction: 1913

Our diffusion index dropped from 100 in 1912 to 33 in 1913, but in most cases the component time series fell only slightly below their record peaks of the previous year. Although money tightened severely late in 1912, the momentum of the expansion carried it through the first

<sup>57</sup> These breakdowns are actually for the fiscal years ending March 31, 1909 and March 31, 1913 respectively. half of 1913, after which it gradually slackened; by year-end, however, the economy had passed into a state of contraction.

				Table	II 🚥	16		
Summary	of	Changes	in	Merchar	ıdise	and	Non-Merchandise	Trade
			Ba	alances,	1912	2 🚥 🛽	13	

\$ millions	1912	change	1913	<b>(</b> 1914)
Merch. Exports	363	+ 70	433	403
Merch. Imports	654	+ 30	<u>684</u>	501
Merch. Trade Balance	-291	+ 40	-251	<b>~</b> 98
Non-Merch. Receipts	96	- 1	95	115
Non-Merch. Expenditures	235	+ 32	267	304
Non-Merch. Balance	-139	- 33	-172	-189

The rate of increase in imports slowed very markedly and, in fact, much of the 4 1/2% increase was apparently the result of higher prices. If one considers the great strength of the previous expansion and the fact that business did not turn down until midway through the year, it was perhaps unusual that the previous rapid growth in imports should vanish so abruptly. On the other hand, the value of merchandise exports in 1913 jumped almost 20%, a surprisingly large increase given that the American economy recorded a cyclical peak very early in the year. However, the resultant improvement in the trade balance was offset by a further deterioration in all components of the balance on invisibles.

We felt that it would be interesting to observe the behaviour of the current account balance in 1914, although the year was excluded from the main part of our study because of the outbreak of war. It seems safe to assume that the war would have had relatively little influence on Canada's foreign trade in 1914. The recession which had begun the previous year became progressively more severe during 1914. Therefore, it is not surprising to note a large decline in imports which caused the trade deficit to shrink by approximately \$150 million. The non-merchandise deficit, however, continued to increase as net interest and dividend payments jumped \$36 million.

# Post-War Adjustments: 1919 - 1921

Although changes in the current account balance immediately after the First World War followed the normal cyclical pattern, we have excluded the years 1919, 1920 and 1921 from the main body of our analysis. Distortions in foreign trade caused by the war and its aftermath were so great that they dominated the current account's behaviour. In the first place, the very large surplus on merchandise trade in 1919 was caused by artificially buoyant exports and depressed imports. For example, in fiscal 1914, exports of animals and their products totalled \$77 million, but by fiscal 1920 they had climbed to \$314 million before dropping back to \$188 million in fiscal 1921. The second distorting feature of the post-war years was a large and rapid fluctuation in In 1920, import prices jumped 22% and export prices rose 12% prices. whereas in 1921, the former fell 27% and the latter declined 28%. Deflation continued in 1922 with declines of 16% in both import and export prices.

The business revival early in 1919 was followed by a relatively short but strong expansion which lasted throughout most of 1920. Im-

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ports in the latter year soared by \$522 million, but approximately onehalf of the increase was caused by the rapid rise in prices; also, it is impossible to estimate the proportion of the increased volume of imports which was simply an adjustment to the renewed availability of overseas products. At the same time, merchandise exports were retreating to a more normal peacetime level and, as a result, the trade balance deteriorated by almost \$600 million in 1920. On the other hand, the deficit on non-merchandise items decreased by almost \$100 million. The decline was caused almost entirely by a very large shift in the balance on other current items, presumably due to post-war adjustments.

A downturn in the economy in the latter part of 1920 soon developed into a serious depression which persisted throughout 1921, accompanied by very significant price deflation. The value of merchandise exports and imports fell 28% and 41% respectively in 1921, but in each case sliding prices appear to have accounted for well over one-half of the decline. The merchandise trade account in 1921 was approximately in balance, midway between its levels in the two preceding years. The nonmerchandise balance was virtually unchanged in 1921.

Expansion: 1922 - 1923

Table II - 17 Summary of Change in Merchandise Trade Balance, 1921 - 23 \$ millions 1921 1923 change Merch. Exports 962 +165 1127 Merch. Imports 944 + 62 1006 18 Merch. Trade Balance +103 121
If we accept the premise that the economy entered an expansionary phase of the cycle around the end of 1921,<sup>58</sup> then the improvement in the trade balance between 1921 and 1923 implies contracyclical be-However, most of the available evidence suggests that the rehaviour. vival in business was very gradual and that the entire expansion lacked vigour. Thorp described "continued dullness" in 1922 which gradually gave way to "moderate prosperity" in 1923.<sup>59</sup> Values of only 22 in 1922 and 67 in 1923 in our diffusion index and the continued weakness of prices in 1922 support this description. The \$103 million improvement in the trade.balance shown above conceals a deterioration of \$52 mil-In other words, only the very large \$155 million improvelion in 1923. ment in the trade balance in 1922 requires an explanation and it may be attributed, at least partially, to the weakness of the expansion in that year.

Several other special circumstances should be noted. Declining prices more than offset a small volume increase in imports in 1922, and a sharp rebound in prices the following year accounted for roughly onehalf of a large 20% increase. Consequently, increases in the volume of imports of approximately 5% in 1922 and 10% in 1923 seem consistent with the extent of expansion in Canada during this time. On the other hand, merchandise exports were surprisingly buoyant, especially in 1922 when a small value increase was recorded, despite a severe drop in prices.

<sup>58</sup> Chambers' reference date for the trough in the Canadian cycle was September, 1921. Chambers, "Canadian Business Cycles Since 1919", p. 181.

<sup>79</sup> Thorp, Business Cycle Annals, p. 306.

Exports to the U.K. accounted for much of the increase in 1922, whereas the following year the U.S. market took the largest share of the growth in Canadian exports.

The recorded improvement in the non-merchandise balance must be viewed with suspicion. From 1921 through 1926, Knox's estimates revealed that an increasing deficit on interest and dividends was more than offset by increases in the surplus on travel and, to a lesser extent, by a surplus on other current items. However, we noted previously that Knox's non-merchandise estimates for 1926 were significantly more favourable than official 1926 data. Therefore, our summary tables describing each cyclical swing in the balance of payments exclude non-merchandise figures until 1926.

#### Contraction: 1924

## Table II - 18

Summary of Change in Merchandise Trade Balance, 1923 - 24

\$ millions		1923	change	1924	
Merch.	Exports	1127	+ 48	1175	
Merch.	Imports	1006	-117	889	
Merch.	Trade Balance	121	+165	· 286	

Although the contraction in 1924 was relatively brief, and moderate in amplitude, merchandise imports fell substantially. Once again, the commodity groups iron and its products and non-metallic minerals registered the largest declines, accounting for roughly two-thirds of the overall decrease.<sup>60</sup> Exports, on the other hand, were sustained by

<sup>60</sup> Urquhart and Buckley, <u>Historical Statistics</u>, p. 186. See data for fiscal years ending March 31, 1924 and March 31, 1925. demand from the U.K., where business continued to expand until the end of 1924.

#### Expansion: 1925 - 1929

# Table II - 19 Summary of Changes in Merchandise and Non-Merchandise Trade Balances, 1924 - 29

\$ millions	1924	change	1929
Merch. Exports	1175	+145	1.320
Merch. Imports	889	+513	1402
Merch. Trade Balance	286	368	- 82
•	(1926)		
Non-Merch. Receipts	267	+ 72	339
Non-Merch. Expenditures	460	<u>+ 95</u>	<u>555</u>
Non-Merch. Balance	-193	- 23	-216

Late in 1924, the Canadian economy entered a period of rapid expansion which persisted until mid-1929. The index of gross domestic product less agriculture increased by an average of 8 1/2% per annum from 1925 to 1928 inclusive; in addition, the agricultural sector of the economy experienced several years of marked prosperity as grain exports jumped 50% from 1924 to 1928; and finally, investment proceeded at a rapid rate, more than doubling between 1924 and 1929.

Stimulated by this acceleration of business activity, merchandise imports rose swiftly. Except for 1925, when a strong export performance led to a slight improvement in the balance, the merchandise trade account deteriorated in each year of the expansion. An ll% average annual increase in imports during the years 1925 to 1928 inclusive was achieved despite declining import prices which fell an average of 3 1/2% per annum during this time. A slightly slower growth in imports in 1927 supports Chambers' contention that a brief pause occurred in that year.<sup>61</sup>

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Even taking into account a slow but persistent decline in prices. export growth in 1926, 1927 and 1928 was very disappointing; in fact, small declines were evident in the latter two years. This performance was understandable however, since the U.S. experienced a mild recession in 1927 and the U.K. economy contracted throughout part of the same and the following year. We should also point out that the five year moving average of grain exports reached a peak in 1926 - 27 and dropped sharply in the following two years, reflecting the rapid decline in annual shipments which began in 1929. Non-grain exports, which had been fairly stable in 1926, 1927 and 1928, grew at a slightly faster pace in 1929 as the major world economies enjoyed a last spurt of expansion prior to the Great Depression. Nevertheless, by this time Canadian business activity had begun to feel the effects of depressing circumstances in wheat and also forest products<sup>62</sup> and as a result, growth in imports in 1929 slowed to about 6%.

In the non-merchandise account, interest and dividend expenditures continued to rise but they were partially offset by increasing travel receipts. Therefore, the non-merchandise account had little in-

62 Marcus, Canada and the International Business Cycle, pp 36 -

<sup>61</sup> Chambers, "Canadian Business Cycles Since 1919", p. 180. See also the diffusion indexes on pages 176 and 179. However, our index of 'G.D.P. less agriculture' does not indicate any slowing in business activity.

fluence on the total current account balance during this period.

Contraction: 1929 - 1933

Table II - 20 Summary of Changes in Merchandise and Non-Merchandise Trade Balances, 1929 - 33

\$ millions	1929	change	1933
Merch. Exports	1320	-650	670
Merch. Imports	1402	968	<u>434</u>
Merch. Trade Balance	- 82	+318	236
Non-Merch. Receipts	339	-168	171
Non-Merch. Expenditures	<u>555</u>	-158	<u>397</u>
Non-Merch. Balance	-216	- 10	-226

There is no need to describe the severity of the depression beginning in late 1929 which gripped Canada and other industrial nations and caused real non-agricultural gross domestic product to decline more than 26% between 1929 and the trough in 1933. Every sector of the economy and every type of business activity and enterprise felt the shock. Canada's terms of trade deteriorated badly in this period, with a very severe drop in the price of grain exports largely responsible.

In value terms, merchandise imports fell by almost \$1 billion from 1929 to 1933. Most of the decline occurred in 1930 and 1931, so that by 1933, when a cyclical trough was reached in the first half of the year, the decrease was very small. We note that iron and its products again exhibited a larger drop than any other commodity group, both in absolute and percentage terms.<sup>63</sup> On a percentage basis, exports dropped 53% from 1929 to 1932, compared to a 67% decline in imports; in dollar terms, however, the decline in the former amounted to only three-quarters that in the latter. Attention is drawn to an increase in net exports of non-monetary gold which more than doubled from \$39 million in 1929 to \$82 million in 1933, due chiefly to the higher price of gold following Canada's departure from the gold standard. Other exports rose sharply in 1933 with most of the increase going to the U.K. whose economy turned up in mid-1932, somewhat ahead of recovery in Canada and the U.S. The strength of Canadian exports to the U.K. relative to the U.S. suggests that income fluctuations were more important than changes in exchange rates. In any event, the fact that from mid-1931 to mid-1933 the Canadian dollar took a value roughly half-way between the pound sterling and the U.S. dollar probably limited the effects of changing exchange rates on the current account balance.

As a result, the trade account moved back into a surplus position in 1931 and showed further large improvements in the following two years. The continuing sizable deficit on non-merchandise trade, however, prevented the total current account from achieving a balanced position until 1933. Once again, cyclical changes in the non-merchandise balance were relatively unimportant. In 1930, the non-merchandise deficit jumped from \$216 million to \$250 million, largely because of a continued increase in interest and dividend expenditures. A large volume of net new issues of Canadian securities had been sold abroad in

<sup>63</sup> Imports of iron and its products fell 82% from 1929 to 1933. The index of investment declined by exactly the same percentage during this time.

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1929 and 1930 to finance the total current account deficit. The deficit on interest and dividends declined over the next three years but much of this was offset by a falling surplus on the travel account.

#### Expansion: 1933 - 1937

## Table II 🛥 21

Summary of Changes in Merchandise and Non-Merchandise Trade Balances, 1933 - 37

\$ millions	1933	change	1937
Merch. Exports	670	+638	1308
Merch. Imports	434	+479	913
Merch. Trade Balance	236	+159	395
Non-Merch. Receipts	171	+124	295
Non-Merch. Expenditures	397	+103	500
Non-Merch. Balance	-226	+ 21	205

The recovery of the Canadian economy after mid-1933 began from such a depressed level that a sizable proportion of the nation's resources were still unemployed in 1937, when non-agricultural gross domestic production finally regained its 1929 peak. Investment in particular remained very low relative to the summit which it attained immediately prior to the depression.<sup>64</sup> Despite excess capacity, imports more than doubled in value from 1933 to 1937, and since prices rose by only 16%, greater volume accounted for most of the increase. As we might expect, imports jumped sharply (30%) in 1934 when deflation had

<sup>64</sup> This very slow recovery in domestic investment had an important influence on the trade balance between 1933 and 1939. It will be examined later in the chapter. finally ceased and the economy gradually returned to a more stable, though still very depressed state of operation. A similarly large increase occurred in 1937 when import prices rose almost 10% and some speculative activity crept back into the economy.<sup>65</sup>

Despite this doubling of imports, the merchandise trade surplus increased slightly in each of the years 1934 to 1937. Since the volume of foreign trade was also increasing, however, our index of the trade balance was approximately constant during this period. One probable reason for this strength in the trade account was the steady improvement in Canada's terms of trade. In addition, several special circumstances should be mentioned concerning the buoyancy of Canadian exports. Continuing the trend mentioned previously, and further stimulated by the U.S. revaluation of the price of gold in 1933, net non-monetary gold exports jumped \$32 million in 1934 and increased another \$31 million over the next three years. Equally important was the relatively rapid pace of recovery in the U.K. which, perhaps aided by Empire Preference, caused the demand for Canadian products to increase significantly. Strong demand was particularly noticeable in exports of metals and products (iron and non-ferrous) which quadrupled between 1932 and 1937. This \$200 million increment accounted for roughly 30% of the total increase in exports during this period. By comparison, exports of agricultural and animal products (in this case excluding grain which showed very little increase) and wood, wood products and paper rose \$109 million

65 Business fixed investment increased 36% in 1937 and accumulation of business inventories was also strong.

and \$129 million respectively.<sup>66</sup> European rearmament programmes helped to stimulate large demand for Canadian metals during the mid-thirties.

A slight improvement in the non-merchandise balance from 1933 to 1937 was caused by a larger travel surplus with the Americans. Although Canadian tourist and travel expenditures in the U.S. doubled, the dollar value increase in Canadian travel receipts was much larger. Actually, the non-merchandise deficit had fallen \$43 million in 1934 alone, but then deteriorated slightly in the following three years. As in the previous 1929 to 1933 period, year-to-year changes in the balance on invisible items were rather erratic and did not follow any apparent cyclical pattern.

#### Contraction: 1938

#### Table II - 22 Summary of Changes in Merchandise and Non-Merchandise Trade Balances, 1937 - 38

\$ millions	1937	change	1938
Merch. Exports	1308	<b></b>	11.55
Merch. Imports	913	-159	_754
Merch. Trade Balance	395	+ 6	401
Non-Merch. Receipts	295	- 34	261
Non-Merch. Expenditures	500	+ 7	507
Non-Merch. Balance	205	- 41	-246

A short but rather severe recession lasting from the latter part of 1937 until the end of 1938 led to significant changes in both

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Urquhart and Buckley, Historical Statistics, p. 178 ..

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exports and imports but had little effect on the trade balance itself. Price deflation was an important factor in the decline in the value of foreign trade and a 5% deterioration in the terms of trade served to limit the improvement in Canada's balance. Exports to the U.S., particularly of pulp and paper, registered the largest decline, while demand for Canadian mineral and metal products was sustained by increasing rearmament in Europe. As usual, imports of iron and steel products recorded a larger decline than any other major commodity group.

In 1938, there was a rather large increase in the non-merchandise deficit, primarily because of a reduction in receipts from the U.S. in all three categories of invisibles. As a result, the total current account balance deteriorated by \$35 million.

#### Expansion: 1939

#### Table II - 23

Summary of Changes in Merchandise and Non-Merchandise Trade Balances, 1938 - 39

\$ millions	_1938	change -	
Merch. Exports	1155	+ 36	1191
Merch. Imports	754	+ 78	832
Merch. Trade Balance	401	<b></b> 42	<b>3</b> 59
Non-Merch. Receipts	261	+ 4	265
Non-Merch. Expenditures	507	<u> </u>	499
Non-Merch. Balance		+ 12	-234

The economy reached a trough late in 1938 and experienced a moderate expansion in 1939. Both exports and imports increased and the trade balance deteriorated slightly as expected. However, we must point out that our method of adjustment for grain exports produced a \$32 million decline in the moving average of such exports in 1939, whereas there was an actual annual increase of \$24 million. If grain exports are excluded entirely from 1937, 1938 and 1939, the trade balance shows little change over the three year period. On this basis the merchandise trade surplus increased by \$5 million in 1938 and decreased by \$10 million in 1939.

#### Summary of the Period 1900 - 1939

The preceding narrative indicates that the Canadian balance of payments during this period, as during the late nineteenth century, tended in most cases to react to cyclical fluctuations in the manner predicted by our hypothesis. However, whereas the trade balance registered only nine surpluses in thirty-two years between 1869 and 1900, there were trade surpluses in twenty of the thirty-five years from 1900 to 1939.

Although the accuracy of non-merchandise trade data prior to 1926 is questionable, it appears safe to conclude that fluctuations in -the balance on invisibles were not closely related to the business cycle. Furthermore, changes in the non-merchandise balance tended to be small relative to swings in merchandise trade. The absolute dollar value of the chronic deficits on non-merchandise trade, primarily net payments of interest and dividends, was an important determinant of the level of the total current account balance. Nevertheless, annual changes in the total balance were clearly dominated by the cyclical fluctuations of the merchandise trade balance, although the relative stability of transactions in invisibles did tend to reduce the amplitude of fluctuations in the total current account balance. As we note in Table (iv), Appendix B, the direction of change in the merchandise and current account balances differed in only two years, 1905 and 1938, and in both cases, the differences were very slight.

In order to obtain an exact measure of the degree of similarity between changes in business activity and changes in the balance of payments, we performed several regression analyses, the results of which are given in Table II - 24. As an indicator of changes in the business cycle, we used our diffusion index but subtracted fifty from the value for each year. In other words, the range of the adjusted diffusion index was minus fifty to plus fifty instead of the previous zero to one hundred. In each regression analysis, the post-war adjustment years 1919 to 1921 were excluded, along with the war years 1914 to 1918.

The first regression analysis indicates that during the thirtyone years included in the analysis, there was a significant negative correlation between the diffusion index and the rate of change in the merchandise trade balance. When the years 1934 - 39 were excluded in 'analysis 2', the negative correlation became even stronger. Since we are dealing with time series, however, the possibility of autocorrelation must be considered. To test for autocorrelation, we calculated for each regression analysis the value of 'von Neumann's ratio' which is the ratio of the mean-square successive difference to the variance. As long as the calculated values for the ratio lie between the critical values indicated in notes (iii) and (iv) of Table II - 24, then we may safely conclude that autocorrelation is not serious. Both 'analysis 1' and 'analysis 2' pass the von Neumann test.

Regressi Analysi Number	on Independent s Variable (x)	: Dependent Variable (y)	Period Covered	Number of Observations (n)	Correlation Coefficient (r)	Regression Equation	Value of von Neumann's Ratio
l	diffusion index	rate of change merch. trade balance	≥ 1901–13. 1922–39	, 31	- <b>.</b> 65	y'=2.48 <b></b> 23x	2.03
2	diffusion index	rate of change merch. trade balance	e 1901-13, 1922-33	25	-•7 <sup>1</sup> +	y'=1.6427x	2.24
3	diffusion index	rate of change current account balance	901-13, 1922-39	, 31	62	y'=0.8317x	1.57
4	diffusion index	rate of change merch. imports	1901-13, 1922-39	31	+.88	y'=-0.99+.47x	1.87
5	diffusion index	rate of change merch. exports	901-13, 1922-39	31	+.63	y'=0.91+.23x	1.16
Notes: (i) In analyses 1 and 3 where there are 29 degrees of freedom, the critical value of the correlation coefficient for $\alpha = 0.05$ is36; and in analyses 4 and 5, the critical value is +.36.							
	(ii) In analysi coefficien	s 2 where there t for≪= 0.05 i	are 23 de s40.	egrees of freed	lom, the crit:	ical value of the	he correlation
· (:	iii) In analyse ≪= 0.05 a	s 1, 3, 4 and 5 re 1.47 and 2.6	where n = 6.	31, the criti	cal values of	f von Neumann's	ratio for
	(iv) In analysi · 1.42 and 2	s 2 where $n = 2$ $\cdot 7^4$	5, the cri	tical values o	of von Neumani	n's ratio for 🛛	= 0.05 are

Table II -  $2^4$ Results of Regression Analyses for the Period 1900 - 1939

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We noted earlier in this section that fluctuations in the nonmerchandise balance had little effect on cyclical swings in the total current account balance. The third regression analysis indirectly confirms this observation, since the negative correlation between the cycle (as measured by our diffusion index) and the current account balance is only slightly less significant than that between the business cycle and the trade balance.

A very strong positive relationship between the business cycle and merchandise imports is revealed by a correlation coefficient of +.88 in 'analysis 4'. Our adjusted diffusion index and the change in imports exhibited opposite signs in only two years, 1904 and 1913, and in each case the difference was minimal. Both 'analysis 3' and 'analysis 4' also pass the von Neumann test for absence of autocorrelation.

The coefficient of correlation between the diffusion index and merchandise exports in the final regression analysis indicates a positive relationship, but the strength of the correlation is much less than that between imports and the business cycle. Moreover, the calculated value of von Neumann's ratio is less than the minimum critical value; therefore, the effects of autocorrelation cannot be ignored. The regression equation expressing changes in exports as a function of the diffusion index is not very meaningful, of course, since the direction of causation runs primarily from the former to the latter and not vice versa. The equation was calculated simply to determine a value for von Neumann's ratio. A discussion of the absence of a strong correlation between exports and the domestic business cycle was given in our summary of the 1869 - 1900 period.

Several of the above regression analyses were repeated using a one year lead or lag. The nature of the relationships and results in the prior 1869 - 1900 era suggest that exports should tend to lead the cycle while imports and the trade balance should lag behind cyclical swings in the economy. However, in each case, correlation with the diffusion index was weakened by the assumption of a lead or a lag. We conclude that although leads and lags probably existed, most were considerably less than one year in duration and consequently were not detected by our analysis.

In our earlier discussion concerning the need for an adjustment to remove the effects of non-cyclical fluctuations in grain exports, it was suggested that inclusion of a five year moving average of grain exports would eliminate very sharp year-to-year changes while retaining intermediate trends which could influence other sectors of the economy. This procedure was particularly well suited for our index method of analysis, which compares levels in the trade balance over a number of years.<sup>67</sup> However, we have also pointed out several instances in which the five year average of grain exports moved contracyclically. Therefore, we repeated the previous regression analyses using rate of change data, shown in Table (vi), Appendix B, which completely exclude grain exports.

<sup>&</sup>lt;sup>67</sup> For example, when grain exports were completely excluded from our analysis, the index of the trade balance failed to improve between 1876 and 1879 despite continuous contraction during the period. The answer apparently lay in the strong performance of grain exports which helped to maintain Canadian demand for imports. When a five year centred moving average of grain exports was included, the trade balance index improved in line with the decline in Taylor's prosperity index.

Table II - 24(a)									
Results	of	Regression Analyses for the Period 1900 - 39							
		(Modified to Exclude Grain Exports) .							

Regression Analysis Number	Independent Variable (x)	Dependent Variable (y)	Period Covered	Number of Observations (n)	Correlation Coefficient · (r)	Regression Equation	Value of von Neumann's Ratio
l(a)	diffusion index	rate of change merch. trade balance	1901 <b>-</b> 13 1922 <b>-</b> 39	31	<b></b> 72	y'=3.6332x	1.92
2(a)	diffusion index	rate of change merch. trade balance	1901 <b>-</b> 13, 1922 <b>-</b> 33	25	81	y <b>'=2.613</b> 7x	2.30
3(a)	diffusion index	rate of change current accoun balance	1901-13, t 1922-39	, 31	67	y'=1.3923x	1.64
4(a) ·	diffusion index	rate of change merch. imports	1901–13, 1922–39	31	no chai	nge from Table	II <b>-</b> 24
5(a)	diffusion index	rate of change merch. exports	1901-13, 1922-39	, 31	+•57	y <b>'=1.</b> 62+.24x	1.30

Note: The same critical values for correlation coefficients and von Neumann's ratios apply as in Table II - 24.

The strength of the negative correlation between our diffusion index and rates of change in the trade and current account balances excluding grain exports is slightly higher than for the previous analyses which included a five year moving average of grain exports. However, differences in the results obtained with the two alternative types of adjustment are relatively small. On the other hand, the positive coefficient of correlation in 'analysis 5(a)' is slightly less than that in 'analysis 5'. Again, however, the calculated value for von Neumann's ratio lies outside the acceptable range, indicating that significant autocorrelation was present.

Chart II - 3 is a graphic presentation of the rate of change method of analysis including a moving average of grain exports. In the early years of this period, changes in the trade balance appear to have lagged a full year behind swings in the business cycle. This behaviour persisted until 1907 but from 1908 to 1933 the timing of movements in the two variables was practically identical. Beginning in 1934, the trade balance displayed relatively small but continued improvements whereas the diffusion index was close to ninety from 1934 to 1937 inclusive. Finally, the trade balance did not reflect the brief but severe cyclical downturn in 1938.

A comparison of the trade balance and the index of prosperity for the period from 1900 to 1939 is presented in Chart II - 4. Unfortunately, we were forced to show the pre-World War I data separately since Taylor's index of prosperity was the only available measure of economic activity for these years. The Taylor index, furthermore, does not appear to be an entirely reasonable indicator of relative annual

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Chart II - 3 Changes in Merchandise Trade Balance Related to Changes in Business Cycle, 1900 - 39

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Chart II - 4

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levels of prosperity. For example, it climbs very rapidly after 1899 to a peak in 1902 and then declines in all but one of the following seven years. We have attempted, therefore, to adjust the index. Briefly, we used the actual average 1900 - 02 index value as a starting point for the year 1901 and the actual average 1911 - 13 index value as a terminal point for the year 1912. We then 'distributed' the increase in the index from 1901 to 1912 in a pro rata manner based upon the annual values of our diffusion index. The actual and adjusted indexes are shown in Table (vi), Appendix C. For the post-war prosperity index, we used our ratio of actual to potential output as described earlier.

After a brief period of relative stability from 1900 to 1902, the trade balance began to deteriorate rapidly. Chart II - 4 indicates the very close relationship between strong economic expansion from 1900 - 12 and the deteriorating trade balance which reached a record deficit in the latter year. Investment expenditures rose very rapidly during this period, more than quadrupling from 1902 to 1912. Surging domestic investment spending increasingly outpaced the growth in domestic saving and forced Canada to import more and more goods to meet its requirements.

Again from 1925 to 1929 when investment practically doubled, rapid deterioration was apparent in Canada's trade balance and current account balances as growth in domestic saving was insufficient to meet the heavy demands made upon it. The opposite situation pertained from 1929 to 1933 however, as investment fell precipitously and Canada's current account moved back into a surplus position.

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INCOLLECTION

Continuing slight improvement in the trade and current account balances after the cyclical trough in 1933 was due in part to the relatively strong recovery in the U.K. and Europe and the resulting rapid increase in Canadian exports. However, another important explanation was the extremely depressed level of domestic investment. Whereas gross national product in 1937 stood at 85% of its 1929 peak, the value of business gross fixed capital formation was just over 50% of its 1929 level. Despite relatively rapid increases in national income from 1933 to 1937, the non-agricultural economy in the latter year was operating at an estimated 79% of potential. In these circumstances, the marginal efficiency of capital remained very low and domestic investment failed to recover as rapidly as some other types of expenditure. On the other hand, domestic saving presumably increased approximately in line with aggregate income and therefore, the excess of saving over investment which first appeared in 1933 continued to increase from 1934 to 1937.

At this point we have completed our statistical investigation of the cyclical behaviour of the Canadian balance of payments for the period 1870 to 1939. We have demonstrated, both statistically and graphically, that domestic economic expansions during this period tended to be accompanied by deteriorating trade and current account balances and that recessions or depressions in the Canadian economy were almost always coincident with improving trade and current account bal-

ances.<sup>60</sup> Secondly, we showed that Canada's current account balance of payments was in a deficit position for much of the period and that only when the domestic economy was seriously depressed did a surplus appear. Finally, we demonstrated that over extended periods of time, the size or level of the trade and current account balances was closely related to the degree of prosperity in the domestic economy.<sup>69</sup> ;

Before completing our statistical examination of the current account for the post-war years in the fourth chapter, we shall expand in Chapter III our previous outline of the theory explaining the observed cyclical pattern of the current account balance. As suggested earlier, we suspect that during at least some of the post-war years the current account did not behave precisely as predicted by our hypothesis. If so, our study of the period since 1945 may be somewhat simpler after we have examined in detail the theory underlying the hypothesis.

Admittedly, our analysis prior to 1900 dealt only with the merchandise trade account; also, the available non-merchandise trade data for the period 1900 to 1926 may not be too reliable. Nevertheless, our study of the years 1926 to 1939 indicated we may be quite confident that cyclical changes in the trade account will usually dominate the total current account's cyclical behaviour.

On the other hand, we also recognize that an examination of the level of Canada's trade and current account balances encompassing a period of some years will reflect any underlying or structural changes in the balance of payments. For example, if Canada's competitive position relative to other nations were to deteriorate over a period of years, then our index of the current account balance would also deteriorate when compared to the level of domestic prosperity. We shall return to this matter in our concluding chapter. HIGHLE 21.

# EXPLANATION OF THE OBSERVED CYCLICAL BEHAVIOUR OF CANADA'S CURRENT ACCOUNT BALANCE

III

In the previous chapter, it was observed that during most cyclical fluctuations in the Canadian economy between 1870 and 1939, the current account balance of payments responded in the manner predicted by our hypothesis---that is, the balance deteriorated in times of domestic prosperity, and improved during cyclical downturns in the economy. We realize that, in some cases, our data may be partially inadequate or unreliable, particularly during the period prior to 1926 for which official national accounts were not published; also, annual data only were used in the analysis. Nevertheless, in our opinion, the cyclical pattern observed in the second chapter was sufficiently consistent to support the general validity of the hypothesis.

The current chapter will expand the development of the hypothesis which was summarized briefly in the introductory chapter. A statistical examination will be made of the basic propositions underlying the hypothesis. We shall also consider a number of secondary points which follow logically from our major propositions or are related to the hypothesis but which are not essential to its development.

#### Canada: A Dependent Resource Economy

Although there has been some disagreement about the relevance

to Canada of the staple theory of growth,<sup>1</sup> natural resources have undoubtedly provided a corner-stone for the country's development. Few will deny that the existence in Canada of large quantities of undeveloped natural resources together with the recognition by succeeding generations of the potential to be realized through their exploitation have contributed greatly to Canadian economic growth. The fact that popular opinion has always assumed an abundance of undeveloped natural resources in Canada may be taken, in itself, as some indication of its validity.

The principal natural resources are generally considered to be those providing energy (chiefly coal and waterpower, and more recently petroleum and natural gas) or food and raw materials (agricultural land and fisheries for the former, mines and forests for the latter). The accompanying tables provide some quantitative evidence concerning the abundance in Canada of many of these natural resources.

Table III - 1 reveals that just prior to the Second World War, Canada (including Newfoundland) ranked first on a per capita basis among those countries shown in terms of coal and lignite and also waterpower. In addition, most readers will be aware of the discovery since the war of very large reserves of petroleum and natural gas in Western Canada. Turning to those resources providing food, Table III - 1 also indicates that Canada and Newfoundland had more arable and cultivated land per capita than any of the other countries listed, and that in terms of pasture land Canada ranked fourth.

<sup>1</sup> M.H. Watkins, "A Staple Theory of Economic Growth", <u>Canadian</u> Journal of Economics and Political Science, XXIX (May 1963), 142 - 143.

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ALCOLUCE 11

Table III - 2 shows that in 1948, Canada had far more productive forest area per capita than any other region of the free world. The importance of Canadian production of forest products, particularly newsprint and wood pulp, relative to total world production is evident in Table III - 3. Furthermore, Canadian production as a percentage of the world total was as high in 1955 as it was in 1937. Finally, with regard to minerals, Canada was second to South Africa in iron ore per capita but far ahead of any other nation (see Table III - 1); and, as indicated in Table III - 3, Canada produced at least 10% of total world production of a number of other important minerals, including gold, silver, nickel, copper, lead, zinc and asbestos.

Although the data are far from complete, they do confirm that our initial assumption concerning the magnitude of natural resources in Canada is an apparently reasonable one. The following discussion outlines the implications for the Canadian economy of this abundance of natural resources.

In the most general terms, Canada's economic relationship with other nations is determined, as for any country, by its relative factor endowments. An abundance of land relative to labour and capital, or more specifically an abundance of land which is rich in natural resources, gives Canada a comparative advantage in the production of certain commodities such as forest products, mineral products and grain. Moreover, such comparative advantage forms the basis of international trade --to derive the maximum benefit from the world's resources, each country must specialize in the production of those goods in which it has a comparative advantage and then trade with other nations for their spe-

	Coal and lignite reserves coal equivalent (tons p.c.)	Potential water power at ordinary min. flow (H.P. p.c.)	Iron ore metal content (tons p.c.)	Arable and other cultivated land (acres p.c.)	Pasture (acres p.c.)
United Kingdom	3,700	0.015	38.1	0.28	0.40
West Continental Europe	1,510	0.20	31.4	1.09.	0.47
East Continental Europe	980	0.10	4.1	1.34	0.51
U.S.S.R.	6,300	0.46	94.0	2.35	5.70
U.S.A. and Cuba	17,000	0.25	48.0	2.66	4.40
Canada and Nfld.	37,300	2.27	217.1	5.04	6.78
South Africa	20,600	0.23	300.0	1.31	10.00
Australia and N.Z.	3,580	0.64	20.7	. 3.74	17.00
Argentina, Uraguay, Chile	107	0.48	12.7	4.64	18.70
India	66	0,10	5.9	1.29	0.52
China	546	0.05	1.4	0.55	1.78
Japan	227	· 0.10	0.4	0.23	0.11
All countries listed	3,000	0.16	24.6	1.30.	2.10

Table III - 1 Natural Resources Per Capita (last few years before 1939)

Source: A.J. Brown, Industrialization and Trade (London: Royal Institute of International Affairs, 1943), p. 21.

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	Million hectares	% of total	Hectares per capita
United States and Alaska	• 240	12	1.6
Canada	214	31	16.2
Free Europe	98	5.	0.3
Latin America	715	37	4.7
Central and South Africa	350	18	2.3
North Africa and Near East	20	l	0.2
Southeast Asia	225	12	0.4
Oceania	50	3	4.2
Japan	_22	<u> </u>	0.3
Total	1,934	100	1.2

Table III - 2 Productive Forest Area of the Free World: 1948<sup>1</sup>

Capable of producing trees suitable for industrial wood products as distinguished from fuel wood only.

Source: President's Materials Policy Commission, Resources for Freedom (Washington: U.S. Government Printing Office, 1952), V, 53. (sometimes referred to as the Paley Commission Report).

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				Table 1	III <b>-</b> 3					
Canadian an	d World	Production	of	Important	Mineral	and	Forest	Products,	1937	and 1955

· · · · ·		1937		1955		
	Canada (incl. Nfld.)	World	Canada as % of World	Canada (incl. Nfld.)	World ·	Canada as % of World
Population (millions)	11.3	2,013	0.6	16.1 <sup>1</sup>	2,737 <sup>1</sup>	0.6
Mineral Products						
Gold (000 Kilogrammes) Silver (metric tons) Nickel (000 metric tons) Copper (""""") Lead (""""") Zinc (""""") Tin (""""") Bauxite("""")	128 760 102 249 216 232 - - 372	919 8,400 113 2,190 1,640 1,640 1,835 210 3,700 480	14 9 90 11 13 13 - 78	141 896 159 296 184 393 - 965	840 5,900 205 2,730 1,930 2,640 15,350 15,350 1,315	17 15 78 11 10 15 - 73
Forest Products						
Roundwood (mill. cu. metres) Lumber, sawn ("""") Wood Pulp (OOO metric tons) Chemical Pulp (OOO metric tons) Newsprint ("""")	67.4 9.4 3,269 1,601 3,651	1,220 185 9,600 14,000 8,100	6 5 34 11 45	92.9 19.8 5,114 4,095 5,593	1,580 291 15,330 30,300 11,030	6 7 33 14 51
l 1956 population ·						

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# cialty products.<sup>2</sup>

If Canadians are to utilize the country's resources in the most efficient manner and realize the maximum benefit from their rich endowment of natural resources, they must specialize in producing these raw materials and related products. In other words, it is the actual development of Canada's natural resources and not simply their abundance relative to labour which enables the country to achieve high unit labour productivity and per capita incomes. Furthermore, although Canada is rich in total resources relative to population, this abundance is centred in very large amounts of relatively few resources. As a result, one would expect to find that a significant proportion of Canadian production is concentrated in a relatively small number of commodities and resource-based products.

Our documentation of this concentration of Canadian production will be rudimentary since once again the characteristic appears to be quite widely recognized. We shall simply look at the 1949 industry weights incorporated in the index of real domestic product. Goods-producing industries, wherein cyclical fluctuations usually arise, accounted for 53.1% of gross domestic product in 1949.<sup>3</sup> Table III = 4 shows

<sup>2</sup> In the extreme case, one country may possess all of the necessary resources and therefore be the only producer of a certain commodity. For example, Canada produces a very large proportion, though not all, of the world's output of nickel.

<sup>3</sup> As a country becomes more affluent, the ratio of services to total output almost invariably increases. The fact that service-producing industries made up almost one-half of GDP in 1949 might be viewed as an indication of Canada's success in utilizing its resource endowment to achieve a high level of per capita income. Table III - 4 Percentage Distribution of Gross Domestic Producty by Industry, 1949

General Industrial Classification		Resource-Based Industries			
Agriculture	10.71%	wheat other grains	3.80% 0.80		
Forestry	2.11	chiefly timber &	2.11		
Fishing and trapping	0.54	fishing, trapping	0.54		
Mining	3.24	metals fuels	1.92 0.92		
Non-durable manufacturing	14.74	pulp and paper other paper products	2.11 0.54		
Durable manufacturing	12.60	saw and planing mills non-ferrous metal smelting & refining primary iron & steel	1.44 1.03 0.84		
Other goods industries	<b>1.1</b>		د. همه همهریند.		
Sub-total	45.05		16.05%		
Construction	6.38				
Electric power & gas util-	1.65	· 	· · · · · · · · · · · · · · · · · · ·		
Total Goods-producing Industries	53.08%				

<sup>1</sup> The weights for wheat and other grains are rough approximations only. In 1949, wheat accounted for almost 30% and other grains about 6% of gross farm cash income. The wheat crop was very good in 1949 and participation and adjustment payments were high. On the other hand, one suspects that income from wheat production as a percent of total agricultural income would be larger on a net than on a gross basis. In any event, the table is intended only to indicate the importance of grain production in Canada.

Source: Dominion Bureau of Statistics, <u>Indexes of Real Domestic Product</u>, pp 105 - 123. ALC: N. LEWIS

a break-down of the weights assigned to these goods-producing industries. The left column indicates the relative importance of the various general industrial classifications while the right column shows the weights assigned to resource-based industries in which production is concentrated in relatively few products.

In 1949, 6.2% of gross domestic product was centred in the forest products industries, the principal products being timber, lumber, pulpwood, pulp and paper. Metal and fuel mining and metal smelting and refining (including primary iron and steel) made up 4.7% and grain production approximately 4.6% of gross domestic product. Finally, fishing and trapping accounted for 0.5% of output. Roughly 30% of Canadian production of goods was therefore concentrated in these relatively few resourcebased products. If we exclude construction and utilities, part of whose output is produced directly for the resource industries, the above percentage becomes 35%.

Such a concentration of production implies, however, that a large proportion of the output of these products cannot be consumed domestically. In most high income economies, consumption tends to be more diversified than production. When production is highly concentrated in relatively few products as in Canada, this tendency is reinforced; therefore, only a small proportion of Canadian output of commodities such as pulp and paper, lumber, grain, nickel and other metals can be absorbed by the relatively limited domestic market. If Canada is to achieve a high level of per capita income through concentration of production in these commodities, then it must be able to sell large volumes of them to other countries. Consequently, Canadian income is highly dependent

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upon exports of resource-based materials and products.

As a percentage of gross national product, exports of goods and services averaged 26.3% from 1926 to 1939 and 22.2% from 1946 to 1966. Merchandise exports accounted for 68.2% of total exports in the former period and 77.1% in the latter period. The Economic Council observed that "merchandise exports have traditionally accounted for around 50 per cent of the output of the goods-producing industries in Canada".<sup>4</sup> The few resource-based products mentioned in the previous paragraph have almost invariably constituted well over one-half of total merchandise exports. Table III - 5, which documents Canada's dependence on exports of these products, indicates the percentage distribution of merchandise exports by major commodity groups in 1954 - 56 and in 1963 -65. Three major resource product groups, namely grain, forest products, and selected metals, minerals and their products accounted for 74% of merchandise exports in 1954 - 56 and 67% in 1963 - 65.

In summary, we conclude that the sale of large volumes of resource products, primarily in the form of exports, plus investment expenditures required to develop these resources have generated and will continue to generate a sizable proportion of aggregate national income. One must consider not only income gained directly from the original expenditures but also income derived indirectly through the multiplieraccelerator mechanism.

Economic Council of Canada, Economic Goals, p. 78.

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# Table III - 5 Canadian Exports, by Major Commodity Groups as Percentages of Total Exports, 1954 - 56 and 1963 - 65

Gnaina	<u> 1954 - 56</u>	<u> 1963 - 65</u>
- wheat and wheat flour - barley, oats and rye	11.2% 2.7	12. <i>3%</i> 0.8
Forest Products	¢.	
- lumber and other <sup>1</sup> - woodpulp - newsprint	11.4 6.7 15.6	5.7 5.8 13.8
Metals, Minerals and their Products	·,	
<ul> <li>iron ore</li> <li>aluminum and products</li> <li>copper, nickel and products</li> <li>lead, zinc and products</li> <li>uranium</li> <li>crude petroleum and natural gas</li> <li>other metal and mineral materials<sup>2</sup></li> </ul>	2.2 4.9 8.8 2.4 0.6 1.1 6.0	4.2 4.3 7.6 1.9 1.1 4.5 4.8
Sub-Total	73.6	66.8
<ul> <li>other farm and fish</li> <li>chemicals and fertilizers</li> <li>primary iron and steel</li> <li>other manufactured goods &amp; miscellaneous</li> </ul>	9.4 4.0 1.9 <u>11.0</u>	8.4 3.9 2.9 <u>17.9</u>
	100.0%	100.0%

1 mainly pulpwood, plywood, veneers, logs, pit props, poles and paper products.

<sup>2</sup> mainly asbestos, platinum, silver and products, and abrasives.

Source: B.W. Wilkinson, <u>Canada's International Trade: An Analysis of</u> <u>Recent Trends and Patterns</u> (Montreal: Private Planning Association of Canada, 1968), p. 34.

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Furthermore, since such spending has usually been highly variable, it has probably tended to account for an even greater proportion of cyclical fluctuations in income. As an illustration of a situation whereby fluctuations in the demand for Canadian exports can lead to large swings in investment for resource development and thereby contribute to cyclical fluctuations in the overall economy, we shall briefly examine the 1954 to 1958 period. Table III - 6 shows exports of selected resource products and capital investment in resource-based industries (excluding agriculture) for the years 1954, 1956 and 1958. In just two years, from 1954 to 1956, exports of selected forest and mineral products plus resource-developing investment expenditures jumped 48% from \$2,376 million to \$3,522 million. During the same period, non-agricultural GNP rose 22%. In contrast, between 1956 and 1958 when exports of the above products plus investment in resource industries declined \$504 million<sup>5</sup> to \$3,018 million, non-agricultural GNP rose only 6%.

Since Canada's natural resources are plentiful relative to the country's labour force and since production is concentrated to take advantage of these resources, unit productivity of labour and therefore per capita incomes are high relative to other countries which do not possess or have not developed natural resources to the same extent. Consumption in practically all high income economies is very diversified and Canada is no exception. Most Canadians have sufficient pur-

<sup>5</sup> If uranium exports are excluded, the decline was \$735 mil-

lion.

Table III - 6 Resource Industries' Exports and Capital Investment, 1954, 1956, 1958 (millions of dollars)

Exports of Selected Resource Products	<u>1954</u>	1956	<u>1958</u>
newsprint wood pulp planks and boards aluminium, nickel, copper, iron ore, zinc uranium petroleum	636 271 325 589; 8 6	708 305 326 870 46 104	690 285 292 732 277 <u>73</u>
Total	1,835	2,359	2,349
excl. uranium	(1,827)	(2,313)	(2,072)
Capital Investment			

forestry	46	76	33
wood products	33	51	31
paper products	87	257	127
mining, quarrying, oil wells	278	542	342
non-ferrous metal products	54	117	96
non-metallic mineral products	43	<u>120</u>	40
Total	541	1,163	669
GNP excluding net farm income	23,854	29,135	30,883
Capital expenditures excluding agriculture	5,232	7,536	7,899
Merchandise exports excluding grain	3,263	4,058	4,180

Source: Dominion Bureau of Statistics, <u>Canada Year Books</u>, <u>1957</u>, <u>1959</u>, <u>1960</u>, <u>1961</u> (Ottawa: Queen's Printer, 1958, 1960, 1961, 1962).

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chasing power to demand a wide range of goods and services and there are no significant traditions or inhibitions in Canadian society to dull the motivating power of consumers' material wants.

Given that per capita incomes in Canada are high and that consumption demands are large and varied, one would expect the volume of imports to be considerable. Actually, however, a heavy dependence on imports can be regarded as simply the obverse of a large volume of exports. From an external point of view, the only way in which a country can receive payment over the long run for its exports is in the form of imports. In terms of the Canadian economy, a rather large proportion of domestic labour and capital is employed in the production of resource products sold externally; therefore, domestic production of some other goods and services is limited and must be supplemented by imports in order to meet demand, part of which is supported by income derived from these export sales.<sup>6</sup>

As noted above, Canada's natural resources are concentrated in relatively few commodities and therefore, a number of other needed raw materials must be imported.<sup>7</sup> Canadian production of certain products may be limited by inability to benefit from economies of scale accruing to manufacturers of very large quantities of such goods. Although in-

6 We have implied only that the volume of imports is large. No mention has been made of the relative levels of imports and exports.

In some instances, transportation costs make it more economical to import raw materials than to use distant Canadian sources. For example, in Montreal, Venezuelan oil is cheaper than Western Canadian petroleum.

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dividual incomes and demand in Canada are large, the aggregate domestic market is too small to support viable and efficient production of manufactured goods in great variety, particularly if the domestic market is fragmented. Unit production costs of many Canadian secondary manufacturers tend to be high relative to unit costs in the largest industrial nations. In addition, extensive research is frequently uneconomical and consequently Canadian technology may lag behind that in countries whose larger domestic markets support broader research and development programmes. Considerable secondary manufacturing has developed in Canada, but this has been primarily a result of the tariff structure which has limited international specialization by protecting high-cost domestic producers and encouraged foreign corporations to establish branch plants in Canada.<sup>8</sup>

Canadian merchandise imports include a wide range of goods. The following are some of the leading commodities and products imported into Canada during the past several years: tropical and semi-tropical agricultural products including fruits, berries, vegetables, sugar, coffee, nuts, vegetable oils and rubber; cotton, wool and synthetic fibres and textile products; newspapers, books, magazines and other printed material; iron and steel bars, rods, plates, pipes, tubes and wires; tractors and other farm equipment; engines and various types of machinery; automobiles and parts; electrical apparatus including

<sup>o</sup> In the past, Canadian tariff preference in other Commonwealth countries was also important in attracting American industry. To the extent that North American production is rationalized on a continental basis (such as was done recently in the automobile industry), secondary manufacturing in Canada will presumably be increased.

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# Table III - 7 Canadian Imports, by End-Use Classes as Percentages of Total Imports, 1954 - 56 and 1963 - 65

	<u> 1954 - 56</u>	<u> 1963 - 65</u>
Fuels and lubricants	10.7%	7.6%
Industrial Materials	27.6	26.5
<ul> <li>textiles, leather and fur materials</li> <li>metal</li> <li>chemicals</li> <li>other</li> </ul>	7.0 8.7 5.1 6.8	6.3 8.6 5.6 6.0
Investment Goods	31.9	30.9
- machinery and parts - electrical machinery - aircraft and trans. equip. and parts	16.6 4.7 5.4	19.1 3.9 4.2
and pipe	5.2	3.7
Consumer Goods	29.2	34.1
- food, beverage, and tobacco - clothing, household textiles, leather	10.2 2.2	10.4 1.7
- passenger autos, engines, and parts - household durables and semi-durables - other manufactured goods	6.7 4.2 5.9	10.5 2.8 8.7
Special items	.6	.8
	100.0%	100.0%

Source: Wilkinson, Canada's International Trade, p. 25.

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motors and generators; petroleum and petroleum products; coal; drugs; plastics; scientific equipment; and aircraft and parts. Table III - 7 shows the percentage distribution of Canadian imports by end-use for 1954 - 56 and 1963 - 65. In terms of the stage of fabrication, end products made up an average of 54.3% of merchandise imports from 1963 to 1965; fabricated materials accounted for 27.3% and crude materials only 18.3%.<sup>9</sup>

In summary, the attempt to benefit from its abundance of natural resources has made Canada's economy very open. Both exports and imports are large relative to national income.<sup>10</sup> As a result, Canadian national income is vulnerable to cyclical fluctuations and changes in economic policy and circumstances abroad. Fluctuations in the demand for Canadian exports which lead in turn to swings in investment for resource development constitute an important element of the business cycle in Canada. This dependence on foreign demand is heightened by the fact that a very large proportion of Canadian export sales are made to just two countries, the United States and the United Kingdom. At the same time, transactions with Canada are small relative to total production in the U.S. and the U.K. so that Canadian influence on them

<sup>9</sup> In contrast, the corresponding distribution by stage of fabrication for domestic exports from 1963 to 1965 was 17.4% end products, 46.6% fabricated materials and 36.1% crude materials, based on current dollars for both exports and imports. Wilkinson, <u>Canada's International</u> <u>Trade</u>, pp 26, 38.

10 It should be noted that non-merchandise trade is also significant. The principal items in this category are travel expenditures, payment of interest and dividends, freight and shipping charges and charges for business services.

#### tends to be minimal.

## Aggregate Saving and Investment and Canada's Current Account Balance

In the introductory chapter, we suggested that the desire to develop Canada's abundant natural resources will tend to make domestic investment large relative to aggregate income and also that domestic investment will probably tend to exceed domestic saving. In the second chapter, it was observed that Canada ordinarily incurs a deficit on its current account balance of payments. We can show, however, that the existence of such a current account deficit is equivalent to an excess of domestic investment over domestic saving. The reasons for a higher rate of domestic investment than domestic saving will then be examined briefly; finally, we shall consider the inflow of foreign capital which is required to balance Canada's chronic deficit on current account.

The basic national accounts identity 'saving equals investment' may be expressed more specifically as 'domestic saving equals domestic investment plus net foreign investment', <u>ll</u> which we write  $S_D \equiv I_D + I_F$ . However, net foreign investment for any country is simply exports of goods and services less imports of goods and services; therefore, the previous identity may be written  $S_D \equiv I_D + (X - M)$ . If we transpose and express the identity in the form  $S_D - I_D \equiv (X - M)$ , it immediately becomes obvious that the current account position of any country (that

<sup>11</sup> The domestic economy includes both the public and private sectors, so that government fiscal policy requires no special attention in our identity at this time.

is, its 'X - M') must be equal on an expost basis to the difference between domestic saving and domestic investment.<sup>12</sup>

When domestic saving exceeds domestic investment, then the left side of the identity  $S_{D} - I_{D} = (X - M)$  is positive and similarly exports will be greater than imports. Therefore, the country will enjoy a current account surplus. On the other hand, when domestic saving falls short of domestic investment, the left side of the identity is negative and the right side will also be negative. In this case, imports will exceed exports and the nation will be running a deficit on its current account. Assuming for a moment that all the nations of the world form one 'super-economy', then world saving must equal world investment since, in this case, there can be no distinction between domestic and foreign. In terms of the above identity, this is equivalent to stating that total world exports must equal total world imports, which is a The analysis explains, however, why some countries must have truism. a current account surplus whenever others are in a deficit position.

Using the saving-investment identity, we see that Canada's 'normal'<sup>13</sup> current account deficit which was observed in Chapter II is equivalent to a consistent shortfall of domestic saving relative to domestic investment. In effect, we have used the current account bal-

12 C.P. Kindleberger, <u>International Economics</u>, (Homewood, Ill.: Irwin, 1963), pp 189 - 190.

<sup>13</sup> In other words, if one were to calculate a long-term average of the current account balance, the result (either surplus or deficit) might be termed the 'normal' position of the balance.

ance of payments data from the previous chapter to prove indirectly that domestic investment ordinarily exceeds domestic saving.

As suggested previously, it seems quite reasonable to find that domestic investment has tended to be greater than domestic saving in Canada. Excepting periods of prolonged subnormal business activity, investment expenditures have been a relatively large proportion of total Canadian expenditures. For the years 1955 - 62, fixed investment (excluding housing but including government nondefence capital expenditures) as a percentage of total output was 19.0% in Canada, 16.0% in the European Economic Community, 12.9% in the U.K., and 12.2% in the U.S.<sup>14</sup>

One of the basic reasons for such a relatively high level of investment spending in Canada is the need to develop vast and complex resource industries. To bring a resource project such as a paper mill or a mine into production requires large capital investment in terms of the factors of production employed in its construction. In addition, the distances and physical barriers which separate various parts of the country necessitate very sizable investment in transportation facilities.

On the other hand, although per capita incomes in Canada are as large or larger than in most countries, Canada's relatively small population limits the size of aggregate income and therefore the size of aggregate saving which can be generated domestically. If we recall

<sup>14</sup> Economic Council of Canada, <u>Economic Goals</u>, p. 70.

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that saving is simply the difference between income and consumption, then over the long run domestic output employing only Canadian factors of production tends to be insufficient to meet all of the demands made upon it for both domestic consumption and investment.<sup>15</sup> Consequently, one finds that Canada ordinarily incurs a current account deficit to offset the imbalance between its domestic saving and investment, with imported goods and services making up for the inadequacy of Canadian output relative to expenditures.<sup>16</sup>

Such behaviour is typical of a relatively young and immature economy with large quantities of undeveloped natural resources. Development of these resources by the domestic economy alone would be achieved very slowly, if at all, since the required investment is large whereas the domestic saving that can be generated is relatively small. As long as domestic saving remains inadequate to develop its resources, Canada must be a debtor economy in order to realize the potential richness of these resources, borrowing from other nations in the form of imported goods and services.<sup>17</sup> The Economic Council of Canada noted

15 Since  $S \equiv Y - C$ , the identity  $S_D - I_D \equiv X - M$  can be written  $Y - (C + I_D) \equiv X - M$ . Therefore, the current account balance equals output less expenditure. See Kindleberger, <u>International Economics</u>, p. 202.

16 This assumes that Canadians have been and are currently unwilling to give up part of their standard of living in order to increase domestic saving and thereby finance domestic investment internally.

17 Initially, the inflow is in the form of investment capital, either as direct equity investment or through the sale of Canadian debt or equity securities. The proceeds of such 'borrowing' in the financial sense are then spent on imports of needed goods and services. THE REPORT OF THE PARTY OF THE

the traditional inflow of productive resources from abroad during most years, stating that "such inflows have tended to allow for larger and more prolonged expansion than would have been possible without access to additional resources from abroad."<sup>18</sup>

There are countries such as the United States and the United Kingdom however, whose natural resources are smaller relative to labour and capital than in Canada. Because the productivity of capital invested in their own country is lower than can be attained in Canada, they are willing to export capital to the latter. In addition to the higher prospective rates of return offered by investment in Canada, another motive which is frequently important is the desire to provide a source of raw materials for the manufacturing industries in the lending country.

We have seen that Canada speeds its development by importing goods and services to augment domestic production, and that certain foreign nations find it advantageous to invest financial capital in Canada, frequently in resource projects. In the Canadian balance of payments, the former appears as a current account deficit while the latter is seen as a capital inflow which provides Canada with foreign currency to finance its import balance. It is important to understand that both operations are closely related to domestic investment expenditures and therefore to each other. This relationship will be re-

Economic Council of Canada, Economic Goals, p. 78.

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examined later in the chapter. The import balance---capital inflow process is not necessarily bilateral since the goods and services imported by Canada from one country may be financed through capital inflows from another nation. Also, Canada does not necessarily import only those goods and services needed for resource development. In some cases, domestic factors of production may be used to produce investment goods, and the consumer goods which might otherwise have been produced domestically are imported instead.

Finally, we should comment on two other aspects of the nature of the capital inflows into Canada. First, a large proportion of the foreign funds entering Canada is usually long-term capital attracted by the underlying investment opportunities in this country. Such capital tends to be more permanent than short-term or "hot" money which flows in or out of a country according to relatively small short-term interest rate differentials. We shall reconsider the importance of this point when we investigate cyclical fluctuations of capital inflows into Canada later in the chapter.

In addition, we observe that inflows of equity rather than debt capital have financed part of Canada's current account deficits, particularly in the past twenty years. The question of 'foreign ownership', though a timely one, lies outside the scope of this paper. Excluding political connotations, the chief economic distinctions between issuing debt capital on the one hand or selling ownership of production on the other are possible differences first, in total return accruing to the foreign lender or buyer respectively and second, in the level of 'fixed' costs imposed on the economy. In terms of the effect upon the short-run

cyclical behaviour of the current account balance, the only apparent difference concerns the probable greater cyclical variability of dividends, that is the return to foreign equity capital, relative to the fixed interest rate payable to foreign debt capital.

In the long-run, of course, there may be a considerable difference in the balance of payments effects of the two methods of obtaining foreign capital. One must remember that interest or dividend payments are a 'legitimate' current account debit, in the sense that Canadian exports would be considerably smaller if foreign capital had not originally been obtained to finance development of resource industries. In other words, to reach an overall current account surplus position, Canada must eventually achieve a large enough trade surplus to more than offset its deficit on interest and dividends. However, when a large proportion of Canadian export capability has been developed through foreign equity capital, payments of dividends to foreigners will increase along with Canadian exports and could continue to do so indefinitely. Consequently, a surplus on the total current account will be more difficult to achieve.

## Cyclical Variations in the Current Account Balance of Payments

In the preceding sections of this chapter, we have described those characteristics of the Canadian economy which determine the nature of its international transactions. First, Canada is a resource economy highly dependent upon foreign trade. Second, in order to develop its natural resources, Canada's domestic investment tends in most instances to exceed its domestic saving, thereby creating a chronic deficit on

the current account balance of payments. Third, the deficits are largely offset by long-term capital inflows attracted by investment opportunities in Canada. With this background analysis, we are now ready to consider the short-term cyclical behaviour of the current account balance.

Initially, we must recognize the two-way relationships which exist between a country's current account balance and the level of domestic prosperity. Changes in the current account balance are a partial determinant of income and employment while on the other hand, changes in domestic prosperity will induce fluctuations in the current account balance. Obviously, an increase in exports or a shift from imported to domestically produced goods will raise the rate of domestic production and the level of domestic income. One must remember, however, that the level of exports and imports is only one of many determinants of domestic prosperity and secondly, that the initial impact of a change in exports and/or imports may be dramatically altered by other changes which follow indirectly. Similarly, any change in domestic income will tend to induce fluctuations in exports and imports of goods and services and thereby affect the current account balance.

Although we expect certain exceptions, the tendency will be for each of the four variables,  $S_D$ ,  $I_D$ , X and M to increase during cyclical expansions in Canada and to decrease during contractions. Let us examine briefly the functional relationships between the business cycle, defined in this case as fluctuations in national income, and each of these four variables. In an economy such as Canada's which is so heavily dependent on international trade, a significant increase in ex-

ports is ordinarily necessary to generate a major cyclical expansion. The sequence is usually initiated by rising income in our principal export customers, principally the United States, which creates additional demand for Canadian products. Increased exports directly augment the incomes of Canadian exporters and their suppliers, but in addition, the multiplier effect causes national income to increase by an amount greater than the original jump in export sales. Furthermore, as Canadian incomes rise, additional domestic investment will be induced which leads to a further increase in income. As we shall see in a moment, imports will also rise as income grows.

On the other hand, a serious decline in exports will almost invariably depress the Canadian economy, as the deflationary effects are spread and amplified by the multiplier-accelerator mechanism. In the context of the Canadian business cycle, the level of exports is an autonomous or exogenous variable, changes in which are frequently one of the primary causes of fluctuations in aggregate income.<sup>19</sup> Therefore, one often finds related movements among the American business cycle, the level of Canadian exports and the cycle in this country.<sup>20</sup>

<sup>19</sup> Although the effect is probably minimal unless the Canadian economy is operating quite close to full employment, we should also note that exports may not be completely independent of the level of income in Canada. As income increases, export production may have to compete with production for both investment and domestic consumption. See Kindleberger, International Economics, p. 190.

<sup>20</sup> Besides the importance to Canada of American demand for its export products, other factors promote Canadian dependence on American business conditions. These intangibles include close relationships between corporations (parent-subsidiary) and labour organizations, personal and financial connections, tourist travel and the flow of ideas through communications media. See Walton, "Vulnerability of the Canadian Economy", <u>Canadian Journal of Economics and Political Science</u>, XX (February 1954), 17.

In addition to the income-induced investment mentioned above, other investment is usually considered to be autonomous and therefore income-determining. On the other hand, however, both saving and imports may be treated as endogenous variables which react to changing levels of income. When incomes in Canada are rising, much of the increase will probably be spent on domestically produced goods and services, but it is natural that some proportion will also be spent on imported products and that another part of the increase will be saved. Conversely, when incomes are falling, Canadian demand for imports will also decline as will the amount of domestic saving.

Therefore, we may transpose our saving-investment identity and write  $I_D + X \equiv S_D + M$ , grouping the exogenous or partially exogenous variables on the left side and the endogenous variables on the right. Since the identity must hold for each separate period of time, a change in the variables on the left must be matched by a similar change in those on the right; thus  $\Delta I_D + \Delta X = \Delta S_D + \Delta M$ . In other words, any change in exports and/or domestic investment (whether autonomous or induced) will cause income to increase or decrease by an amount sufficient to induce an equal change in domestic saving plus imports.

Let us assume for the moment that the changes in each of the four variables, domestic investment, domestic saving, exports and imports, are positive in the case of a business expansion and negative in

the case of a contraction.<sup>21</sup> Obviously, if an increase in national income induces an increase in domestic saving which is exactly equal to the rise in domestic investment, then the induced increment in imports must equal the increase in exports and the current account balance will be unaffected. However, if domestic investment rises less than domestic saving, then imports will increase less than exports and the balance will improve. On the other hand, if investment increases more than şaving, the current account balance will deteriorate. Similarly during a cyclical contraction, the net foreign balance on current account will remain the same, improve or deteriorate depending on whether the decline in domestic investment is equal to, greater than, or less than, respectively, the decrease in domestic saving.

The cyclical variability of domestic investment relative to domestic saving and its equivalent, the behaviour of the current account balance, may be summarized as follows:

- (1) when  $\Delta I_D = \Delta S_D$ , then  $\Delta X = \Delta M$  and there will be no change in the current account balance during either a business cycle expansion or a contraction;
- (2) when  $\Delta I_D \langle \Delta S_D$ , then  $\Delta X \rangle \Delta M$  and there will be an improvement in the current account balance during a business cycle expansion and a deterioration in the balance during a business cycle contraction;

<sup>&</sup>lt;sup>21</sup> Our assumption is less restrictive than it might first appear to the reader. We are assuming that the marginal propensities to save, to import, and to invest are positive; that cyclical changes in exports will determine the direction of change of the overall economy; and that if autonomous investment should move counter to the cycle, it will be outweighed by the positive cyclical behaviour of induced investment.

(3) when  $\Delta I_D > \Delta S_D$ , then  $\Delta X < \Delta M$  and there will be a deterioration in the current account balance during a business cycle expansion and an improvement in the balance during a business cycle contraction.

It would be unrealistic to suggest that the cyclical variability of domestic investment relative to domestic saving will always remain the same in any given country; however, it is probably true that for many nations, one of these three relationships will tend to prevail. The previous chapter established that in Canada, there has been a consistent tendency for cyclical fluctuations in imports to exceed those in exports, thereby placing it in the third category above. In other words, Canada is a country in which cyclical changes in domestic investment are usually greater than fluctuations in domestic saving.

#### The Foreign Trade Acceleration Effect

We must now investigate why domestic investment tends to fluctuate more than domestic saving during swings in the Canadian business cycle and its counterpart, why imports tend to fluctuate more than exports. As we outlined in the introductory chapter, the major reasons appear to be, first the importance of what is termed the foreign trade acceleration effect in the Canadian economy; and second, accommodating cyclical swings in the inflow of long-term capital from abroad. In this section, we shall consider the former reason, while the latter will be examined in the following section.

If we assume that an upswing in the Canadian economy is initiated entirely by increased investment, that is an upward shift in

autonomous investment, and that exports are unchanged,<sup>22</sup> then the resulting increase in income would cause both saving and imports to rise. It is obvious that such an expansion falls into our third category, in which the current account balance would deteriorate; conversely, the balance would improve in a cyclical contraction stemming entirely from a decline in autonomous domestic investment. As suggested previously, however, it is unlikely that the Canadian economy will experience a major cyclical advance or decline independent of the cycle in other countries, that is without a significant increase or decrease, respectively, in exports. Consequently, we must determine why, for example, a cyclical upturn initiated by increased exports, the direct impact of which would improve the current account balance, in fact leads to a deterioration in the balance.

Let us assume that the Canadian economy is in a position of static equilibrium at less than full-employment. If rising incomes in its principal customers cause Canadian exports to increase, we can determine the new equilibrium level of national income and, of greater interest to us, the effect on the balance of payments as the economy moves towards its new equilibrium position. Since Canada is small relative to the rest of the world, the possibility of foreign repercussion may be safely ignored. Supposing initially that autonomous investment is unchanged, the increase in income  $\Delta Y$  equals  $k \Delta X$ , where k is the simple multiplier and has the value 1/(s + m) (s being the mar-

<sup>22</sup> This assumes that there is no cyclical shift in production away from goods sold externally to goods sold domestically. If such a shift occurs, it will reinforce the predicted deterioration in the current account balance.

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ginal propensity to save, m the marginal propensity to import and  $0 \le s, m \le 1$ . In other words, income will rise until the resulting increase in saving plus the increase in imports equals the original increase in exports. Obviously, the increase in imports would be less than that in exports and the current account balance would improve.

However, we cannot assume constant domestic investment in a dynamic situation where income is rising. Once an expansion begins, rising incomes generate an increasing sales volume which, together with improving profit margins, leads to an increase in earnings. As the business outlook improves and excess capacity shrinks, the marginal efficiency of capital begins to rise. Higher anticipated returns make numerous investment projects increasingly attractive. Once started, an expansion tends to become cumulative and self-sustaining, at least for a time. As investment increases, the multiplier causes national income to grow by an amount greater than the original capital expenditure; consequently, the marginal efficiency of capital moves even higher and investment spending accelerates further.

Therefore, as exports grow, domestic investment will tend to increase for several reasons. First, growing exports will lead to expansion in the export industries themselves; in addition, rising national income will induce increased investment in industries producing for domestic consumption; and finally, autonomous investment may be rising as well. The first two reasons are related since increased investment in both is induced by rising exports. Kindleberger terms this effect the 'foreign-trade accelerator' and states that an increase in exports may lead through increased investment and larger imports to a deterior-

ation rather than an improvement in the trade balance.<sup>23</sup>

To illustrate the way in which this can happen, let us suppose for the moment that there is no change in autonomous investment, that is  $\Delta A = 0$ . Since we are probably dealing with a relatively short period of time,  $\Delta A$  may not be very great in any case. We also quantify induced investment  $\Delta V$  in terms of a marginal propensity to invest v which equals  $\Delta V$ .<sup>24</sup> We now have a different and larger multiplier k' which must be applied to any increase in exports in order to determine the rise in income--in this case, k' = 1/(s + m - v). Thus, the increase in income resulting from additional exports will equal  $\Delta X / (s + m - v)$ , and the corresponding increase in imports  $\Delta M$  equals  $m \Delta Y$ , or  $m \Delta X / (s + m - v)$ .

Therefore, the change in the current account balance as a result of the initial increase in exports will be  $\Delta X - \Delta M$ 

 $= \Delta X \left[ 1 - m / (s + m - v) \right]$  $= \Delta X \left[ (s - v) / (s + m - v) \right]$ 

Consequently,  $\Delta X - \Delta M = 0$  when s = v,  $\Delta X - \Delta M > 0$  when s > v, and  $\Delta X - \Delta M < 0$  when s < v. On the other hand, when declining exports cause a business contraction the current account balance will react as follows:  $\Delta X - \Delta M = 0$  when s = v,  $\Delta X - \Delta M < 0$  when s > v, and  $\Delta X - \Delta M > 0$  when s < v.

<sup>23</sup> Kindleberger, <u>International Economics</u>, pp 196 - 197.

At present, we assume that s, m and v are all constant although, as we shall discuss later, these propensities may vary over the course of the business cycle.

It is evident that the effect on the current account balance of a change in exports is determined by the relationship of s to v, that is the induced change in domestic saving relative to the induced change in domestic investment. When s equals v, there will be no change in the current account balance. When s is greater than v, however, the balance will improve during a business expansion resulting from increased exports, but will deteriorate when declining exports lead to a contraction in the economy. Finally, when s is less than v, the current account balance will deteriorate as business expands and improve as business contracts.

We note that m, the marginal propensity to import, has no effect upon the direction of change in the current account balance when exports increase or decrease. However, the size of m does help to determine the magnitude of cyclical swings in income, since the multiplier k' varies inversely with the value of (s + m - v). In considering a change in imports  $(m\Delta Y)$ , the larger m is, the smaller  $\Delta Y$  will be, and vice versa. In other words, as long as s is less than v, an increase in exports which causes the economy to expand will lead to a deterioration in the current account balance, regardless of the size of m. The value of m merely determines the size of the increase in income which is necessary to induce a sufficiently large rise in imports to re-establish equilibrium.<sup>25</sup>

When the restriction on changes in autonomous investment is

<sup>25</sup> Note that unless s + m - v > 0, our model is unstable. In other words, m must be greater than (v - s).

dropped, our analysis becomes somewhat more complex. A change in income caused by changes in both exports and autonomous investment will equal  $(\Delta X + \Delta A)/(s + m - v)$ . Therefore, the resultant change in the current account balance will be  $\Delta X - \Delta M$ 

$$= \Delta X - \frac{m(\Delta X + \Delta A)}{s + m - v}$$
$$= \frac{\Delta X (s - v) - m\Delta A}{(s + m - v)}$$

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As long as changes in exports and autonomous investment are in a similar direction (that is both positive or both negative), the effect on the current account balance can be determined fairly simply. For example, if we suppose that  $\Delta X$ ,  $\Delta A > 0$ , then  $\Delta X - \Delta M = 0$  when  $\Delta X$  (s - v) =  $m\Delta A$ ,  $\Delta X - \Delta M > 0$  when  $\Delta X$  (s - v) >  $m\Delta A$ , and  $\Delta X - \Delta M < 0$  when  $\Delta X$  (s - v)  $\langle m\Delta A$ . Conversely, if we suppose that  $\Delta X$ ,  $\Delta A < 0$  (that is, that the economy is experiencing a cyclical contraction), then  $\Delta X - \Delta M = 0$  when  $\Delta X$  (s - v) =  $m\Delta A$ ,  $\Delta X - \Delta M < 0$  when  $\Delta X$  (s - v) >  $m\Delta A$ , and  $\Delta X - \Delta M = 0$  when  $\Delta X$  (s - v) =  $m\Delta A$ ,  $\Delta X - \Delta M < 0$  when  $\Delta X$  (s - v) >  $m\Delta A$ , and  $\Delta X - \Delta M > 0$ when  $\Delta X$  (s - v)  $\langle m\Delta A$ .<sup>26</sup>

Therefore, we note that the relationship of s to v is still the key determinant of the current account's behaviour. In the case where s is less than v, our conclusions from the earlier analysis remain valid --that is, the current account balance will deteriorate as business expands and improve as business contracts. However, v does not have to be as large relative to s as previously in order to explain the observed

<sup>&</sup>lt;sup>26</sup> When exports and autonomous investment (and therefore income and imports) are declining, we can rewrite our earlier equation by, in effect, multiplying by (-1). Therefore  $\Delta M - \Delta X = [m \Delta A - \Delta X (s - v)]$ /(s + m - v), and improvement in the current account balance (that is, the decline in imports exceeding the decline in exports or  $\Delta M > \Delta X$ ) will occur when  $m \Delta A > \Delta X$  (s - v).

pattern of cyclical behaviour in the current account balance. For example, s might be greater than v and yet the inequality required to explain our observations of Chapter II (that is,  $\Delta X$  (s - v)  $\langle m \Delta A$ ) could still apply. This can be explained by the fact that, in addition to the foreign trade acceleration effect which induces a change in investment whenever income responds to fluctuations in exports, we now have a similar process which might be termed the domestic acceleration effect, initiated by changes in autonomous investment.<sup>27</sup>

We have shown that s < v is sufficient to explain the cyclical behaviour of the current account balance observed in the second chapter. It was also noted that the same pattern could occur when s is greater than v, providing that  $\Delta X$  (s - v)  $\langle m \Delta A$ . However, it seems reasonable to assume that, in the context of the Canadian business cycle, changes in exports have been more important in most instances than changes in autonomous investment. Therefore, we suggest that the foreign trade acceleration effect has been the most important cause of the observed cyclical behaviour of the current account balance, inducing changes in domestic investment which tend to exceed those in domestic saving.

The chief reasons for this importance of the foreign trade acceleration effect as a determinant of the cyclical behaviour of the Can-

<sup>&</sup>lt;sup>27</sup> For the moment, we shall ignore the possibility that exports and autonomous investment might move in opposite directions, although this problem will be investigated later. At that time, we should expect to find that such divergences, together with cyclical changes in s, m and v, may explain some of the abnormal periods of behaviour in the Canadian current account balance which were observed in the previous chapter.

adian current account balance appear to be as follows: first, the significance of exports relative to the total Canadian economy; second, the fact that fluctuations in exports, particularly of resource products, tend to be large; and third, the close relationship between changes in export sales and expenditures on large resource development projects, including transportation facilities required to market resource products. Earlier in the chapter we observed the tremendous increase in resourceindustry investment between 1954 and 1956 which was stimulated by rising exports of resource products, followed by a sharp decline in such investment from 1956 to 1958. The magnitude of many of these projects and the 'lumpiness' of the spending required to bring them into production make their development highly irregular over short periods of time. Also, variations in such capital expenditures, together with the initiating swings in exports, lead to relatively large fluctuations in domestic income which in turn induce significant changes in investment by industries producing for domestic consumption.

In other words, practically all types of investment spending will increase during a business upturn initiated by rising exports. Large expansion programmes in the export industries themselves will stimulate demand for all types of consumer products. As output begins to strain existing capacity, expenditures for new plant and equipment will be made in many industries; in addition, business will repair and modernize its present facilities. Investment in inventories is also likely to increase, primarily to support the higher volume of business but reinforced perhaps by a desire to hedge against rising prices. Therefore, under the stimulus of rising demand accompanying a cyclical

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expansion, business investment in general will tend to increase very rapidly both in absolute terms and relative to other components of gross national expenditure. Similarly, a downturn in business and the resultant dampening of investor psychology shifts the marginal efficiency of capital downward, causing investment to fall. Since the multiplieraccelerator mechanism operates during a downswing as well as an upswing, investment spending reverses its earlier behaviour and declines more rapidly than other types of expenditures.

Finally, major resource developments probably have a significant psychological effect on the entire economy. Changing expectations may affect not only business investment but also personal saving and public investment. The former will be influenced by swings in consumers' desire to purchase durable goods. Also, contrary to what one might expect, direct federal government construction outlays have usually added to or, at best, failed to reduce the volatility of private investment spending.<sup>28</sup> In addition to large public expenditures for transportation facilities, which are often required to complement resource development projects, governments may have been unable or unwilling to withstand increased public demand for more government capital formation in prosperous periods. This demand probably varies directly with incomes and expectations in the private sector, becoming more in-

<sup>&</sup>lt;sup>28</sup> Economic Council of Canada, <u>Prices, Productivity and Em-</u> ployment, (Ottawa: Queen's Printer, 1966), pp 108 - 117. Although the federal government's share of total public investment is relatively small, cyclical variability in its capital formation has been as great as that of the provinces. On the other hand, municipal government construction since 1950 has shown a relatively steady increase during recession as well as expansion.

#### sistent in times of expansion.

## The Cyclical Variability of Long-Term Capital Inflows

We have suggested that cyclical fluctuations in domestic investment in Canada tend to exceed fluctuations in domestic saving, primarily because there is a large foreign trade acceleration effect in this country. As a result, Canada's current account balance, which is ordinarily in a deficit position, tends to deteriorate during a business expansion and improve as business contracts.

In other words, the normal gap between aggregate demand and aggregate output in the Canadian economy widens during periods of expansion. As expansion carries the domestic economy close to full-employment, output will be restricted by a lack of unused capacity. Furthermore, during a period of heavy capital investment, an increasing proportion of Canadian men and materials are directly employed on investment projects and therefore unavailable for production of consumer goods and services. Although the labour employed in capital formation is not producing goods for immediate consumption, it is earning a sizable income and possesses current purchasing power. Shortages may appear in a rather broad range of products including some consumer non-durables as well as durables and producers' goods.

Therefore, when the economy is buoyant and there is a high rate of capital formation, investment outruns saving by an increasing margin in physical demand-supply terms. There is an increasing gap between the amount of resources actually being devoted to capital formation and the amount which the economy is willing to release from production for current consumption. As a result, demand which cannot be satisfied by domestic production is filled by imports.

However, there is another side to this investment-saving gap, a financial side. Specifically, there is a scarcity of money capital as the Canadian demand for investment funds exceeds the available supply of current domestic money savings. As a result, during periods of heavy capital formation coincident with a strong business upturn, Canada must obtain an increased amount of financial capital from abroad to finance its expanding investment programme. Expansion of the domestic money supply does not represent an alternative to increased capital inflows from abroad. An expansive monetary policy cannot reduce the current account deficit and, in fact, will probably lead to a further deterioration. The problem lies in the conversion of Canadian dollars into the currencies of Canada's foreign suppliers. Whereas the monetary authorities can create domestic money to settle obligations within the country, they can do little to create acceptable international money. If additional capital does not flow into the country, the outcome of the resulting deterioration in the overall balance of payments position will be downward pressure on Canada's foreign exchange rate and her exchange reserves.<sup>29</sup> The eventual effects of prolonged pressure must be deflationary and under these conditions, an

<sup>&</sup>lt;sup>29</sup> Given a floating exchange rate, most of the pressure will probably fall on the exchange value of the Canadian dollar. If the exchange rate is fixed, then the reserve position is vulnerable. We assume that non-residents are unwilling to hold Canadian dollars per se, as they might hold a reserve currency.

expansion in business activity could probably not persist for any length of time before being cut off by the constraint of the balance of payments disequilibrium.

Furthermore, it is desirable and probably essential that a relatively large part of the additional inflow should be in the form of longterm investment capital rather than short-term funds. Rising interest rates needed to attract the latter type of funds are one problem, but a greater danger appears to lie in the instability implied by reliance upon large volumes of 'hot money'. Short-term capital flows can be extremely volatile and it would be virtually impossible to finance with short-term funds large resource developments which may not generate a profit for some years. Increases in net short-term indebtedness can carry a country through relatively brief periods of 'working-capital' or 'liquidity' types of balance of payments disequilibrium but are a source of weakness and problems if allowed to build up or persist for any length of time.

The cyclical variability of Canada's current account balance has in most instances been largely offset by swings in the inflow of long-term capital from abroad. As the current account balance deteriorates during periods of expansion, capital inflows tend to increase; on the other hand, when depressed business conditions lead to an improving current account position, inflows of foreign capital usually decline. In the former case, increasing amounts of capital are drawn to Canada from abroad by a desire to participate in the expansion and by the opportunity to earn a higher rate of return (relative to the risk) than elsewhere. Canada has traditionally possessed most of the

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background conditions necessary to attract foreign investment, particularly from the U.S. and the U.K., including political and financial stability and similarities of language, institutions and customs. Swings in capital inflows are related, however, to changes in the difference between the marginal efficiency of capital in Canada (especially in the resource industries) and that in alternative areas of investment.

On the one hand, expectations of large profits attract equity capital, as foreign investors purchase Canadian equities for their portfolios. Furthermore, as their own demands for Canadian raw materials increase, non-resident businessmen quickly realize the opportunities for expanding the production of Canadian resource products. Also, the increasing scarcity of some of these materials may create a desire for additional sources of supply which, together with large anticipated earnings, leads to direct investment in this country. On the other hand, a high marginal efficiency of capital makes entrepreneurs, whether Canadian or foreign, willing to offer relatively high interest returns in order to attract foreign debt capital.<sup>30</sup>

<sup>&</sup>lt;sup>30</sup> One may speculate that in addition to the need for accommodating cyclical variations in long-term capital inflows (as opposed to dependence on short-term flows), it may be preferable for equities, primarily direct investment, to provide at least part of the required variability in the total capital inflow. If Canada had to rely entirely on fluctuations in debt capital to accommodate the cyclical pattern of its current account balance, the required swings in long-term interest rates might be very large. Again, the effect could be a dampening of domestic investment which would seriously inhibit any business expansion.

Since our study is concerned basically with the current account balance of payments, we have not attempted at this point to document cyclical swings in the capital account (though we shall return to this matter in Chapter V). In any case, the margin of error in the available statistical data appears to be quite large--this is certainly true prior to 1926 and to a lesser extent from 1926 to 1939. As an indirect indication that cyclical fluctuations in the current account balance have generally been accommodated by complementary cyclical swings in the capital account, we note that the exchange value of the Canadian dollar has fluctuated within a relatively narrow range, even during periods of a floating rate when any overall balance of payments disequilibrium would be reflected in the exchange rate. It has been principally during periods of international economic or political disturbances such as 1919 = 20, 1930 = 33 and 1939 = 49 that the value of the Canadian dollar has been subject to significant change.<sup>31</sup>

We wish to emphasize that increased inflows of foreign investment capital during expansionary periods, associated largely with Canadian resource development, and decreased inflows of foreign capital during business contractions help to limit the possibility of disequilibrium in Canada's overall payments position, despite very large cyclical fluctuations in the current account balance. In fact, it is our contention that this cyclical variability on the capital side of the balance is a necessary condition which permits fluctuations in the

31 See Chart 23 - 1, <u>Report of the Royal Commission on Bank-</u> ing and Finance, p. 480.

current account balance of the magnitude, both in terms of amplitude and duration of the swings, which were observed in the previous chapter.

Domestic investment opportunities and actual capital expenditures, both depending primarily on the level of exports, provide a link between the inflow of foreign capital seeking to participate in and benefit from Canadian economic development, and the outflow of funds to pay for an excess of imported goods and services over exports. Cyclical variations in investment opportunities tend to produce complementary swings in capital inflows, while changes in actual investment expenditures lead to an increased need for imports, both in absolute terms and relative to exports.<sup>32</sup>

We have now completed our basic explanation concerning the cyclical behaviour of the current account balance. However, there are several secondary points which will be considered in the following sections. These include a brief look at the available data on domestic saving and domestic investment; a description of the product mixes of Canadian merchandise exports and imports; an examination of possible sources of variation in the current account's normal or expected cyclical behaviour; the unimportance of fluctuations in the non-merchandise trade balance relative to those in the merchandise balance; and finally a brief look at several possible alternative explanations of the observed cyclical behaviour of the current account balance.

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<sup>&</sup>lt;sup>32</sup> We also note that the inflow of labour resources, that is immigration, usually exhibits cyclical fluctuations somewhat similar to those of goods and capital. See Economic Council of Canada, <u>Economic</u> <u>Goals</u>, pp 78 - 79.

Data on the Cyclical Behaviour of Domestic Saving and Domestic Investment

In the second chapter, we observed that cyclical fluctuations in Canada's imports tend to exceed those of its exports--that is imports rising more than exports during an expansion and declining more than exports during a cyclical downturn in the economy. We have shown in the preceding sections that such behaviour is the equivalent of cyclical fluctuations in domestic investment which exceed those in domestic saving, and that the critical relationship is the value of s, the marginal propensity to save, relative to the value of v, the marginal propensity to invest. In this section we shall examine briefly the available statistical data on domestic saving and investment.

Tables (i) and (ii) of Appendix D show the various types of investment spending in absolute terms and as percentages of gross national expenditure.<sup>33</sup> Private new non-residential construction and purchases of new machinery and equipment are the largest components of total investment (together about 60% of the total). Along with physical changes in non-farm business inventories, which are similarly responsive to economic conditions, they tend to dominate cyclical fluctuations in aggregate capital expenditure. As we suggested earlier, government spending for fixed capital formation has been slightly cyclical, although variations relative to GNE have been much less significant

<sup>33</sup> Gross National Expenditure was adjusted to exclude changes in farm inventories and was also adjusted by the difference between our five year moving average and actual grain exports. These adjustments correspond with those made in our definitions of saving and investment.

than those in business fixed and inventory investment. Prior to 1939, the ratio of residential construction to GNE also varied directly with the cycle, but in the post-war period the ratio has exhibited slightly contra-cyclical behaviour.<sup>34</sup>

In summary, we find that the ratio of total investment spending to gross national expenditure has followed closely the degree of economic prosperity, as measured by the ratio of actual to potential output. The only significant exceptions since 1926 appear to be the years 1941 - 45, when the war effort took precedence over private investment, and the period 1956 - 59 which we shall examine more carefully in the next chapter.

With minor exceptions, the various types of investment expenditures discussed above, plus the balance on current account, equal the disposition side of the national saving account.<sup>35</sup> There are certain difficulties however, when one attempts to compare the disposi-

<sup>54</sup> Economic Council of Canada, <u>Prices</u>, <u>Productivity and Em-</u> <u>ployment</u>, p. 114. This apparent change will be re-examined in the following chapters.

<sup>35</sup> Dominion Bureau of Statistics, <u>National Accounts Income</u> and <u>Expenditure 1926 - 1956</u> (Ottawa: Queen's Printer, 1958), pp 50 -51. Also, <u>National Accounts Income and Expenditure 1962</u> (Ottawa: Queen's Printer, 1963), p. 35. and <u>National Accounts Income and Expenditure 1967</u> (Ottawa: Queen's Printer, 1968) p. 27. The national accounts definition does not include government fixed investment which is included in government expenditure on goods and services. The alternative procedure which we have used is described in Dominion Bureau of Statistics, <u>National Accounts 1926 - 1956</u>, p. 132. On the other hand, the national accounts includes the value of physical change in farm inventories which we have excluded. We note also that the national accounts current account balance differs slightly from the balance shown in the Canadian Balance of International Payments.

tion and source<sup>36</sup> sides of the national saving account.<sup>37</sup> The residual error of estimate required to balance the two sides was frequently large relative to the total, particularly prior to 1939. Furthermore, the residuals varied considerably from one year to the next, and from 1926 to 1939 the residuals themselves displayed a recognizable cyclical pattern. Non-residual sources of national saving were apparently overestimated in the prosperous years of the late nineteen-twenties and/or non-residual disposition of saving, that is investment, was underestimated. In the depressed years of the nineteen-thirties, the opposite tendency can be observed.

In Tables (iii) and (iv) of Appendix D, it was necessary to make several slight adjustments to saving and some of its components paralleling the adjustments in grain exports in our balance of payments statistics. Personal net saving was adjusted to exclude the value of physical

36 The national saving account-source is found in the same publications as the disposition side of the national saving account. See previous footnote.

<sup>37</sup> Whereas the national saving account-source should exclude first, the difference between undistributed earnings accruing to nonresidents which have been retained in Canada and undistributed earnings accruing to Canadians which have been retained abroad and second, capital consumption allowances on foreign-owned assets in Canada, statistical difficulties preclude these adjustments. However, this problem does not directly affect our analysis since comparable adjustments are not made in the current account balance of payments either. See Dominion Bureau of Statistics, <u>National Accounts 1926 - 1956</u>, p. 131 for a discussion of this problem.

change in farm inventories<sup>38</sup> corresponding to its exclusion from total investment. The adjustment on grain transactions in the national saving account-source, which represents accrued earnings of farm operators arising out of operations of the Canadian Wheat Board, has been included in personal net saving. In addition, the government surplus or deficit in the source side of the national saving account was adjusted by the amount of government fixed capital formation which we had added to the disposition side as described above. Finally, total saving was adjusted (except for the war years 1940 - 45) by the difference between our five year average of grain exports and actual grain exports. It seems not unreasonable to assume that year-to-year fluctuations in grain exports about a five year moving average may be absorbed chiefly by changes in the saving of farmers, whereas consumption and investment might be more stable in the very short-run and follow swings in the moving average.

The most important source of national saving, ordinarily accounting for at least 50% of the total as defined in the national accounts, is the category called capital consumption allowances and miscellaneous valuation adjustments. Included in this item are capital consumption or depreciation allowances of corporations, government business enter-

<sup>&</sup>lt;sup>38</sup> Farm inventories in this case include grain in commercial channels. Net income of farm operators from farm production used in calculating personal net saving includes changes in farm inventories narrowly defined to exclude grain in commercial channels. To the extent that changes in grain in commercial channels represent income of corporate rather than unincorporated business, they should be excluded from undistributed corporate profits rather than personal net saving. This would not affect the amount of adjusted total saving, however.

prises, unincorporated businesses and imputed allowances on owneroccupied residential dwellings. Since these allowances are directly related to the capital stock, which increases or decreases relatively slowly, they are not subject to large cyclical fluctuations. Expressed as a percentage of gross national expenditure, depreciation allowances since 1926 have almost invariably been within the narrow range of 10% to 13%. The only exceptions were the depression years 1931 - 33 (14.5%) and the war and immediate post-war years 1943 - 48 (8.8%).

Undistributed corporation profits are the other principal source of business gross saving. They are, of course, very volatile, increasing rapidly as the economy expands and falling sharply when business is slack. Their volatility is even greater than that of aftertax profits since dividend payments tend to decline less than profits in a downturn and to lag behind rising profits in a business expansion. Although cyclical swings in this component of national saving are large, we note that the absolute amount of retained earnings is usually quite small compared with capital consumption allowances; consequently, cyclical fluctuations in the former are dampened when considered relative to total business gross saving.

In the national accounts, an inventory valuation adjustment must be made on the income-source of saving side of the accounts to eliminate unrealized gains or losses caused by changes in the price of goods held in inventory. The adjustment is necessary since the expenditure-disposition of saving side of the accounts includes only the value of physical change in inventories (valued at average prices of the current period) which is net of the inventory valuation adjust-

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ment.<sup>39</sup> Since there is a fairly strong tendency for the general price level to increase during a business expansion and to decrease or at least rise at a much slower rate when the economy is slack, it becomes apparent that fluctuations in profits on inventory are partially responsible for the cyclical variability in undistributed corporate profits.<sup>40</sup> Consequently, the inventory valuation adjustment usually varies in a contra-cyclical manner to stabilize the statistical measure of total saving.

When considered before expenditures for government capital formation, the government budget on a national accounts basis has been in a surplus position in most years except 1930 - 35 and, of course, during the Second World War. More important, however, is the fact that the budgetary position has varied positively relative to the cycle, improving during periods of expansion and worsening during times of cyclical contraction. Some of this cyclical variability is presumably involuntary reflecting changing tax revenue, while some represents planned contra-cyclical fiscal policy.

Personal net saving is usually the second largest source of net national saving. Although removal of changes in farm inventories and inclusion of the adjustment on grain transactions smoothed the series slightly, the data indicate that personal net saving has tended to fluc-

<sup>39</sup> Dominion Bureau of Statistics, <u>National Accounts 1926 - 1956</u>, pp 167 - 168.

<sup>40</sup> Only part of the inventory valuation adjustment represents the corporate sector, of course. Other sources of saving are similarly overstated through inventory profits.

tuate widely over relatively short periods of time. This variability is probably due at least partially to its statistical derivation--it is calculated as the difference between personal disposable income and personal consumption expenditures. Although there is no proof, one suspects that a fairly large part of the residual error of estimate may frequently originate in the calculation of this series. Nevertheless, while the statistical reliability of short-run changes in personal saving may be suspect, one can usually observe a tendency for this type of saving expressed as a percentage of GNE to vary positively relative to the business cycle.

Fluctuations in personal disposable income, from which personal saving is derived, will usually be similar to those in total income. In the first place, personal income makes up a high proportion of total income so that changes in the two are likely to be similar in magnitude. In recent years, automatic stabilizers such as unemployment insurance, transfer payments and progressive tax rates on personal income have helped to insulate disposable income from cyclical fluctuations in the economy.

Consumers may expect any drop in their incomes to be temporary and therefore try to maintain spending close to its previous level. Purchases of some non-durables such as food and perhaps clothing may decline only slightly. Partially offsetting this relative stability in consumer purchases of non-durables and services is the variability of spending for consumer durables. Expenditures for expensive goods such as automobiles and household appliances and furniture are more
dependent upon consumers' current incomes and expectations. 41

Nevertheless, in most cases a given decline in income will lead to a proportionately smaller drop in consumption and consequently, saving will fall by a proportionately greater amount than income. Similarly, consumption will rise proportionately less than income during a cyclical expansion so that saving as a percentage of income will rise. We should note, however, that such changes in the marginal propensity to consume are short-term in nature and that the consumption function is probably relatively stable in the long-run. Both Duesenberry's 'relative income.hypothesis'<sup>42</sup> and Friedman's 'permanent income hypothesis'<sup>43</sup> attempt to explain the apparent long-run or secular stability and the short-run or cyclical variability of the marginal and average propensities to consume.

The former suggests that in the long-run an individual's marginal propensity to consume is a function of his relative position in the economy's scale of income distribution. Since relative income positions tend to change very little, consumption and saving in the long-run are relatively constant proportions of aggregate income. In

<sup>42</sup> J.S. Duesenberry, <u>Income</u>, <u>Saving and The Theory of Consumer</u> <u>Behaviour</u> (Cambridge: Harvard University Press, 1952).

43 Friedman, <u>A Theory of the Consumption Function</u>.

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<sup>41</sup> It would not be unreasonable to consider consumer purchases of durable goods as 'personal investment' and include them with the other categories of investment expenditure described earlier. In fact, Friedman excluded consumer durables from consumption in his analysis. See M. Friedman, <u>A Theory of the Consumption Function</u> (Princeton: Princeton University Press, 1957).

the short-run, however, Duesenberry believes that the aggregate marginal propensity to consume is a function of the ratio of present disposable income to past peak disposable income. Consequently, the marginal propensity to save will increase during a cyclical expansion when incomes are rising, and will decline as incomes fall during a contraction in the economy.

Friedman considers that both income and consumption include a permanent component and a transitory component. Current changes in income will affect consumption only to the extent that the consumer believes his long-run 'normal' income has been affected. The ratio of permanent consumption to permanent income depends on several variables such as the rate of interest, which he considers to be relatively constant in the long-run. When an individual assesses his long-run average or normal income, short-run fluctuations disappear (that is, the transitory component becomes zero) and therefore the secular average propensity to save is approximately constant. In his analysis of shortrun or cyclical fluctuations in income, Friedman contends that changes in the transitory component of income have little effect on consumption; instead, consumption will be significantly adjusted only when consumers believe that the new level of income (either increased or decreased) will be permanent.

In summary, both Duesenberry's and Friedman's consumption function theories confirm our contention that although in the long-run individuals' average propensity to save is relatively constant, it tends to vary in the short-run with the business cycle, increasing in time of expansion and decreasing when the economy is contracting. Moreover,

individuals' marginal propensity to save in the short-run is probably unstable, varying widely within the business cycle and when compared to previous cycles.

We have found, therefore, that capital consumption allowances are the largest source of domestic saving and that they are stable relative to the business cycle. Random short-run variations and probable statistical inadequacies complicate any analysis of the cyclical behaviour of personal net saving; however, we can assume that it will ordinarily vary positively with the business cycle and that its fluctuations will usually have moderately greater amplitude than swings in aggregate income. Corporate retained earnings expressed as a percentage of GNE increase rapidly as business expands and fall sharply during a contraction; and although swings in government saving are less regular, the same kind of behaviour is evident in most cycles. Finally, the inventory valuation adjustment ordinarily exhibits contracyclical variations.

Cycricar variations.

When the residual error of estimate is included as a balancing item, then by definition the difference between saving and investment must equal the current account balance. We have previously observed the usual cyclical behaviour of the current account balance and therefore, we know the nature of cyclical change in the difference between saving and investment. At this point, however, we wish to observe actual data on cyclical fluctuations in aggregate domestic saving and in aggregate domestic investment.

It was noted earlier that a large part of the residual error of estimate probably lies in the statistical derivation of saving rather

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44 than investment. Although we considered including the entire residual error of estimate with saving, it was divided equally between saving and investment as in the national accounts. The resulting ratios of saving and investment to GNE are shown in Chart III - 1, along with the ratio of actual to potential output. 45 As we were led to believe from our previous discussion of the components of saving and investment (as they appear in national accounts data), both domestic saving and investment have tended to vary positively relative to the business cy-In addition, as we knew must be the case from our observation of cle. the current account balance, the increase in investment during a business expansion tends to be greater than the rise in saving and, on the other hand, the decline in investment during a contraction tends to exceed the decline in saving. Although we anticipated that the cyclical fluctuations in saving and investment would be greater than those in aggregate income, the extreme variability in some cases of both saving and investment is somewhat surprising. Another point which should not be overlooked is the fact that the difference between saving and investment was usually small compared not only to GNE but also to the two

Some of the residual error of estimate could originate in the current account balance itself. However, the relatively small balancing item between the current and capital accounts of the balance of payments in most years serves to increase our confidence in the reliability of the balance of payments data.

<sup>72</sup> Placement of the latter ratio relative to the other two ratios was arbitrary. The scale for the ratio of actual to potential output was chosen to give what we considered to be a reasonable 'fit' with the savings and investment ratios.

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Saving, Investment and the Current Account Balance as a Percentage of GNE, 1926 - 66

## Chart III - 1

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variables themselves. Consequently, relatively small changes in total saving or investment frequently had a large impact on the difference between them.

Previously, we had suggested that the failure of the current account balance to deteriorate after the cyclical trough in 1933 was caused by the absence of a strong recovery in investment, which was retarded by large amounts of excess capacity. However, Chart III - 1 indicates that a relatively sharp resurgence in saving (chiefly personal net saving and retained earnings) was also at least partially responsible. On second thought, such an outcome might have been expected since reaction to the depression would cause individuals and business to save as much of their income as possible, both to restore liquidity and also as a hedge against further economic hardship. Since cyclical swings in the nineteen-thirties were so wide, it was difficult to adjust to rapidly changing incomes. By 1933 or 1934, most individuals' estimates of their long-run or permanent income levels were probably very low, and consequently a relatively large part of subsequent increases in income was saved.

#### Relative Product Mixes of Canadian Merchandise Exports and Imports

The statistical evidence presented in the second chapter and its related appendices established that: first, both merchandise exports and merchandise imports tended in general to vary positively with the business cycle; and second, that cyclical fluctuations in the latter were usually greater than those in the former. We shall now examine the product composition of merchandise exports and imports and the general cy-

clical variability of various product groups.

In the most general terms, the level of Canadian exports is determined chiefly by business conditions in the United States, the United Kingdom and, to a lesser extent, Western European and other countries relative to the performance of the Canadian economy (since domestic supply conditions may have some influence). The level of national income in these countries has a direct effect on their demand for Canadian products. Therefore, fluctuations in Canadian merchandise exports frequently have timing and amplitude similar to cyclical swings in production and consumption in those nations which are its principal It must be noted, however, that in these countries as in customers. Canada, the various components of total expenditure display varying degrees of cyclical fluctuation. Although this matter does not determine the cyclical behaviour of the current account balance, the product mix, of imports in particular, is important in the process through which cycles are transmitted to and from Canada.

As we stated earlier in this chapter, most Canadian exports are crude or fabricated materials rather than finished products. In addition, many of these commodities are consumer non-durable goods or producers' materials used in the production of consumer non-durables. Newsprint, wood pulp, grains and non-farinaceous animal and vegetable products are included in these categories. Consumer expenditures for non-durables tend to form a significant part of GNE, and along with consumer spending on services, such expenditures are the most stable component of aggregate demand, having a relatively low income elasticity. When an individual's personal income is falling, purchases of

these items may decline only slightly; similarly, rising personal income will induce only a moderate increase in demand, particularly in the short term. Conversely, producers' machinery and equipment and consumer durable goods, which are two of the most variable components of demand, form a small proportion of Canadian merchandise exports.

For some countries, imports from Canada of certain commodities account for a relatively small proportion of total supply. Consequently, when business in these countries is contracting, Canadian exports are likely to be subjected to increased competition from domestic producers who make an effort to increase their share of the home market. Canada's role as a marginal supplier is particularly relevant in the large U.S. market. In other cases, however, countries buying from Canada do not have the necessary natural resources to permit domestic production of the imported commodities. Therefore, the existence of unemployment and excess capacity has little effect on the proportion of demand for such products that is satisfied by imports, since substitution of domestic output is impossible.

Within the Canadian economy, the rate of growth of exports during a boom period may be retarded both by physical capacity limitations and also by decreased incentives and desire to export. A large increase in the demand for Canadian raw materials may push some export-based industries to the physical limits of their productive capability. Since a large, time-consuming capital construction programme is usually required to increase capacity, it may take some time before Canada can supply the desired volume of output. Under these circumstances, the value of such exports may rise as shortages drive up the price; however,

alternative sources or materials will often limit the increase in price. Under full-employment conditions, labour shortages may also restrict the level of exports since the geographical location and living and working conditions in some of the resource industries are less attractive than those in other commercial enterprises.

In non-resource industries, ability to sell their maximum possible output in the domestic market could dampen producers' desire to export, since the latter may involve certain inconveniences such as government licenses, delayed payment or future servicing problems. As suggested in the second chapter, some of these conditions may have been operative in Canada in the late nineteen-forties and early nineteenfifties.

We are not suggesting that cyclical swings in Canadian exports are necessarily small, either in absolute or percentage terms, nor are we contradicting an earlier statement that such changes constitute an important cause of fluctuations in the Canadian business cycle. We are merely pointing out that a significant proportion of Canadian export products are dependent on relatively stable components of aggregate demand in its principal customers, and that certain domestic circumstances may sometimes limit fluctuations in Canadian exports.

The commodity distribution of Canadian imports is considerably different from that of merchandise exports. This fact plays an important role in cyclical fluctuations in the merchandise trade balance and is directly related to the saving-investment relationship analysed previously. When Canadian business activity is accelerating and national income is rising, it is natural that some proportion of the increment in demand will be spent on imports. Similarly, when Canadian income is falling, the resultant drop in aggregate demand will affect imported goods as well as domestically produced articles. Two related factors must be noted, however, when one considers the cyclical variability of Canadian merchandise imports. First, a significant proportion of Canadian demand for producers' goods and consumer durables is satisfied by imports; and second, cyclical fluctuations in purchases of such products tend to be large.

Economies of scale are inherent in the production of most types of industrial machinery. The sizable investment required by these capital-intensive industries leads to heavy fixed costs which may make production uneconomical in a country such as Canada where demand is relatively small. Machines and equipment, particularly the heavy industrial types, are not purchased in sufficient quantity to provide a viable base for their production domestically. Large industrial nations such as the U.S. and the U.K. can manufacture such goods more cheaply and in addition, they may possess more advanced technology which permits them to build more productive capital equipment than Canadians.

Although unable to produce these goods economically, Canada does require them to facilitate efficient, low-cost production of producers' materials and consumer goods which can meet foreign competition in both domestic and export markets. Consequently, a large proportion of Canadian demand for producers' equipment is filled by imports; and, as indicated earlier, imports of capital goods account for an important share of total merchandise imports. We have also observed, however, the extreme cyclical variability of investment spending; therefore, imports

of producers' goods will exhibit a similar variability.

Expenditures for consumer durable goods such as automobiles and electrical appliances are also subject to wide cyclical swings. Purchases of these goods can be postponed, and they tend to be concentrated in prosperous periods when individual incomes are rising and confidence in future earning ability is high. Economies of scale and the relatively small home market may again limit domestic production and lead to large imports of consumer durables into Canada. Since they are dependent on a highly variable source of demand, imports of this type also tend to fluctuate with an amplitude greater than that in general business activity.

Consumer purchases of non-durables are relatively stable in the aggregate, but there are a number of specific goods which have an income elasticity considerably greater than one. It appears that many such goods tend to be imported into Canada rather than produced domestically. The classic examples which come to mind are 'high fashion' articles such as some types of clothing, jewellery and perfumes and also certain culinary delicacies. It is uncertain, however, whether sufficient volume of such luxury items are imported into Canada to increase noticeably the cyclical variability of total imports.

Finally, capacity limitations in the Canadian economy, particu-

46 In some cases, foreign subsidiaries have assembly plants in Canada but many component parts are imported from the parent company. The current programme to increase Canadian automotive production to equal its share of continental purchases has not reduced imports but it has lead to increased exports of automobiles and parts.

larly in secondary manufacturing industries, probably augment cyclical swings in imports. We have suggested that Canadian economic circumstances may sometimes inhibit efficient and competitive production of manufactured and semi-manufactured goods. Most companies engaged in manufacturing in Canada find that to operate profitably, they must maintain output reasonably close to capacity. The scale of operations of such companies is often too small to bear the heavy fixed costs of a large expansion which would require several years of normal growth to achieve efficient and profitable utilization.

As a result, a strong economic expansion may soon push such firms to the limit of their productive capacity. Since there will obviously be some lag before capacity can be increased, excess demand will spill over into imported goods during the interval. Long delays in delivery are another example of the capacity limitations which can cause buyers to turn to imported products when the Canadian economy is close to full-employment. A speculative inventory build-up would be an important additional stimulus to this process.

The fact that a relatively large proportion of Canadian imports are products for which domestic demand tends to be highly cyclical has an important effect upon m, the marginal propensity to import. Since Canada depends upon imports for a large proportion of its purchases of producers' goods and consumer durables and since demand for these products fluctuates widely, therefore the volume of imports of these products is also highly variable. At the same time, fluctuations in these components of aggregate demand are large relative to swings in total income and since imports of business and personal investment goods are

also large relative to total imports, therefore the value of m in Canada is large compared with many other countries. As we noted previously, given the values of s and v, the larger m is, the smaller will be the change in income required to offset any disequilibrating shift in exports or investment. The fact that m is relatively large implies that Canada tends to 'export' its domestic inflation or deflation and therefore cyclical fluctuations in Canada are smaller than would be the case if m were reduced.

# Possible Variations in the Cyclical Behaviour of the Current Account Balance

In the second chapter, we noted several instances in which the current account balance did not behave as indicated in our hypothesis. In this section, we shall attempt to determine why such exceptions may occur. Two possible causes will be analysed--first, a change by exports and autonomous investment in opposite directions; and second, cyclical changes in s, m and v.

Previously, we had assumed that autonomous investment and exports would change in the same direction, with increases in each causing national income to rise and decreases causing national income to fall. Given these circumstances, we found that if s were less than v, the current account balance would deteriorate during a cyclical expansion and improve during a contraction.<sup>47</sup> However, as soon as we drop this assum-

<sup>47</sup> In fact, we noted that as long as  $\Delta X$  (s - v)  $\langle m \Delta A$ , then the current account balance would behave in this manner. In other words, s  $\langle v \rangle$  was now a sufficient condition but it was no longer a necessary one.

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ption and concede that autonomous investment might increase while exports are falling or vice versa, our earlier method of analysis tends to break down. Under these circumstances, even the more restrictive  $s \lt v$  is no longer a sufficient condition for cyclical behaviour of the current account balance as observed in the previous chapter.

The problem, of course, is that when exports are moving in one direction and autonomous investment in the opposite direction, then  $(\Delta X + \Delta A)$  and therefore  $\Delta Y$  may be either positive or negative. For example, if exports are increasing and autonomous investment is decreasing, it would be possible for the current account balance to improve at the same time that income is rising, even though s were less than v. In other words, the increase in exports could be sufficient to outweigh the drop in autonomous investment, thus causing income to rise; but at the same time, the foreign trade acceleration effect could be so dampened by the effects of declining autonomous investment that imports would increase by less than the original jump in exports. Similarly, given a decline in exports which is larger than an accompanying increase in autonomous investment, it is possible for the current account balance to deteriorate in the face of a drop in income, regardless of the relationship of s to v.

Let us consider briefly the chances that exports and autonomous investment might move in opposite directions. We have mentioned the well-known tendency for our business cycle to coincide with that in the United States and to a lesser extent with business in the U.K. and other Western European nations. This coincidence is to be expected given first, the dependence of Canadian exports upon business in these

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countries and second, the importance of exports to total Canadian economic activity. However, Dr. O.J. Firestone concluded in 1952 that declining employment and income in the U.S. may or may not be accompanied by a concurrent decline in Canadian merchandise exports.<sup>48</sup> He suggested that the communication of U.S. recessions to Canada appears to depend on the strength of autonomous internal demand in Canada, as well as on the magnitude of the decline in the U.S. However, a prolonged or severe contraction in the United States will almost certainly be reflected in the Canadian economy, both through declining exports and autonomous investment.

An important source of variation between fluctuations in Canadian exports and the domestic business cycle was found in occasional differences between North American and European economic activity. The Canadian economy responded to any significant change in the U.S. and moved in fairly close harmony with the American cycle. However, the business cycle in the U.K. and other industrialized Western European nations periodically exhibited marked variations in amplitude and even direction relative to American business activity. In such cases, Canadian exports sometimes responded to the European situation, whereas investment moved in the opposite direction, that is in sympathy with the American cycle.

<sup>&</sup>lt;sup>48</sup> O.J. Firestone "Foreign Trade and National Welfare", lecture to Department of University Extension, McGill University, Oct. 22, 1952. Referred to in Edward A. Walton "The Vulnerability of the Canadian Economy", p. 15. Firestone cited 1949, 1923 - 24, 1911 and 1904 as periods in which declining activity in the U.S. had little effect on Canadian exports to that country or to third countries.

Under such conditions, fluctuations in Canadian economic activity would presumably be relatively small. This type of analysis appears to explain the behaviour of the current account balance in periods such as the mid-1890's. We remember that the trade balance improved markedly from 1893 to 1897 whereas business contracted for only part of this period and was stagnant during the remainder. The above-mentioned circumstances describe this period very well, since exports were relatively strong whereas autonomous investment was apparently weak during these years.

In the second chapter, we also observed that the current account balance frequently continued to deteriorate, or at least failed to improve, for some time after the upper turning point in the business cycle. Similarly, the balance did not usually begin to deteriorate immediately after a cyclical trough in business activity. It is reasonable, however, to expect that exports should tend to lead imports. After a decline in exports has caused a turndown in the economy, autonomous investment expenditures will probably continue to increase for a short time. In the first place, there may be a recognition lag before producers identify a divergence between their actual and expected sales. Secondly, at the upper turning point of the cycle, expansion projects currently underway cannot be easily or economically reversed and therefore, they will ordinarily be completed. Since construction of a new plant is quite timeconsuming, investment spending may continue at a relatively high level for some months after a cyclical peak has been reached, and imports of capital goods will be maintained at peak levels for a short time. As we proved in the previous analysis, the current account balance may

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continue to deteriorate under these circumstances, even though income has begun to decline. 49

Following a cyclical trough in Canadian business activity, investment expenditure may remain at a relatively low level for a time, but the lag may be slightly different than that at a cyclical peak. There will again be a delay in recognizing a cyclical turning point as well as a 'preparation lag' during which investment plans and designs must be drawn and contracts let. In addition, however, the marginal efficiency of capital may fail to rise for a considerable length of time following the trough, particularly if there is significant excess capacity. Only when output has recovered sufficiently to move close to its potential are firms likely to consider an expansion of capacity.

Excess capacity will not only dampen an upturn in autonomous investment but will also affect v, the marginal propensity to invest. In our previous analysis, we assumed that s, m and v were constant---in fact, however, each of these propensities is likely to vary, depending on business conditions. For example, when the economy is very depressed, investment expenditures and purchases of consumer durables will be low, not only in absolute terms but relative to income. Consequently, imports of producers' and consumers' investment goods will also be relatively small, and therefore the value of m, the marginal propensity to import, will be reduced. Similarly, when the economy and especially

<sup>49</sup> If capital imports begin to decline immediately, Canada might experience brief but possibly severe pressure on its overall payments position.

investment spending is booming, the value of m will be relatively high.

Furthermore, as we noted in our discussion of the components of domestic saving, s is probably rather unstable in the short-run. In general, one might expect s to increase for a time when incomes are rising and to decrease when incomes start to fall, since both individuals and business usually require some time to adjust their spending plans to changes in income. One also suspects that such adjustments may be fairly modest, as long as cyclical fluctuations in the economy are not too great and economic activity does not vary significantly from general expectations of its behaviour.

Variations in v are probably somewhat similar to those in s. In other words, when the economy is expanding, expectations of future business activity are high and v will rise. On the other hand, in a recession falling expectations will presumably reduce v. Since variations in s and v are at least partially offsetting, the effects upon our determinant of the direction of change in the current account balance, or more specifically (s - v), would appear to be relatively small in most cases. In any event, variations in the past have seldom been sufficiently large to change the basic inequality s < v.

Suppose, however, that the economy has experienced a serious recession and actual output is substantially below its potential. Given these conditions, expectations about future income will probably be depressed. If a recovery begins and income starts to rise, v will probably remain at a relatively low level for some time, because of poor profit expectations and large excess capacity. On the other hand, a relatively large part of any increase in income will probably be

saved, that is s will be high, both to restore liquidity and because the recovery is considered to be only temporary. Given these conditions, it is quite possible that s will exceed v and the current account balance will continue to improve, despite the fact that income has begun to rise. Contrary to other occasions when exceptions to the normal cyclical behaviour of the current account balance occur for only very limited periods, such a situation may persist for a considerable length of time, until income has risen sufficiently to restore expectations to a more normal level after which v will again exceed s.

This type of analysis appears to explain the failure of the current account balance to deteriorate after a cyclical trough was reached in 1933. Together with the possibility that autonomous investment may have continued to decline for at least part of this period (though not enough to offset rising exports), an abnormally large s and/or an abnormally small v appear to have been responsible for the unusual behaviour of the current account balance during these years.

Relative Importance of the Merchandise and Non-Merchandise Components

The available data in the second chapter suggested that merchandise trade was dominant in determining the cyclical behaviour of the current account. In the first place, the direction of change in the merchandise balance followed in most cases the pattern described in our hypothesis. On the other hand, we were unable to detect any regularity in the behaviour of the non-merchandise balance relative to the business cycle. Secondly, changes in the non-merchandise balance were usually small relative to changes in the merchandise balance and therefore, they had

little effect on the total current account balance. Consequently, most of our analysis has concentrated on merchandise trade and at present we shall examine only briefly the behaviour of non-merchandise transactions in the current account balance.

Canadian payments of interest and dividends are by far the largest invisible item and account for the traditional large deficit in non-merchandise trade. Theoretically, one would expect the balance on interest and dividends to display at least a slightly positive cyclical relationship. Dividend payments should increase in prosperity and decline during a contraction, while the reduced capital inflow accompanying a downturn should limit the increase in interest payments. In actual fact, the behaviour described above was apparent at times, but generally speaking the deficit on interest and dividends was relatively stable in the short-run while displaying a long-term secular uptrend. In addition, there were changes which at times seemed to have little or no relationship to the domestic business cycle.

The balance on travel expenditures displayed some tendency to behave as predicted by our hypothesis; however, fluctuations were usually small relative to those in merchandise trade. As we shall see later, the exchange rate between the Canadian and U.S. dollars is probably one of the most important determinants of the travel balance. Short-term movements in the balance on other invisible items seemed to be quite irregular with little or no cyclical relationship.

The present study of non-merchandise trade has been admittedly very brief, but we believe that its treatment to date in our analysis reflects its apparent relative unimportance in determining cyclical movements in the current account balance. In the following chapter however, where greater and more accurate data are available, we shall make a somewhat more detailed study of non-merchandise trade and keep it in mind as a possible cause of the suspected change in the behaviour of the balance after the cyclical peak in 1957.

### Possible Alternative Explanations of the Observed Cyclical Behaviour of the Current Account Balance

First there is a purely mathematical consideration which should be mentioned. If a country runs a large and persistent current account deficit as Canada does, then an equal percentage change in both exports and imports would cause the deficit to increase in absolute terms during prosperity when both exports and imports are increasing, and to decrease in absolute terms during a recession when both exports and imports are falling. It is obvious, however, that this explanation does not account for all of the cyclical change in the current account balance since cyclical swings remain even when we expressed the deficit as a percentage of the average of receipts and expenditures.

Another rather simple approach would be to relate cyclical swings in Canadian national income to those in other countries. If the amplitude of cyclical fluctuations in Canada tended to be consistently greater than the amplitude of fluctuations in our principal trading partners, then under certain conditions,<sup>50</sup> the variability of Canadian

<sup>&</sup>lt;sup>50</sup> The basic condition is that the income elasticity of demand for imports in Canada must be greater than other countries' income elasticity of demand for imports from Canada. In fact, this tends to be the case because of the relative product mixes of Canadian exports and imports.

imports would tend to be greater than that of its exports. Despite the volatility of domestic investment in Canada, there appears to be little evidence that relative fluctuations in Canadian national income have been consistently greater than those in countries with which Canada trades. Probably the most important reason is the functioning of the current account balance as a 'safety valve' in the Canadian economy. As described earlier, a dependence on imports of investment goods results in a relatively large marginal propensity to import, which reduces the effect upon Canadian national income of cyclical swings in exports and domestic investment. In other words, Canada tends to export part of its business cycle through the behaviour of the current account balance.

Finally, we shall mention the effects upon the Canadian current account balance of consistent opposite changes in the North American and European business cycles. Previously, we noted that if exports were increasing whereas autonomous investment and aggegate income were decreasing, then the current account balance would improve regardless of the relation of s to v.

Suppose for example that the Canadian economy, following the lead of the United States, is experiencing a relatively severe recession. Although Western European nations, particularly the U.K., were operating considerably closer to full-employment, buoyant Canadian export sales to these overseas markets would probably be insufficient to stimulate the Canadian economy and overcome the depressing effect of the U.S. contraction. Closer contacts with the United States mean that Canadian expectations will be more affected by economic conditions in that country

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than in Europe. Therefore, the U.S. is likely to be a more important influence on Canadian developments.

In the second chapter, we noticed several instances in which European or British business activity was considerably more buoyant than a depressed North American economy. European demand for Canadian exports together with restricted demand for imports in the domestic economy caused Canada's trade balance to improve markedly. The years 1895 - 96 and 1932 - 33 were the prime examples of this kind of situation. Although there appear to have been no outstanding examples, a European recession coinciding with a North American expansion could possibly have retarded Canadian exports and led to rapid deterioration in Canada's trade balance.

Given that the Canadian business cycle will almost invariably follow strong leadership from the American economy, then a significant variation in European economic activity may cause Canada's trade (and current account) balance to behave in the manner described in the hypothesis. However, this explanation can only supplement occasionally our basic theory, since there is no evidence of a consistent difference between North American and European cycles.

We have now completed a detailed description of our hypothesis, explaining the causes of the cyclical behaviour of the current account balance that we observed in the previous chapter. In Chapter IV we shall go on to complete our statistical investigation of the current account's cyclical behaviour for the period from 1946 to 1966. CYCLICAL BEHAVIOUR OF THE CURRENT ACCOUNT BALANCE, 1946 - 1966

IV

The current chapter will complete our statistical analysis of the cyclical behaviour of the Canadian current account balance of payments by examining the years 1946 to 1966. We have attempted to make our examination of this third and final period slightly more concise than that of the previous two periods. As we saw in Chapter II, in most years of both the 1870 - 1900 and the 1900 - 1939 eras, the cyclical behaviour of the merchandise trade balance (which in turn tended to dominate changes in the total current account balance) followed the pattern predicted by our hypothesis. Therefore, to the extent that the trade and current account balances behaved in a similar manner from 1946 to 1966, there should be less need for detailed verbal explanations than previously.

Furthermore, a greater quantity of reliable data for the postwar years permits a more precise statistical description of the cycle and reduces the need for verbal description of various indicators of economic activity required for the earlier periods in our study. Finally, most readers presumably have a greater knowledge of the post-war Canadian business cycle. For these reasons, we shall rely to a greater extent on charts which relate the behaviour of the trade and current account balances to the business cycle.

On the other hand, there are several reasons for rather detail-

ed discussion in this chapter. First, the many adjustments which took place in the immediate post-war and Korean War periods brought about sizable changes in Canada's current account balance which will have to be explained. More important, however, will be the need to make a thorough examination of all aspects of the current account from 1957 to 1962, when we suspect some change may have occurred in the adjustment of the current account balance to shifts in domestic prosperity.

The period under study was interrupted in mid-1962 by a number of policy measures in response to a run on the Canadian dollar. An indication of Çanada's weakening international position came in 1960 when the value of the dollar declined from about \$1.05 U.S. early in the year to par by the end of December.<sup>1</sup> By the end of the following year, a combination of government policy and decreased foreign capital inflow had reduced the exchange rate to approximately \$.96 U.S. Although the run on the Canadian dollar which lowered foreign exchange reserves from more than \$2 billion in December, 1961 to \$1.1 billion in June, 1962 appears to have been the immediate result of lack of confidence and uncertainties over government policy and a coming election, one immediately suspects the existence of more basic problems originating at least partially in the current account balance of payments.

1 Almost 2 cents of this decline occurred in the last week of the year, following an expression of concern by the Minister of Finance regarding the impact of capital inflows on the foreign exchange rate.

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### Period Three: 1946 - 1966

Since quarterly current account data have just recently become available on a seasonally adjusted basis, our quarterly balance of payments statistics in Tables (viii) to (xv) inclusive of Appendix B represent totals for the latest four quarters instead. Values of grain exports were derived from tables showing commodity breakdowns of merchandise exports found in various issues of the <u>Canadian Statistical Review</u>.<sup>2</sup> Other data were found in <u>The Canadian Balance of International Payments</u> <u>A Compendium of Statistics from 1946 to 1965</u><sup>3</sup> and <u>Quarterly Estimates</u> of the <u>Canadian Balance of International Payments</u>.<sup>4</sup> As in the 1900 to 1939 period, net non-monetary gold exports and freight and shipping receipts were included in non-grain merchandise exports while freight and shipping expenditures were included in merchandise imports. Throughout the post-war period, official contributions were excluded from other non-merchandise expenditures, and government transactions were excluded from both other non-merchandise receipts and other non-merchandise ex-

<sup>2</sup> Dominion Bureau of Statistics, <u>Canadian Statistical Review</u> (Ottawa: Queen's Printer, monthly). Grain exports were defined to include the categories wheat, wheat flour and other grain products. The third of these categories, other grain products, was apparently changed slightly after 1962 but the difference between the original and revised classifications was minimal.

Dominion Bureau of Statistics, <u>The Canadian Balance of Inter-</u> national Payments A Compendium of Statistics from 1946 to 1965 (Ottawa: Queen's Printer, 1967).

<sup>7</sup> Dominion Bureau of Statistics, <u>Quarterly Estimates of the</u> <u>Canadian Balance of International Payments</u> (Ottawa: Queen's Printer, quarterly). MUMIL C.IC.

penditures, since changes in these types of receipts and expenditures would appear to be unrelated to the domestic business cycle.<sup>5</sup>

The 'latest four quarters' method of calculation which we have employed permits the comparison of a given quarter in any year with the same quarter of the previous year, though it does not in itself give data for any single quarter.<sup>6</sup> Therefore, to measure changes in the business cycle on a comparable basis, we calculated the percentage increase or decrease in real non-agricultural gross domestic product for each quarter compared with the same quarter of the previous year.<sup>7</sup> Table (vii) of Appendix C includes estimates of actual real non-agricultural gross domestic product as a percentage of potential real non-agricultural output for the years 1946 to 1966. Selection of 1948, 1952 and 1956 as years of approximately full-employment implied a 5.75% annual growth in potential real output during this period, which we assume ended in 1957. Initially, we also assumed that growth in potential output prior to 1948 continued at the same 3.2% rate as we used in the nineteen-thirties.

<sup>7</sup> Since data for government transactions were available on an annual basis only, changes from one year to the next were pro-rated throughout the four intervening quarters.

For example, given the merchandise balance for the fourth quarter of 1947 (which equals the total of the balances in the four quarters of that year), we calculate our measure of the merchandise balance for the first quarter of 1948 by subtracting the balance for the first quarter of 1947 and adding the balance for the same quarter of 1948.

7 Dominion Bureau of Statistics, <u>Annual Supplement to the Mon-</u> <u>thly Index of Production</u> (Ottawa: Queen's Printer, 1966). pp 9, 74. Dominion Bureau of Statistics, <u>Index of Industrial Production April</u> 1968 (Ottawa: Queen's Printer, 1968), p. 10.

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Our assumption that the economy had returned to full-employment by 1966 implied a potential real growth rate of 4.35% per annum for the period 1958 to 1966. In estimating the ratio of actual to potential output, we used as a check on our own analysis the Economic Council's estimates<sup>8</sup> which are shown in Table (vii) along with our annual and quarterly estimates.

Post-War and Korean War Adjustments: 1946 - 1953

The immediate post-war years were characterized internally by relatively full-employment and rapid economic development and externally by widespread financial dislocations. Conversion of the Canadian economy to peacetime operation was accomplished quickly and smoothly. Private consumption and investment expenditures climbed rapidly when freed from wartime shortages and regulations which had created forced saving. Imports climbed 23% in 1946 in initial reaction to removal of restrictions on civilian imports from the U.S. As the post-war boom began rolling in 1947, imports jumped 38%, a tremendous rise even when allowance is made for a 15% increase in prices. Over 90% of the 1947 increase in imports came from the U.S.

On the other hand, the economic and financial position of many of Canada's traditional overseas customers was very serious. The war had destroyed much of their productive capacity, thereby limiting export capability and consequently their ability to earn foreign exchange.

<sup>o</sup> Economic Council of Canada, <u>Towards Sustained and Balanced</u> <u>Economic Growth</u> (Ottawa: Queen's Printer, 1965), p. 9. Economic Council of Canada, <u>The Canadian Economy from the 1960's to the</u> <u>1970's</u> (Ottawa: Queen's Printer, 1967), p. 86.

Although Canada's merchandise exports increased 9% in 1947, several other points must be remembered--first, export prices rose 15% during this time so that in fact there was a small decline in the volume of exports; and second, much of Canada's overseas export trade was financed through loans and credits by the Canadian government. Since there was little excess capacity in the economy and since domestic demand for goods was very great, Canada's short-run ability to increase exports was probably rather inflexible.

During 1947, rising deficits on interest and dividends and on other non-merchandise trade caused the total non-merchandise deficit to increase from \$191 million in the fourth quarter of 1946 to \$298 million in the third quarter of 1947.<sup>9</sup> With both the merchandise and nonmerchandise balances deteriorating, the over-all current account surplus had shrunk to just \$48 million by the fourth quarter of 1947. However, considering that by the end of 1947 the economy was operating very close to full-employment, even an approximate balance on current account was unusual when compared with previous experience. For example, under full-employment conditions in 1929, Canada had run a current account deficit of almost \$300 million, or 4.8% of adjusted GNE.

The explanation for the situation lies primarily in the level of investment which was still small relative to total output. Although

<sup>9</sup> All references in this chapter to quarterly balance of payments data refer to totals for the twelve month period ending in the specified quarter.

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the value of total investment expenditure<sup>10</sup> had increased from \$1.5 billion in 1945 to \$2.9 billion in 1947, investment as a percentage of gross national expenditure was still relatively low (21.8%) in the latter year. On the other hand, personal saving had dropped sharply from its very high wartime level, but the government's swing from deficit to surplus was even greater as it attempted to overcome inflation. In other words, post-war adjustments had not been completed by the end of 1947 and therefore, the current account balance had not yet returned to a normal level.

Canada's liquid reserves at the end of the war were very large, but since only part of the surplus with overseas countries was available as convertible exchange to pay for imports from the U.S., reserves were rapidly depleted in 1946 and 1947. Finally, the sterling crisis in mid-1947 forced the reintroduction in November of that year of exchange conservation measures in Canada, both on merchandise imports and travel expenditures. It is interesting to observe the effect of such action upon our four quarter moving total of balance of payments data. Any policy change such as the 1947 - 48 exchange controls shows up most noticeably in our statistics during the four quarters immediately following its introduction, since during this period we are in effect comparing data for a three month period which occurred after the change with data for a period which occurred before the change.

<sup>10</sup> As in the previous chapter, total investment expenditure has been defined to include new residential and non-residential construction, new machinery and equipment, the value of physical change in non-farm business inventories, and government gross fixed capital formation. See tables (i) and (ii) of Appendix D. Note, however, that the data quoted in the text exclude the residual error of estimate.

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Therefore, we find that during 1948, the previous deterioration in the current account balance was reversed. Between the fourth quarter of 1947 and the fourth quarter of 1948, the current account surplus increased from \$48 million to \$534 million. A larger surplus on merchandise trade accounted for \$348 million of the \$486 million improvement. Although growth in non-agricultural gross domestic product moderated slightly in 1948, most of the improvement in the current account balance probably resulted from exchange conservation policies. Despite a further 14% increase in import prices, the value of imports in 1948 was approximately unchanged from that in the previous year.

After the end of 1948, our four quarter total of the current account balance resumed its previous rapid deterioration. Chambers suggested that the Canadian economy reached a cyclical peak in October, 1948 and that the ensuing recession lasted until September, 1949.<sup>11</sup> The modest nature of the recession is indicated by the gradual decline in the ratio of actual to potential output to a low of 97.0% in the first quarter of 1950. After increasing at an annual rate of about 10% in the first half of 1949, imports declined slightly in the following three quarters; on the other hand, exports held steady in the first half and fell in the second half. Consequently, the trade surplus continued to decline throughout most of the year before turning up very slightly in the fourth quarter.

As a result of devaluation of the Canadian dollar in September, 1949, Canada's competitive position relative to the United States was

11 Chambers, "Canadian Business Cycles since 1919", pp 181 - 182.

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improved but at the same time, the larger relative devaluations in sterling and other currencies weakened the Canadian position vis-a-vis the U.K. and other overseas nations. Exports to the U.S. increased sharply in 1950 whereas exports to other countries declined; however, American demand for Canadian products was stimulated in the second half of the year by the Korean War while on the other hand, actual grain exports declined \$120 million in 1950 accounting for a sizable portion of the drop in exports to the U.K. and other European countries. Also, the improvement in our measure of the trade balance between the third quarter of 1949 and the second quarter of 1950 is somewhat misleading in that actual grain exports were declining whereas our five year average of grain exports rose strongly. In general terms, we conclude that the domestic economic slowdown in 1949 plus any advantages which may have been gained through devaluation of the Canadian dollar led to a pause in the deterioration of the Canadian current account balance toward a more normal peacetime level.

Aided by exchange controls, Canada's traditional non-merchandise deficit fell to a low of \$117 million in the four quarters ending in September, 1948. During the next three years, however, the non-merchandise balance deteriorated rapidly with the deficit more than quadrupling. Relaxed exchange restrictions resulted in a doubling of travel expenditures and a 35% increase in other non-merchandise payments between 1948 and 1951. Payments of interest and dividends, primarily the latter, rose steadily throughout 1949 and 1950, then levelled out as corporate profits peaked in the first quarter of 1951.

Turning now to the two year period beginning in the middle of 1950, we find that the behaviour of the merchandise trade balance from mid-1950 to mid-1951 was dominated by rapid inflationary expansion associated with the outbreak of war in Korea. In the following twelve month period, however, several other factors determined the behaviour of the trade balance: first, there was a marked decline in the pace of economic growth in Canada; and second, import prices fell very sharply causing a 10% improvement in Canada's terms of trade.

Real growth had already started to increase in the first half of 1950, but the recovery quickly accelerated after the start of the Korean War. Remembering previous wartime shortages, consumers made large expenditures for durable goods, and non-farm business inventories were built up very rapidly. During the final quarter of 1950 and the first three quarters of 1951, inventory accumulation totalled almost \$1 billion. Business fixed investment also rose sharply, jumping from a \$3.2 billion annual rate in the second quarter of 1950 to \$3.9 billion just a year later. Although higher prices accounted for a large part of these increases, it is significant to note that by 1951, total investment expressed as a percentage of GNE had finally exceeded its Under this pressure, imports leaped from \$3.0 billion in 1929 peak. the year ending June, 1950 to almost \$4.5 billion fifteen months later. Only about one-fourth of this 50% increase was attributable to higher prices. As a result of the surge in imports, in mid-1951 the trade account experienced its first deficit since 1929 - 30.

Non-grain exports, which had been relatively stable from mid-1949 to mid-1950, increased steadily between the latter date and mid-

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1952, and grain exports rose rapidly from about the middle of 1951 to the end of the following year. As in the case of imports, rising prices accounted for roughly one-quarter of a 40% increase in the value of total exports between the second quarter of 1950 and the second quarter of 1952.

A significant moderation in economic growth after the middle of 1951 was accompanied by a sharp curtailment of non-farm inventory investment. The volume of imports levelled out in the latter part of 1951 and most of 1952, but declining import prices coupled with the continued increase in exports described above, soon returned Canada's merchandise trade account to a surplus position. This surplus was large enough, in fact, to offset the non-merchandise deficit and create a small current account surplus for a brief period during 1952.<sup>12</sup> An increasing travel deficit in 1952 was approximately offset by a decline in the deficit on interest and dividends and therefore, the non-merchandise deficit was relatively stable at approximately \$500 million.

A brief resurgence in economic activity began about the second quarter of 1952 and continued to a business cycle peak in the second or third quarter of 1953. Business investment, both fixed and inventory, increased rapidly. Between the third quarter of 1952 and the same quarter of the following year, merchandise imports jumped almost \$600 million or 14%. Considering that the United States index of industrial

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<sup>&</sup>lt;sup>12</sup> The current account surplus was actually somewhat larger than shown in our data. As a result of a relatively brief but strong spurt in grain exports in 1952 and 1953, actual annual shipments substantially exceeded our five year moving average. At its peak in the third quarter of 1952, the current account surplus including actual grain exports was \$271 million.

production increased almost 11% during this time, the small increase in exports to the United States was rather disappointing. Once again strong domestic demands and lack of excess capacity may have limited Canada's short-run ability to increase its exports. Decreased shipments to other countries more than offset the increase in exports to the U.S. and, combined with the surge in imports, led to a \$763 million deterioration in Canada's foreign trade balance in the fourth quarter of 1952 and the first three quarters of 1953.

Despite generally prosperous conditions, corporate profits failed to improve in 1953. Together with the retention by foreign-owned corporations of a larger part of their earnings in Canada, stability in profits led to a further small decline in dividend payments. At the same time, investment income from abroad continued to increase, Canada's deficit on travel levelled off, and there was a small decrease in the deficit on other non-merchandise trade. As a result, the non-merchandise deficit declined from high of \$525 million in the third quarter of 1952 to \$490 million a year later.

Summarizing the behaviour of the current account balance of payments for the period 1946 to 1953, several features stand out. First, the domestic economy operated at or close to full-employment throughout these years and therefore one would have expected to observe rather large deficits. This was not the case, however, since the current account balance had begun the period in a very strong surplus position generated by the war. Second, the deterioration in the current account during these years reflected, to a considerable degree, a return to more normal peacetime conditions. Third, the current account's movement to-

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wards the deficit position which we expect in prosperous times was not smooth or continuous. There were a number of sharp swings in both the direction and rate of change of the current account balance, although actual output fell below potential output only twice during these years, with both periods of slower growth, in 1949 and in 1951, being brief and neither representing a serious cyclical decline. Reversals in the trend towards a normal current account deficit after 1946 were caused chiefly by factors which were not directly related to the domestic business cycle. Exchange controls in 1947, devaluation in 1949 and improved terms of trade in 1952 delayed the return to a more normal current account position until the second half of 1953.

Contraction: 1954 and Expansion: 1955 - 1956

During the contraction which began around the middle of 1953 and the subsequent expansion after mid-1954, the current account balance of payments once again displayed its normal cyclical pattern of behaviour. Although the 1953 - 54 recession was relatively short, it was more severe than the earlier slowdowns in 1949 and 1951. Production declined for several quarters and actual output dropped below 94% of potential. Residential construction continued to increase but all other types of investment expenditure declined sharply. As a result, total investment as a percentage of GNE dropped from 25.7% in 1953 to 22.6% in 1954.

From a peak in the third quarter of 1953 to a low in the fourth quarter of 1954, the value of merchandise imports fell 8%. This figure included declines of 12.5% in industrial materials, 9.5% in fuels and

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lubricants, 8.5% in investment goods, and less than 1% in consumer goods.<sup>13</sup> The decline in non-grain exports which had begun after the middle of 1952 continued until mid-1954, after which the trend was reversed. Consequently, the improvement in the merchandise trade balance which had started in the fourth quarter of 1953 continued throughout the following year. Grain exports reached a peak in 1953 and fell rapidly throughout 1954. As a result, the improvement in the actual trade balance during this period was considerably less than that in our measure of the balance which includes a five-year moving average of grain exports.

Canada's non-merchandise balance registered little change between the third quarter of 1953 and the third quarter of 1954, largely because a further decline in payments of interest and dividends offset increased deficits in the other two categories. However, in the fourth quarter of 1954, increased net payments in all three categories, travel, interest and dividends, <sup>14</sup> and other non-merchandise, caused the deficit to climb \$57 million. The larger non-merchandise deficit

13 Bank of Canada, <u>Statistical Summary Financial Supplement</u> 1957 (Ottawa: Bank of Canada, 1958), pp 108 - 109.

14 Dividend payments to non-Canadians in the second half of 1953 were \$153 million while in the second half of 1954, they were \$173 million. At the same time, corporate profits before taxes were \$79 million less in the second half of 1954 than during the same period of 1953. Transfers of income to foreign owners of Canadian subsidiaries frequently seem to be based on administrative factors within the overall company such as investment programmes or tax considerations rather than on the actual realization of profits.

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approximately offset a fourth quarter improvement in the trade balance.

Although business began to recover in the second half of 1954, Canada's trade surplus showed a further small increase in the first half of 1955. Imports were rising during this period but exports moved ahead more rapidly. In the ensuing expansion, non-grain exports registered increases of 15% and 8% in 1955 and 1956 respectively. However, the tremendous capital investment boom which developed early in 1955 drew in imports at such a rapid pace that the trade balance deteriorated by more than \$1 billion in just 21 months. Total investment as defined previously rose from \$5.7 billion (22.6% of gross national expenditure in 1954) to \$6.4 billion (23.6%) in 1955 and to \$8.8 billion (29.3%) in 1956. Such a tremendous increase was far beyond the capabilities of the domestic economy and consequently, Canada borrowed heavily from other nations in the form of both financial capital and physical imports. Between the middle of 1955 and the first quarter of 1957, total merchandise imports increased 39%.

Once again the overall current account balance was dominated by the merchandise trade account, although deterioration in the latter was reinforced by continued increases in the non-merchandise deficit. Between the third quarter of 1954 and the first quarter of 1957, Canada's non-merchandise deficit jumped more than 60% from \$499 million to \$816 million. About one-half of this \$317 million deterioration was centred in the interest and dividend account. Canada's travel deficit also grew very rapidly during this period, more than doubling from just \$77 million to \$163 million.

#### Contraction: 1957 - 1958

Canadian business activity, which had begun to level out in the latter part of 1956, dropped sharply in 1957 and remained depressed throughout much of the following year. The ratio of actual to potential output, which was slightly above 100% in the second half of 1956, had fallen below 93% two years later. Despite the downturn in the Canadian economy, completion of numerous large projects undertaken in 1955 and 1956 resulted in a further 13% increase in business fixed investment (excluding housing) in 1957. This was largely offset however, by a sharply reduced rate of non-farm inventory accumulation. In 1958, however, total investment dropped 9.5%, despite an upsurge in residential construction. The index of industrial production declined 3 1/2% from the end of 1956 to the end of 1957 and then rose about  $4 \frac{1}{2\%}$  in the following 12 months, but the annual average of the index was approximately unchanged from 1956 to 1958 inclusive. Nevertheless, personal disposable income rose 5.6% in 1957 and 7.5% in 1958 (the implicit GNE price index increased 3.0% and 1.9% respectively), indicating the extent to which automatic stabilizers tended to insulate personal income from the recession.

Non-grain merchandise exports were relatively stable during this period, increasing 4 1/2% in 1957 and then decreasing 2 1/2% in 1958. Merchandise imports, displaying their usual lag relative to the cycle, were unchanged in the first three quarters of 1957, but in the next 12 months they declined 11% to a low of \$5.5 billion in the third quarter of 1958. As a result, the trade deficit fell from \$780 million in the first quarter of 1957 to \$45 million in the third quarter of 1958.

Although this represented a sizable improvement in Canada's trade balance, a comparison with the earlier recession in 1954 reveals that the trade balance deteriorated by almost \$300 million between the fourth quarter of 1954 and the third quarter of 1958.

Deterioration in the non-merchandise balance during this period was even greater, however. Canada's non-merchandise deficit, which had increased \$260 million from the end of 1954 to the first quarter 1957, climbed another \$165 million by the third quarter of 1958, despite rising unemployment and excess capacity during this latter period. The total increase in four years, therefore, was \$425 million. A growing travel deficit accounted for \$99 million of the increase, net payments of interest and dividends \$162 million, and other non-merchandise items \$164 million. Possibly the Canadian current account had not yet reached a 'normal' position by the time of the previous cyclical trough in 1954; it seems doubtful, however, that even this possibility could explain the current account's deterioration of more than \$700 million between the 1954 and 1958 cyclical troughs.

Before going on to the business expansion in 1959, we should emphasize that the direction of change in the current account balance after the cyclical peak in early 1957 was that predicted by our hypothesis. Any abnormality, therefore, lies in the relatively moderate size of the improvement and, as we shall see in a moment, the continuation of large deficits in 1959 and 1960, despite slow economic growth.

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### Expansion: 1958 - 1959

The recovery which began around the middle of 1958 and continued until early 1960 was not a buoyant one; in fact, it was probably the weakest expansionary phase of the cycle in the entire post-war period. By spring of 1959, the ratio of actual to potential output had recovered to approximately 94.5%, but it failed to increase during the remainder of the year. Several factors served to limit economic growth in this period. Although investment as a percentage of GNE remained at a relatively high level, business fixed investment was approximately unchanged and therefore provided little further stimulus to the economy. A small increase in the ratio of investment to GNE in 1959 was due entirely to inventory investment which swung from liquidation of \$197 million in 1958 to accumulation of \$421 million in 1959. Other probable restraining influences were credit tightness and weak recovery in the American economy which also peaked in the first quarter of 1960.

Despite lack of strength in the expansion and the existence of excess capacity in Canada, merchandise imports jumped 14% between the third quarter of 1958 and the first quarter of 1960. The maximum trade deficit of \$399 million was reached in the third quarter of 1959, however, since merchandise exports, which had not begun to increase until the first quarter of 1959, lagged by six months at the peak of the cycle as well.

Canada's deficit in non-merchandise trade increased still further during this period, although the rate of growth was much slower than in the years 1954 - 58. Between the third quarter of 1958 and

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the first quarter of 1960, the interest and dividends deficit increased \$48 million, but relatively large gains in travel and other receipts limited deterioration in the former account to \$22 million and brought about a \$9 million improvement in the latter.

# Contraction: 1960 - 1961

From a peak in the first quarter of 1960, Canada's ratio of actual to potential output dropped from 94% to less than 90% four quarters later. Business gross fixed capital formation (including residential construction) declined 7.6% but consumer durable goods expenditures and exports showed little change. As in the previous contraction, personal disposable income continued to rise, though at a relatively slow pace.

Merchandise imports fell only 3.7% from \$6.2 billion in the first quarter of 1960 to \$6.0 billion in the second quarter of 1961; at the latter date, imports were only \$178 million (2.9%) lower than they had been at the cyclical peak in 1957. In the intervening four years, however, the economy had been contracting more than 50% of the time and non-agricultural real gross domestic product had increased only 8%, an average of just 2% per annum.

Between the first quarter of 1960 and the same quarter of 1961, the non-merchandise balance behaved about the same as it did in the previous expansion. Canada's deficit on interest and dividends climbed another \$50 million but net changes in the other two components of the non-merchandise balance were small. During the four years from early 1957 to early 1961, the deficit on non-merchandise transactions jumped

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almost \$300 million, only slightly less than the increase during the preceding six years. Although we recognized earlier that cyclical swings in business activity often have had relatively little effect on the non-merchandise balance, this very large increase during a period of economic stagnation suggests additional investigation is needed later in the chapter.

#### Expansion: 1961 - 1966

The final period of our analysis must be considered in terms of three sub-periods. The first runs from about mid-1961, when recovery began, until mid-1962, when the government was forced to introduce special austerity measures to halt a run on Canada's exchange reserves. The second period covers the ensuing twelve to fifteen months during which the immediate effects of these measures were evident in the current account balance. The final period includes the last quarter of 1963 and the years 1964, 1965 and 1966.

The two and one-half years of our first and second sub-periods saw a continuation of the subnormal economic growth experienced in the late nineteen-fifties. Business fixed investment was increasing, but the rate of growth was a relatively low 5% per annum until about the middle of 1963. Actual output quickly climbed to roughly 92% of its potential but failed to increase beyond this level. Between the second quarter of 1961 and the third quarter of 1962, merchandise exports and imports grew at roughly the same rate (10% per annum) and there-

fore, the trade balance exhibited little change.<sup>15</sup> In the four quarters following introduction of the austerity measures, however, exports continued to grow at approximately the same pace whereas imports, restricted by tariff surcharges, increased less than 3%. As a result, Canada's trade surplus rose \$427 million. As we shall observe later in the chapter, the position of the trade balance relative to the ratio of actual to potential output in the second half of 1963 was similar to that in late 1954 when the economy was beginning to recover from the 1953 - 54 recession.

Turning now to the non-merchandise account, the travel balance registered a \$74 million improvement between the first quarter of 1961 and the second quarter of 1962. Presumably, the most important cause of this improvement was the decline in the exchange value of the Canadian dollar during this period. Travel in Canada became more attractive for Americans, particularly since the U.S. economy had entered an expansionary phase. On the other hand, Canadian travel expenditures failed to increase significantly. Despite improvement in the travel balance, however, rising expenditures for other invisibles and for interest and dividends led to a further slight deterioration in the total non-merchandise balance.

During the five quarters following introduction of exchange conservation policies in June, 1962, Canada's non-merchandise deficit decreased \$182 million. Practically all of the improvement was con-

<sup>15</sup> Within this period, however, there was a fairly large swing in actual grain exports reflecting the initial large wheat sale to Communist China. centrated in the travel account which moved into a small surplus position for the first time since 1951. As a result, the total current account deficit fell from \$886 million in the second quarter of 1962 to just \$267 million in the third quarter of 1963.

Our final sub-period, from the end of 1963 to the end of 1966. witnessed the first strong expansion in the Canadian economy since 1956. Investment rose rapidly in all three years, although as a percentage of GNE it did not attain the 1956 - 57 peak. Until the fourth quarter of 1965. when there was a very large increase in merchandise imports, Canada's trade surplus moved within a relatively narrow range of \$500 million to \$650 million. Although imports increased fairly rapidly in line with expanding business activity, exports grew at a similar pace. As the economy approached full-employment in the latter part of 1965 and early 1966, merchandise imports began to grow more rapidly than exports and the trade surplus narrowed significantly, though it did not move into a deficit position as at most previous cyclical peaks. The Canada - U.S. Automotive Trade Agreement promoted a very sizable expansion in both exports and imports of motor vehicles and parts in 1966; Canada's deficit in such trade declined about \$200 million, however.16

During the four quarters ending September, 1964, Canada's nonmerchandise deficit increased \$191 million. The deterioration was

16 B.W. Wilkinson, <u>Canada's International Trade: An Analysis</u> of Recent Trends and Patterns (Montreal: Private Planning Association of Canada, 1968), p. 75.

caused by the return to a small deficit on the travel balance and by rapid growth in net expenditures of interest and dividends. In the final two years of our study, however, there was a smaller increase in the travel deficit, and further increases in net payments of interest and dividends were partially offset by rapidly rising receipts for other invisibles. Therefore, Canada's non-merchandise deficit increased \$86 million, but the deterioration was small relative to that in earlier periods.

### Summary of the Period 1946 - 1966

Having completed a verbal description of the relationships which existed between the Canadian current account balance and the domestic business cycle since the end of the Second World War, we conclude that in terms of direction of change, the cyclical behaviour of the balance clearly supported our hypothesis. We remain undecided, however, concerning the magnitude of the current account's response to changing cyclical conditions. On the one hand, from mid-1957 to mid-1961, the current account balance improved more than \$700 million. On the other hand, the current account deficit at the latter date was still almost \$900 million, yet the economy was operating at only 90% of potential after four consecutive years of relatively slow growth.

In order to summarize the period as a whole and hopefully to obtain a clearer perspective on the remaining uncertainties, we have prepared several charts similar to those in the second chapter. It is unnecessary to describe the charts in detail--the relationships which they portray are quite evident in most cases. However, we shall point

out a few of the general conclusions that can be drawn from the charts.

- Chart IV - 1 indicates the very high correlation between changes in merchandise imports and changes in real non-agricultural gross domestic product since 1946.<sup>17</sup> Differences in the early post-war years included 1947, when import growth was very rapid in order to satisfy demands pent up during the war; and 1952, when rapidly falling prices caused a sharp decline in the value of imports. Of greater importance were the differences during each of the recessions 1953 - 54, 1957 - 58 and 1960 - 61, when imports decreased less rapidly than one might have expected given the relationship which applied in expansionary phases of the cycle. In other words, one linear relationship between the growth rates of real non-agricultural GDP and merchandise imports tended to apply when the Canadian economy was experiencing a cyclical expansion, but during periods of slower economic growth a second linear relationship tended to apply. Obviously, one cannot state precisely at what point this 'kink' occurs, but it appears to be approximately at a 4% rate of growth in output.

On the basis of Chart IV - 1, we can suggest that when real non-agricultural GDP was increasing at a rate of 4%, merchandise imports tended to be approximately unchanged, that is the rate of growth was zero. For each additional one percentage point in the rate of growth of output above 4%, the rate of growth of imports tended to increase five percentage points. Thus, when growth in real output was

17 Our choice of the relative position and size of the scales for the two rates of change was designed to provide the closest possible fit.

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Chart IV - 1 Changes in Merchandise Imports Related to Changes in Business Cycle, 1947 - 66

8%, imports tended to be growing at a rate of 20%. On the other hand, it appears that for each reduction of one percentage point in the growth rate of output below 4%, merchandise imports tended to decrease by two percentage points. Therefore, when growth in output was nil, imports tended to decrease at a rate of approximately 8%. In Chart IV - 1, we have sketched the percentage change in merchandise imports during each of the above-mentioned recessions on the basis of the different relationship applying when growth in output was less than 4%.

The only other point that we wish to make about Chart IV - 1 concerns a lag in the cyclical behaviour of imports which was also described in the second chapter. Shifts towards a decreased or increased rate of growth of imports usually occurred about three months after a similar change in the rate of growth of output.

Chart IV - 2 and Chart IV - 3 relate the percentage change in real non-agricultural GDP and the rates of change in the merchandise trade and current account balances respectively. It is evident that changes in the current account balance are determined almost exclusively by changes in the trade balance, with the non-merchandise account having relatively little effect other than to moderate slightly the extent of changes in the merchandise trade balance.

Although the general cyclical behaviour of Canada's current account balance as described in the hypothesis is identifiable in these charts, the degree of correlation between the rates of change of output on the one hand and the trade and current account balances on the other is much less than in the case of merchandise imports. Instead of relying on this chart to indicate the extent of changes over

Chart IV - 2 Changes in Merchandise Trade Balance Related to Changes in Business Cycle, 1947 - 66



Chart IV - 3 Changes in Current Account Balance Related to Changes in Business Cycle, 1947 - 66



prolonged periods of time, however, we shall turn to our 'index method' of analysis relating the level of the current account balance to the level of domestic prosperity.

This is done in Chart IV - 4 which shows the ratio of actual to potential output (as a measure of the degree of prosperity) and our indexes of the merchandise trade and current account balances. Again the relative placing and size of the two scales was determined subjectively to achieve what seemed to be the best fit. We were influenced by a belief that the current account balance had returned to an approximately 'normal' position relative to the state of domestic prosperity by 1953 - 54.

As drawn, the chart suggests the following: first a large part of the gap between our index of prosperity, that is the ratio of actual to potential output, and our index of the current account balance actually developed in 1956 and the first half of 1957 when there was a very rapid deterioration in Canada's current account balance of payments; second, from 1958 to 1961, the absence of improvement in the non-merchandise account partially offset an improving merchandise balance; third, the gap between the index of prosperity on the one hand and the indexes of the trade and current account balances on the other began to narrow after the first quarter of 1961, when the upturn in the former was not reflected in the latter two indexes, but it was only during the fifteen month period after mid-1962 that the trade and current account balances improved significantly, eliminating the gap between them and the index of prosperity; and fourth, deterioration in the trade and current account balances during the strong expansion of business activity between the latter part of 1963 and the end of 1966 appears to have been relative-

ly limited.

Chart IV - 4 Indexes of Merchandise Trade and Current Account Balances Related to Index of Prosperity, 1947 - 66



187.

In other words, weakness in Canada's current account balance of payments position began as early as the latter part of 1955. Given the strong business expansion from 1955 to 1957, a deterioration in the current account balance was to be expected; however, Chart IV - 4 indicates that, when compared with earlier and later cyclical peaks, the deficit had grown abnormally large by the first half of 1957. Furthermore, the deficit remained large relative to the degree of domestic prosperity until after 1962. On the other hand, given the strength of the cyclical expansion in the final three years of our study, one might have expected a somewhat larger current account deficit to have developed by 1966.

Previously, we stated that as an alternative to the index method of analysis, we would also express the current account balance as a percentage of gross national expenditure. In addition to the merchandise, non-merchandise and overall current account balances, we also examined the ratios of exports and imports, both merchandise and non-merchandise, to gross national expenditure.<sup>18</sup> Annual data only were used and the analysis included the years 1926 to 1939 as well as the post-war period, although the statistics are probably considerably less reliable for the pre-war years. These data are given in Table (xvi) of Appendix B and are shown graphically in Chart IV - 5.

Although we are again dealing in terms of broad aggregates, it is possible to draw from the analysis several conclusions about the

18 We used the same adjusted value of GNE as was described in Chapter III.



Chart IV - 5 Components of Current Account Balance as a Percentage of GNE, 1926 - 66

current account's behaviour which are in general agreement with those reached previously. As each of these points is described, a more detailed breakdown of the relevant data will be presented. Our purpose is to provide background material for the explanation of this behaviour which follows in the next chapter.

Probably the most obvious conclusion concerns the behaviour of the non-merchandise account relative to GNE. From 1926 to 1939, the ratio of non-merchandise receipts to GNE was very stable, considering the magnitude of business cycle swings during this period. On the other hand, non-merchandise payments as a percentage of GNE tended to fall slightly during cyclical expansions<sup>19</sup> and, conversely, to rise during contractions in the economy. In other words, non-merchandise payments were less variable than GNE. Consequently, the ratio of the non-merchandise deficit to GNE tended to decrease when the economy was expanding and to increase when the economy was contracting.

Payments of interest and dividends were by far the most important item in the non-merchandise account during this period and it was the tendency for such payments to increase less rapidly in prosperity and to decrease less rapidly in recession than gross national expenditure which was largely responsible for the above-mentioned behaviour. It is also important to remember that changes in GNE during these years were large compared to the period since the Second World War.

Turning to the post-war years, we find a pattern somewhat dif-

19 The only significant exception occurred in 1936 when there was a very large increase in payments of interest and dividends.

ferent than that between 1926 and 1939. Excluding the immediate postwar adjustment period from 1946 to 1950, we note that non-merchandise receipts as a percentage of GNE again stayed within a relatively narrow range; however, there is also evidence of a slight downtrend in the ratio from 1951 to about 1956, followed by a levelling out from 1956 to 1960 and then by an uptrend from 1961 to 1966. The ratio of non-merchandise expenditures to GNE declined irregularly after 1946 to a low of 4.9% in 1953, but then rose steadily to a high of 5.9% in 1961 before dropping to 5.6% in 1962 and stabilizing at approximately that level.

Because of the numerous non-cyclical influences operative during the initial seven or eight years of the post-war period, it is difficult to analyse the changes in the ratio of non-merchandise deficits to GNE during these years. In the next seven or eight years, however, a steady increase is evident in the non-merchandise deficit relative to GNE. Expressed as a percentage of GNE, the deficit rose from an average of 2.1% in 1952 - 54 to an average of 2.9% in 1958 - 61. Although the uptrend was more rapid in the earlier part of the period, that is during the cyclical expansion from 1955 to 1957, it continued at a slower pace in 1958 and 1959 and then levelled out, despite excess capacity in the economy. This trend was not reversed until 1962, and the subsequent decline in the non-merchandise deficit relative to GNE continued until 1966.

Looking more closely at the components of the non-merchandise account during the post-war period, and particularly since 1953, we observe somewhat similar trends until about 1960 in the travel, interest and dividend, and other non-merchandise balances. In each case,

the deficit increased more rapidly than GNE from 1953 to about 1957, then rose at approximately the same pace during the following three or four years. After 1960, however, differences among the three components are noticeable.

Table IV - 1 provides detail regarding receipts and payments of interest and dividends, with each amount expressed in parentheses as a percentage of GNE. We do not intend to describe the data in detail but we shall make several comments which appear relevant to our analysis. Again excluding the period from 1946 to about 1953, the increase in Canada's deficit on interest and dividends has been roughly in line with the growth in GNE since 1957. Rapidly rising dividend payments together with a slight decline in Canadian receipts of interest and dividends pushed the deficit up more rapidly than GNE from 1953 to 1957, but thereafter the deficit has remained at 1.4% to 1.5% of GNE.

During the period of reduced corporate profits after 1957, dividend payments levelled out; there was little decline however, because of an increase in the pay-out ratio of foreign-controlled companies which jumped from just over 40% between 1952 and 1957 to more than 50% after 1957. Instead of reducing dividends, foreign-owned companies retained less in the form of undistributed earnings, in part because growth prospects and therefore investment plans had declined, but also, perhaps, in order to maintain a more stable flow of remittances to the parent company. This tendency to maintain dividend payments at the expense of undistributed earnings was important since it reduced the expected improvement in the current account balance that would have stemmed from a cyclical decline in dividend payments to foreigners.

## Table IV - 1

Interest and Dividends Account, 1946-66 (millions of dollars; as % of GNE in parentheses)

Payments

Receipts Balance

					Interest and Dividends			r •
	Interest	Dividends	Total	Direct	Direct as % of earnings	Portfolio		
1946 47 48 49 50 51	125(1.0) 113(0.9) 104(0.7) 104(0.6) 109(0.6) 114(0.5)	187(1.6) 224(1.7) 221(1.5) 286(1.7) 366(2.0) 338(1.6)	312(2.6) 337(2.6) 325(2.1) 390(2.4) 475(2.6) 452(2.2)	147(1.2) 183(1.4) 174(1.1) 233(1.4) 309(1.7) 272(1.3)	53 57 50 57 64 56	165(1.4) 154(1.2) 151(1.0) 157(1.0) 166(0.9) 178(0.9)	70(0.6) 64(0.5) 70(0.5) 83(0.5) 94(0.5) 115(0.6)	-242(-2.0) -273(-2.1) -255(-1.7) -307(-1.9) -381(-2.1) -337(-1.6)
52 53 55 55 57 55 57 59	115(0.5) 121(0.5) 130(0.5) 127(0.5) 128(0.4) 154(0.5) 181(0.5) 210(0.6)	298(1.3) $285(1.2)$ $294(1.2)$ $346(1.3)$ $396(1.3)$ $440(1.4)$ $433(1.3)$ $461(1.3)$	413(1.8) 406(1.6) 424(1.7) 473(1.7) 524(1.7) 594(1.9) 614(1.9) 671(1.9)	239(1.0) 217(0.9) 230(0.9) 274(1.0) 310(1.0) 340(1.1) 339(1.0) 365(1.0)	43 40 43 43 42 43 57 49	174(0.8) 189(0.8) 194(0.8) 199(0.7) 214(0.7) 254(0.8) 275(0.8) 306(0.9)	152(0.7) 164(0.7) 147(0.6) 161(0.6) 142(0.5) 153(0.5) 167(0.5) 180(0.5)	-261(-1.1) -242(-1.0) -277(-1.1) -312(-1.2) -382(-1.3) -441(-1.4) -447(-1.4) -491(-1.4)
60 61 63 64 65 66	239(0.7) 259(0.7) 274(0.7) 314(0.7) 335(0.7) 383(0.7) 428(0.7)	417(1.1) 505(1.3) 509(1.3) 546(1.3) 675(1.4) 703(1.3) 707(1.2)	656(1.8) 764(2.0) 783(1.9) 860(2.0) 1010(2.1) 1086(2.1) 1135(2.0)	318(0.9) 396(1.0) 398(1.0) 424(1.0) 562(1.2)	51 57 53 48 52	338(0.9) 368(1.0) 385(1.0) 436(1.0) 448(0.9)	171(0.5) 213(0.6) 202(0.5) 230(0.5) 332(0.7) 322(0.6) 323(0.6)	-485(-1.3) -551(-1.5) -581(-1.4) -630(-1.5) -678(-1.4) -764(-1.5) -812(-1.4)

1 includes interest paid on debt to principal owners

Source: Dominion Bureau of Statistics, The Canadian Balance of International Payments A Compendium of Statistics from 1946 to 1965 (Ottawa: Queen's Printer, 1967).

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The other point we wish to make concerns the rapid increase in interest payments after 1956. The absolute dollar amount of such payments had actually declined from 1946 to 1949 and even by 1956, it was only marginally higher than it had been ten years earlier. In the next five years, however, interest payments doubled, jumping from \$128 million in 1956 to \$259 million in 1961, or from 0.4% of GNE to 0.7% of GNE.

In Table IV - 2, annual data are given for the 'other nonmerchandise' category, including inheritances and migrants funds, personal and institutional remittances, miscellaneous income, and business services and other transactions.<sup>20</sup> Looking first at the total balance for these items, we again note that the deficit increased substantially between 1953 and 1960. The greatest deterioration occurred in inheritances and migrants' funds, particularly after 1957 when immigration (and therefore receipts of immigrants' funds) into Canada slowed considerably. Payments rose more rapidly than receipts for each of the other items in this category as well, but no particular abnormalities are apparent in the data. From 1961 to 1964, the deficit on these other non-merchandise items increased very slowly in absolute amount and declined slightly as a percentage of GNE. Large increases in immigrants' funds reduced the deficit in 1965 and 1966.

The most variable component of the non-merchandise balance during the post-war period has been the travel expenditure account. The

<sup>20</sup> As stated previously, we have excluded official contributions and government transactions from our analysis.

Table IV - 2 Other Non-Merchandise Transactions, 1951 - 66 (millions of dollars)

m	<u>1951</u>	<u>1952</u>	<u>1953</u>	<u> 1954</u>	<u>1955</u>	<u>1956</u>	<u>1957</u>	<u>1958</u>	<u>1959</u>	<u>1960</u>	<u>1961</u>	1962	<u>1963</u>	<u>1964</u>	<u>1965</u>	1966
Receipts Inher. & immig. funds Pers. & instit. remitt. Miscellaneous income Bus. serv. & other trans. Total	77 18 29 <u>122</u> 246	85 20 31 <u>108</u> 244	91 22 30 <u>117</u> 260	89 22 34 <u>124</u> 269	86 24 40 <u>134</u> 284	99 26 54 <u>147</u> 326	124 26 55 <u>156</u> 361	97 26 71 <u>165</u> 359	109 30 71 <u>178</u> 388	102 30 83 <u>203</u> 418	104 33 87 <u>208</u> 432	124 34 95 <u>229</u> 482	151 36 84 <u>236</u> 507	169 38 111 <u>257</u> 575	216 42 131 <u>291</u> 680	268 40 168 <u>303</u> 779
<u>Payments</u> Inher. & immig. funds Pers. & instit. remitt. Miscellaneous income Bus. serv. & other trans. Total	70 44 27 <u>275</u> 416	94 50 <u>39</u> <u>233</u> 416	96 56 <u>244</u> 431	99 65 38 <u>262</u> 464	116 71 46 <u>278</u> 511	131 79 64 <u>315</u> 589	157 87 94 <u>330</u> 668	159 90 101 <u>343</u> 693	165 96 115 <u>351</u> 727	184 98 135 <u>374</u> 791	176 99 142 <u>398</u> 815	175 99 160 <u>430</u> 864	185 102 174 440 901	201 102 201 <u>479</u> 983	211 103 218 <u>509</u> 1041	198 110 269 <u>556</u> 1133
Balance Inher. & immig. funds Pers. & instit. remitt. Miscellaneous income Bus. serv. & other trans. Total	7 - 26 2 -153 -170	- 9 - 30 - 8 -125 -172	- 5 - 34 - 5 <u>-127</u> -171	- 10 - 43 - 4 -138 -195	- 30 - 47 - 6 -144 -227	- 32 - 53 - 10 -168 -263	- 33 - 61 - 39 <u>-174</u> -307	- 62 - 64 - 30 - <u>178</u> -334	- 56 - 66 - 44 - <u>173</u> -339	- 82 - 68 - 52 -171 -373	- 72 - 66 - 55 -190 -383	- 51 - 65 - 65 -201 -382	- 34 - 66 - 90 <u>-204</u> -394	- 32 - 64 - 90 -222 -408	5 - 61 - 87 -218 -361	70 - 70 -101 -253 -354
As % of GNE Total Receipts Total Payments Total Balance	1.2 <u>2.0</u> -0.8	1.0 <u>1.8</u> -0.7	1.1 1.7 -0.7	1.1 <u>1.9</u> -0.8	1.0 <u>1.9</u> -0.8	1.1 <u>2.0</u> -0.9	1.1 <u>2.1</u> -1.0	1.1 <u>2.1</u> -1.0	1.1 <u>2.1</u> -1.0	1.2 <u>2.2</u> -1.0	1.2 <u>2.2</u> -1.0	1.2 <u>2.1</u> -0.9	1.2 <u>2.1</u> -0.9	1.2 <u>2.1</u> -0.9	1.3 <u>2.0</u> -0.7	1.4 <u>2.0</u> -0.6
Source: Dominion Bureau of St	tatisti	cs, <u>Th</u>	e Cana	dian B	alance	of in	ternat	lonal	Paymen	ts A C	ompend	lum of	Stati	stics :	rrom 1	<u>946 to</u>

1965 (Ottawa: Queen's Printer, 1967).

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surplus enjoyed by Canada in this account immediately after the war reached a high of \$145 million in 1948, as exchange restrictions brought a sizable decline in travel payments. This surplus had become a deficit of \$66 million by 1952 however, as receipts stabilized after 1948 whereas payments rose steadily during these years. The deficit was approximately the same in 1953 as in 1952 (less than 0.3% of GNE) but it then climbed steadily to \$207 million in 1959 and 1960, representing 0.6% of GNE in the former year. Travel receipts increased in every year except 1958, but the growth in travel payments during the period was considerably larger.

The years 1961, 1962 and 1963 witnessed a complete turn-about in the travel account, as nineteen-sixty's \$207 million deficit became a \$24 million surplus in 1963. During this three year period, travel receipts jumped \$189 million or 45% whereas payments declined by \$42 million. A surge in payments in 1964 returned the travel account to a deficit position of \$50 million but there was little change in the balance in the next two years as further large increases in payments were offset by rapidly rising receipts.

To summarize, we have found that the period of rapid deterioration in the non-merchandise deficit, that is from a deficit of \$475 million (1.9% of GNE) in 1953 to a deficit of \$910 million (2.8% of GNE) in 1957, was not centred in any one of the component items. Of the \$435 million increase in the deficit, interest and dividends accounted for \$199 million, other non-merchandise items \$137 million, and net travel payments \$99 million. In each case, the deficit rose more rapidly than GNE. By 1960, the non-merchandise deficit has risen to

\$1,065 million (2.9% of GNE) with other non-merchandise items (largely migrants' funds) accounting for \$66 million, net travel payments \$45 million, and interest and dividends \$44 million of the \$155 million in-crease.

From our analysis, we come to the following conclusion: since 1953, Canada's non-merchandise balance of payments and its components have exhibited what one might term non-cyclical behaviour. By this, we mean that the non-merchandise deficit, expressed as a ratio of GNE, showed little evidence of any consistent pattern of change, either of improvement or deterioration, during the various phases of the Canadian business cycle. Payments of dividends to non-residents, which one might have expected to show a fairly strong positive relationship with the cycle, were stabilized to a large extent by changes in the pay-out ratios of foreign-controlled companies.

Although trends were evident in the ratio of the non-merchandise balance to GNE, they were apparently independent of the cycle. The deficit expressed as a percentage of GNE increased from 1953 to about 1959, then levelled out until about 1961 and has been decreasing since then. As stated above, each of the three main components of the nonmerchandise balance behaved in a similar manner until 1960. However, only the travel balance and net inheritances and migrants' funds have been responsible for the decline since 1961 in the total non-merchandise deficit relative to GNE. As we shall discuss in the following chapter, changes in the travel balance appear to be closely related to the exchange value of the Canadian dollar, particularly in relation to the U.S. dollar.

A second rather interesting aspect of Chart IV - 4 is the decline in merchandise exports relative to GNE which was evident, with only two brief periods of stability, from the end of the war until 1958 -59. Admittedly, the initial part of this long-run decline represented a process of adjustment to the changed circumstances of the post-war environment. Assuming for the moment, as we did previously, that this process was largely completed by 1953, then the ratio of merchandise exports increased slightly from 18.1% in 1953 to 18.5% in 1955 but dropped to just 16.4% in 1958 and 16.5% in 1959.

An analysis of the underlying causes of this apparent weakness in Canadian merchandise exports in the latter half of the nineteenfifties will be undertaken in the next chapter. At this point, however, we shall introduce Table IV - 3 which provides a commodity breakdown of merchandise exports for the years 1951 to 1966. We have used our five year average of grain exports in this table, though actual grain exports are shown as well. The table also expresses exports of each of the major commodity groupings as a percentage of GNE.<sup>21</sup>

Exports of farm and fish products declined between 1951 and 1956 and although there was some recovery in the following four years, exports of these products were actually lower in 1960 than they had been in 1951. Growth in exports of both forest products and other manufactured goods was also surprisingly slow during the nineteen-fifties.

<sup>21</sup> Values for merchandise exports in this table are smaller than those shown previously since exports of non-monetary gold and receipts for freight and shipping, which were previously included in merchandise exports, are not included in this table.

	Merch	andise	Expor	ts: C	ommodi	ty Cla	ssific	ation,	1951	- 66 (	millic	ons of	dollars)				
	<u>1951</u>	<u>1952</u>	<u>1953</u>	<u>1954</u>	<u>1955</u>	<u>1956</u>	<u>1957</u>	1958	<u>1959</u>	1960	<u>1961</u>	1962	<u>1963</u>	<u>1964</u>	<u>1965</u>	1966	
Grain - 5 yr.avge. (actual) Other farm & fish Sub-total	745 (710) <u>439</u> 1184	753 (1000) <u>329</u> 1082	771 (914) <u>344</u> 1115	730 (618) <u>366</u> 1096	658 (535) <u>382</u> 1040	624 (732) <u>389</u> 1013	616 (562) <u>450</u> 1066	620 (643) <u>529</u> 1149	660 (611) <u>479</u> 1139	678 (562) <u>456</u> 1134	786 (809) <u>492</u> 1278	870 (738) <u>526</u> 1396	969 (922) <u>542</u> 1511	1055 (1216) <u>628</u> 1683	1135 (994) <u>742</u> 1877	1076 (1237) <u>770</u> 1846	
Forest Products Metals & Minerals (petrol, nat. gas & uran.) Sub-total	1377 764 <u>(1</u> ) 2141	1363 922 <u>(4</u> ) 2285	1283 904 <u>(6</u> ) 2187	1365 917 <u>(14</u> ) 2282	1505 1227 <u>(63</u> ) 2732	1496 1472 (150) 2968	1451 1597 <u>(271</u> ) 3048	1410 1439 <u>(368</u> ) 2849	1511 1657 <u>(404</u> ) 3168	1587 1814 (376) 3401	1623 1861 <u>(387</u> ) 3484	1701 2063 <u>(471</u> ) 3764	1824 2169 <u>(448</u> ) 3993	2009 2493 <u>(435</u> ) 4502	2100 2686 (4 <u>38</u> ) 4786	2240 2930 <u>(467</u> ) 5170	
Chemicals & fertilizers Other mfd. goods & misc. (motor vehicles & parts) Sub-total	132 475 <u>(NA</u> ) 607	125 543 <u>(NA</u> ) 668	138 513 <u>(NA</u> ) 651	153 441 <u>(29</u> ) 594	184 427 <u>(42</u> ) 611	183 489 <u>(44</u> ) 672	195 533 <u>(43</u> ) 728	197 572 <u>(40</u> ) 769	202 564 <u>(50</u> ) 766	238 600 <u>(67</u> ) 838	251 719 <u>(46</u> ) 970	248 902 <u>(57</u> ) 1150	268 1073 <u>(88</u> ) 1341	308 1441 <u>(177</u> ) 1749	336 1665 <u>(356</u> ) 2001	367 2527 (994) 2894	
Foreign produce	49	55	55	66	74	79	101	107	122	134	148	179	191	209	242	255	
Total	3981	4090	4008	4038	4457	4732	4943	4874	5195	5507	5880	6489	7036	8143	8906	10165	
As % of GNE (adj.) Farm & fish products Forest & mineral products Mfd. goods Foreign produce	5.7 10.3 2.9 <u>0.2</u> 19.1	4.6 9.8 2.9 <u>0.2</u> 17.5	4.5 8.9 2.6 <u>0.2</u> 16.3	4.4 9.1 2.4 <u>0.3</u> 16.1	3.8 10.1 2.3 0.3 16.5	3.4 9.8 2.2 0.3 15.7	3.3 9.5 2.3 0 <u>.3</u> 15.4	3.5 8.6 2.3 0.3 14.8	3.3 9.0 2.2 <u>0.3</u> 14.8	3.1 9.4 2.3 0.4 15.2	3.4 9.2 2.6 <u>0.4</u> 15.5	3.5 9.3 2.8 <u>0.4</u> 16.0	3.5 9.3 3.1 <u>0.4</u> 16.3	3.6 9.5 3.7 <u>0.4</u> 17.2	3.6 9.2 3.8 <u>0.4</u> 17.0	3.2 9.0 5.0 0.4 17.6	
Source: Bank of Canada, Stat	istical	Summar	y 1967	Suppl	ement	(Ottaw	a: Ba	nk of (	Canada	, 1968	).						

Table IV - 3 se Exports: Commodity Classification, 1951 - 66 (millions of d

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Between 1951 and 1960, the former increased only 15% and the latter 26%. The only major type of exports which kept pace with expansion in GNE during the decade was the metals and minerals commodity group. We note, however, that virtually all of the growth in such exports between 1955 and 1959 was centred in two relatively new and rapidly expanding industries, petroleum-natural gas and uranium. Therefore, the relatively slow expansion of Canadian exports during the nineteen-fifties was not limited to any particular kinds of exports, but was fairly general in scope. On the other hand, the increase in the ratio of merchandise exports to GNE.since 1958 - 59 has been concentrated largely in manufactured goods, particularly in the past few years in motor vehicles and parts.

The ratio of merchandise imports to GNE as shown in Chart IV -4 reveals nothing that we can term 'abnormal', except perhaps the failure of the ratio from 1958 to 1960 to fall farther below the 1954 recession low, and the relatively limited increase in the ratio from 1963 to 1966. Table IV - 4 presents a breakdown of merchandise imports by enduse which will be discussed in more detail in Chapter V. At this time, we merely wish to note that between 1956 and 1960, imports of consumer durables rose \$100 million (16%) and other consumer goods imports increased \$173 million (18%), whereas all other imports decreased \$338 million (8.5%).

The only other data that we wish to introduce pertain to the ratios of saving and investment to gross national expenditure, both of which were described and illustrated (Chart III - 1) in the previous chapter. We recall that the ratio of investment to GNE was very high

	Table $IV - 4$															
	Merchandise Imports: Classified by End-Use, 1951 - 66 (millions of dollars)															
	1951	<u>1952</u>	<u>1953</u>	<u>1954</u>	<u>1955</u>	<u>1956</u>	<u>1957</u>	<u>1958</u>	<u>1959</u>	<u>1960</u>	<u>1961</u>	<u> 1962</u>	<u>1963</u>	<u>1964</u>	<u>1965</u>	1966
Fuels & lubricants Industrial Materials Sub-total	535 <u>1367</u> 1902	503 <u>1134</u> 1637	501 <u>1174</u> 1675	457 <u>1063</u> 1520	489 <u>1278</u> 1767	563 <u>1539</u> 2102	591 <u>1460</u> 2051	502 <u>1338</u> 1840	510 <u>1461</u> 1971	478 <u>1455</u> 1933	473 <u>1552</u> 2025	487 <u>1727</u> 2214	538 <u>1790</u> 2328	547 <u>2079</u> 2626	627 <u>2317</u> 2944	661 <u>2508</u> 3169
Construction Materials	170	173	181	182	206	352	373	252	240	232	216	221	223	274	311	308
Producers' Equipment Transport. Equip. (excl.autos) Sub-total	739 <u>118</u> 857	797 <u>229</u> 1026	908 <u>243</u> 1151	808 <u>227</u> 1035	941 <u>273</u> 1214	1253 <u>260</u> 1513	1218 <u>246</u> 1464	1080 <u>234</u> 1314	1243 <u>229</u> 1472	1173 <u>270</u> 1443	1202 <u>406</u> 1608	1395 <u>365</u> 1760	1492 <u>279</u> 1771	1896 <u>194</u> 2090	2163 <u>280</u> 2443	2569 <u>349</u> 2918
Pass. Autos & parts Household Dur. & Semi-dur. Sub-total	247 <u>128</u> 375	227 141 368	294 <u>193</u> 487	234 <u>171</u> 405	326 <u>198</u> 524	388 <u>223</u> 611	346 208 554	365 <u>215</u> 580	456 <u>239</u> 695	488 <u>223</u> 711	439 227 666	539 <u>203</u> 742	576 191 767	849 <u>356</u> 1205	1168 <u>411</u> 1579	1664 <u>495</u> 2159
Other Consumer goods	675	674	733	790	835	945	1008	1041	1104	1118	1200	1262	1405	1075	1084	1187
Special items	25	36	22	35	21	25	23	26	27	46	53	60	65	217	271	331
Total	4005	3916	4248	3967	4568	5547	5473	5050	5509	5483	5771	6258	6559	7488	8633	10072
Note: Revised classification i	ntroduced	in 19	64. т	herefo	re, da	ta for	1964,	1965	and 19	66 not	entir	ely co	mparab	le wit	h earl	ier

period. Source: Bank of Canada, <u>Statistical Summary 1963 Supplement</u> (Ottawa: Bank of Canada, 1964). <u>Statistical Summary 1967 Supplement</u> (Ottawa: Bank of Canada, 1968).

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in 1956 and 1957 relative to previous and later cyclical peaks in the economy. We also note, however, that investment expenditures remained at a relatively high level for several years following the peak of the business cycle in early 1957. In 1958 and 1959, after the economy had clearly moved away from its earlier state of full-employment, investment expenditures still accounted for almost 25% of GNE, a level exceeded only in 1951, 1956 - 57 and 1965 - 66, all of which were periods when the economy was operating very close to its potential. If inventory investment is excluded, fixed investment as a percentage of GNE averaged 24.7% in 1958 - 59, as high or higher than any post-war year except 1956 (26.6%), 1957 (27.2%) and 1966 (25.8%). It should prove helpful, therefore, to look more closely at capital spending to determine why it accounted for such a large percentage of GNE during the second half of the nineteen-fifties.<sup>22</sup>

Table IV - 5 indicates the composition of private and public investment expenditures (excluding non-farm inventories) for the years 1951 to 1966, together with the ratios of the components to GNE. We note that all types of investment spending except agricultural and private non-business (largely housing) investment rose rapidly in 1956 - 57. It is also evident that the continuation of a high level of capital spending in 1958 and 1959 was concentrated in two areas, namely housing and public investment. Fixed capital expenditures by private business enterprises, on the other hand, reached a peak in 1957 and declined 18%

Total investment, as we have defined it, averaged 24.2% of GNE between 1951 and 1955, 26.2% of GNE from 1956 to 1960 and 24.2% of GNE from 1961 to 1966.

Table IV - 5 Private and Public Investment in Canada, 1951 - 66 (millions of dollars)

	<u>1951</u>	1952	<u> 1953</u>	<u> 1954</u>	<u> 1955</u>	<u> 1956</u>	<u>1957</u>	<u>1958</u>	<u>1959</u>	<u>1960</u>	1961	<u> 1962</u>	<u>1963</u>	<u>1964</u>	<u>1965</u>	1966
Business Capital Agriculture & Fishing Resource Industries <sup>1</sup> Other Mfg. & Construct. Utilities Trade, Services, Instit. Sub-total Less: Public Invest. Private Instit. Priv. Business Enterprises	525 475 606 937 521 3064 501 95 2468	562 517 773 1191 <u>475</u> 3518 581 <u>104</u> 2833	557 540 807 1251 <u>677</u> 3832 655 <u>128</u> 3049	400 581 662 1160 <u>749</u> 3552 664 <u>145</u> 2743	426 738 782 1129 <u>757</u> 3832 621 <u>172</u> 3039	488 1139 1073 1758 <u>790</u> 5248 962 160 4126	$434 \\ 1168 \\ 1123 \\ 2303 \\ 898 \\ 5926 \\ 128 \\ 184 \\ 4524 \\ \hline$	465 716 911 2147 <u>974</u> 5213 1269 <u>231</u> 3713	539 763 916 1837 <u>1105</u> 5160 1031 <u>223</u> 3906	550 778 983 1768 <u>1170</u> 5249 984 236 4029	576 786 934 1691 <u>1190</u> 5177 935 <u>285</u> 3957	663 866 1046 1595 <u>1213</u> 5383 926 <u>291</u> 4166	$762 \\ 935 \\ 1139 \\ 1764 \\ 1284 \\ 5884 \\ 1075 \\ 296 \\ 4513 \\ $	836 1219 1529 2048 <u>1450</u> 7082 1290 <u>333</u> 5459	926 1490 1944 2409 <u>1758</u> 8527 1671 <u>388</u> 6468	1043 1989 2296 2926 2068 10322 2134 415 7773
Priv. Institutions Housing Priv. Non-business	95 <u>890</u> 985	104 <u>919</u> 1023	128 <u>1149</u> 1277	145 <u>1220</u> 1365	172 <u>1373</u> 1545	160 <u>1519</u> 1679	184 <u>1391</u> 1575	231 <u>1741</u> 1972	223 <u>1720</u> 1943	236 <u>1428</u> 1664	285 <u>1447</u> 1732	291 <u>1566</u> 1857	296 <u>1695</u> 1991	333 <u>2014</u> 2347	388 <u>2121</u> 2509	415 <u>2153</u> 2568
Govt-owned Enterprises Govt-oper. Instit. & Housing Govt Departments Total Public	486 206 <u>594</u> 1286	553 236 <u>846</u> 1635	632 218 <u>800</u> 1650	642 215 <u>756</u> 1613	598 266 <u>796</u> 1660	943 274 <u>1012</u> 2229	1193 315 <u>1110</u> 2618	1232 329 <u>1118</u> 2679	982 350 <u>1236</u> 2568	925 370 <u>1274</u> 2569	877 359 <u>1247</u> 2483	864 570 <u>1258</u> 2692	1005 602 1282 2889	1215 463 <u>1460</u> 3138	1570 650 <u>1668</u> 3888	2008 816 <u>1925</u> 4749
Total Priv. & Public Invest.	4739	5491	5976	5721	6244	8034	8717	8364	8417	8262	8172	8715	9393	10944	12865	15090
<u>As % of GNE</u> (adj.) Private Business Enterprises Priv. Non-business Public	11.8 4.7 <u>6.2</u> 22.7	12.1 4.4 <u>7.0</u> 23.5	12.4 5.2 <u>6.7</u> 24.2	10.9 5.4 <u>6.4</u> 22.8	$   \begin{array}{r}     11.2 \\     5.7 \\     \underline{6.1} \\     \overline{23.1}   \end{array} $	13.7 5.6 <u>7.4</u> 26.6	14.1 4.9 <u>8.2</u> 27.2	$   \begin{array}{r}     11.2 \\     6.0 \\     \underline{8.1} \\     \overline{25.3}   \end{array} $	11.2 5.5 <u>7.3</u> 24.0	$   \begin{array}{r}     11.1 \\     4.6 \\     \hline     7.1 \\     \hline     22.7   \end{array} $	10.5 4.6 6.6 21.6	10.3 4.6 <u>6.6</u> 21.5	10.5 4.6 <u>6.7</u> 21.8	$   \begin{array}{r}     11.5 \\     5.0 \\     \underline{6.6} \\     \overline{23.1}   \end{array} $	12.4 4.8 <u>7.4</u> 24.6	13.5 4.4 <u>8.2</u> 26.1
<sup>1</sup> includes mining, quarrying, oil v Source: Bank of Canada, <u>Statistica</u>	vells; al Summ	forest ary 19	ry; fo: 67 Sup	rest p plemen	roduct <u>t</u> (Ott	s; non awa:	-metal Bank o	lic mi f Cana	neral da, 19	produc 68).	tion;	petrol	eum an	d coal	produ	.cts.

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in the following year, though they recovered slightly in 1959. As a percentage of GNE, such expenditures fell from 14.1% in 1957 to 11.2% in each of the years 1958 and 1959, accounting for virtually all of the decline in the ratio of total fixed investment expenditures to GNE.

Having identified those types of investment spending which increased rapidly in 1956 and 1957 and those which did not decline despite the 1957 - 1958 recession, we shall postpone until the following chapter an examination of the causes of this behaviour. However, our earlier analysis of the identity  $S - I \equiv X - M$  indicated that a high level of investment relative to saving is equivalent to a large current account deficit. Therefore, to the extent that investment spending from 1956 to 1959 was high relative to domestic income (and consequently to domestic saving, assuming a normal dependent relationship of domestic saving to income), then the current account deficit must also have been large relative to the degree of domestic prosperity. From Chart III - 1, it appears that domestic saving actually did react in a way that could be considered normal, with the ratio of saving to GNE moving in step with the ratio of actual to potential output.

This completes our statistical analysis of the current account balance of payments for the period 1946 to 1966. We have found that throughout the period, the current account balance changed direction in response to business cycle swings in the manner predicted by our hypothesis---that is, it deteriorated as the economy expanded and improved as the economy contracted. The only exceptions were in 1948 and 1962 - 63, and in both cases the balance improved in the absence of a cyclical downturn in the economy because of direct policy measures instituted

by the government.

We also found however, that Canada experienced what we consider to be abnormally large deficits relative to the degree of domestic prosperity, not only during the years of excess capacity from 1958 to 1961 but in 1956 and 1957 as well; also, we noted that investment spending accounted for a large proportion of total GNE during this period. Weakness in Canada's current account position was noticeable in the nonmerchandise account and in merchandise exports and, to a lesser extent, in the failure of merchandise imports to decline more rapidly after 1956. In addition, we found that since 1963 Canada's current account position appears to have been strong relative to the degree of domestic prosperity. In the following chapter, we shall try to explain the continued weakness of Canada's current account balance in the latter half of the nineteen-fifties, and more briefly, its relative strength since 1963.

## EXPLANATION OF VARIATIONS IN CYCLICAL BEHAVIOUR OF CURRENT ACCOUNT BALANCE SINCE 1956

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In the previous chapter, we concluded that although Canada's current account balance improved significantly following the business cycle peak in early 1957, the deficits in the ensuing four or five years were somewhat larger than one might have expected given the lack of economic growth and the relatively high level of unemployment during this period. We also found, however, that Canada's current account position had already begun to weaken prior to the peak of the cycle--in other words, the cyclical deterioration of the balance during the 1955 to 1957 economic growth. Finally, we found evidence that Canada's current account position from 1963 to 1966 was strong relative to the rapid expansion of economic activity during this period---in other words, cyclical deterioration of the balance was less than might have been expected.

We then proceeded to examine in more detail data pertaining to the various components of the current account, in order to identify those parts which seemed most responsible for the rapid deterioration after 1955, the limited improvement after 1957, and the relatively minor deterioration from 1963 to 1966. In our study, we found that all of the major components of the current account balance displayed some signs of weakness and therefore contributed to the large deficits in the
latter half of the nineteen-fifties. Changes and trends in the nonmerchandise balance bore very little relationship to the cycle, with virtually uninterrupted deterioration from 1954 to 1960; merchandise exports as a percentage of GNE dropped steadily during practically the entire decade; and merchandise imports, though they declined cyclically in 1957 - 58 and 1960 - 61 were maintained to some extent by imports of consumer goods. Finally, we observed that investment expenditure as a percentage of GNE was very high in 1956 and 1957 and that it remained high relative to GNE in 1958 and 1959, given the extent of excess capacity and unemployment. Concerning the years 1963 to 1966, we noted that exports of manufactured products rose rapidly during this period; also, although there was a sizable increase in merchandise imports, the ratio of such imports to GNE did not rise as swiftly as in previous periods of rapid economic growth.

In this chapter, we intend to offer several possible explanations for the rapid deterioration of Canada's current account balance during the business upturn which began in late 1954, for the failure of the current account deficit to improve to a level that we consider commensurate with the declining degree of domestic prosperity after the 1957 business cycle peak, and for the limited deterioration of the current account balance between 1963 and 1966. We shall not undertake a detailed statistical analysis; rather we will describe briefly a number of individual factors, each of which seem to explain at least some of the observations of the previous chapter. The manner in which each affected the current account balance will be indicated but we shall not quantify any of the effects.

In summary, we shall first describe several structural changes which we believe tended to limit Canadian exports and to expand Canadian imports during the latter half of the nineteen-fifties, and which thereby contributed to large current account deficits during these years. Second, we shall examine the reasons for the relatively high level of capital investment that we observed in Chapter IV, including the role of long-term capital inflows. Finally, we shall identify certain aspects of Canadian economic policy which seem to have contributed, directly or indirectly, to large current account deficits in the 1956 to 1961 period. As for the 1962 exchange crisis itself, it appears to have been largely one of confidence, as much political as economic. Nevertheless, Canada's current account experience during the previous five years aided in establishing the setting in which a payments crisis became a possibility. Furthermore, the measures taken in reaction to the crisis more than reversed the previous underlying weakness in Canada's current account position, and the resultant basic strength was evident from 1963 - 66.1

## Structural Changes Affecting Canada's Balance of Payments Position After 1955

Let us turn to an examination of those structural changes which appear to have adversely affected Canada's international economic position and thereby promoted large current account deficits after 1955.

<sup>1</sup> Our discussion of many of these points follows an outline described by Professor David Slater. See D.W. Slater, <u>Canada's Balance</u> of International Payments - When is a Deficit a Problem? (Montreal: Private Planning Association of Canada, 1964).

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First, underlying trends in world trade patterns limited growth in Canadian exports after the mid-1950's. Second, Canada's competitive position relative to many of the other industrial nations deteriorated during the nineteen-fifties. Third, Canadian demand for certain products seems to have shifted after the mid-fifties toward imported goods.

It has been widely recognized that beginning about 1950, world trade has expanded at a somewhat faster pace than world output. The most important causes of this trend were the post-war recovery in Europe, reductions in tariff and non-tariff trade barriers, and relative stability in international monetary relationships. There has been a considerable divergence, however, between the growth rate of trade in manufactured products and that of trade in primary products. Whereas world exports of manufactured products approximately tripled between 1953 and 1965,<sup>2</sup> trade in primary products roughly doubled during this period.

Growth in world trade of those crude and fabricated materials which comprise such a large proportion of Canadian exports (including grains, lumber, pulp and paper, and metals and minerals) was particularly weak in the latter half of the nineteen-fifties. Trade in most agricultural commodities continued to be restricted by numerous tariffs designed to protect local producers. In some cases, technologically improved production processes possibly reduced the needed in-

<sup>&</sup>lt;sup>2</sup> Within this category, trade in end-products (largely machinery and transportation equipment) grew more rapidly than trade in fabricated materials.

puts of crude and fabricated materials. In addition, several nonprice advantages enjoyed by Canada as a supplier of these materials in the immediate post-war and Korean War years had virtually disappeared by the latter part of the nineteen-fifties. War damage and abnormal trade patterns had temporarily limited competition from other sources of supply; also, strategic considerations stemming from the possible military or political vulnerability of alternative producers had benefited Canada in the early part of the decade. These advantages, however, became less and less important as time went on.

In the context of these trends in international trade, the relatively slow growth between 1955 and 1960 in Canadian exports of farm, forest and mineral products that was observed in the previous chapter is more understandable. As we noted at the time, exports of Canadian farm produce failed to increase at all during the nineteenfifties, and for about four or five years after 1955, growth in exports of forest products and, to a lesser extent, metal and mineral products was very slow. Increases in the latter came primarily from two rapidly developing industries, petroleum - natural gas and uranium.

On the one hand, growth in Canadian exports of primary products was limited, as we described above, by relatively weak world demand for these products and by a return to more normal peacetime trading patterns. On the other hand, failure of Canadian industry to share in increasing world trade in manufactured goods can probably be attributed in part to a deteriorating competitive position relative to other industrial countries. Canadian production costs rose rapidly from 1950 to 1952 during the Korean War and again during the strong business expansion

from 1955 to 1957. At the same time, post-war recovery and rapid economic growth in Western Europe and Japan led to large improvements in the productivity and competitive position of these countries. Finally, as we shall see in a moment, large capital inflows, resulting in part from Canadian economic policy, served to prevent the decline in the external value of the Canadian dollar that one might have expected given a floating exchange rate, thereby forestalling needed improvement in the country's competitive position.

Table V - 1 presents a comparison of unit labour costs in manufacturing for Canada, the United States, France, Germany and Japan. Since compensation of labour tends to be the principal cost in manufacturing and since our data take account of changes in international exchange rates, the table provides a reasonable indication of changes in the relative international competitiveness of these countries in manufactured products. When comparing Canadian and American unit labour costs, we see that they were quite similar except from 1950 to 1952, when Canadian costs rose more rapidly than did those in the U.S., and in the years after 1960 when devaluation gave Canada a definite competitive advantage relative to the U.S. In fact, these same two trends, that is a relatively more rapid rise in Canadian labour costs from 1950 to 1952 and a sizable improvement in Canada's competitive position after 1960, also apply when comparing Canadian costs with those of the other nations included in the table.

During the intervening years, that is from 1953 to 1960, Canada's cost position relative to the Federal Republic of Germany does not appear to have deteriorated; in fact, the table indicates a slight

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Year	Car	ada	United	States B <sup>3</sup>	France	Germany	Japan	
	Cdn\$	US\$						
1950	81	71	79	76	54	86	109	
51	88	80	87	82	72	96	107	
52	94	92	90	86	82	93	113	
53	95	93	92	90	86	92	102	
54	96	95	94	92	88	91	105	
55	93	91	92	90	94	91	106	
56	94	92	96	97	99	98	106	
57	100	100	100	100	100	100	1.00	
58	102	100	104	102	90	104	106	
59	100	100	101	102	86	102	100	
60	102 ·	101	102	106	89	105	98	
61	- 99	94	102	106	94	116	100	
62	98	88	102	104	101	125	108	
63	97	86	101	105	107	129	113	
· 64	97	86	101	105	114	129	373	

Table V - 1 Indexes of Unit Labour Cost<sup>1</sup> in Manufacturing, 1950 - 64 (1957 = 100)

1 on a U.S. dollar basis; that is, adjusted for changes in the official or commercial exchange rate.

2 based on Federal Reserve Board index of manufacturing production

- <sup>3</sup> based on estimates of deflated gross national product originating in manufacturing.
- Source: United States Department of Labour, Unit Labour Cost in Manufacturing, Trends in Nine Countries, 1950 - 65, (Washington: U.S. Government Printing Office, 1966).

improvement after 1957. On the other hand, Canada's cost position during the 1953 to 1960 period did deteriorate when compared with that of France and Japan. In the case of the former, unit labour costs increased more rapidly than in Canada from 1953 to 1956 but the sizable devaluations of the franc in 1957 and 1958 significantly improved France's competitive position relative to Canada, as well as the other countries. Japanese unit labour costs were remarkably stable from 1953 to 1958 and they actually declined in the following two years. Consequently, there was a marked deterioration in Canada's competitive position relative to Japan.

Our analysis indicates, therefore, that although the competitive position of Canadian manufacturers deteriorated between 1955 and 1960 relative to manufacturers in France and Japan, there was actually a slight improvement relative to American and German manufacturers. On the other hand, if we include tha Korean War period when Canadian unit labour costs in manufacturing (adjusted for appreciation of the value of the Canadian dollar) rose more rapidly than costs in any of the other countries except France, then for the 1950 to 1960 period as a whole, the deterioration in Canada's competitive position was more serious.

It is also probable that after 1956 or 1957, Canadian manufacturers experienced greater competition both at home and abroad for reasons other than cost. Greatly increased manufacturing production in Western Europe and Japan was by this time catching up with domestic demand, thereby reducing the propensity to import in these countries and encouraging manufacturers to turn to export markets. Finally, it

should be noted that the Canadian government did little before 1960 or 1961 in the way of export promotion programmes. It is difficult to say whether more aggressive export promotion policies during the nineteen-fifties would have significantly increased Canadian exports of manufactured goods. The failure to institute such policies was surprising, however, particularly when there was an apparent lack of interest on the part of some Canadian manufacturers in export markets.

The third structural change, a suspected shift in Canadian demand towards imported rather than domestically produced goods, is rather difficult to document. In the previous chapter, we related total merchandise imports to gross national expenditure, and found that the ratio clearly moved in the expected direction during the business cycle swings of the nineteen-fifties. At the same time, we speculated that imports were maintained at a relatively high level in the late nineteenfifties, given the degree of excess capacity in the domestic economy. A breakdown of imports by end-use revealed that imports of consumer goods rose quite steadily after 1952 except for a brief levelling out in 1954 and again in 1957.

In Table V - 2, we have gone one step further by calculating the ratios of the various end-use categories of merchandise imports to the corresponding types of domestic expenditure. Although the ratios derived in any such comparison between types of imports and components of GNE must be treated as rough approximations only, changes in the ratios may be of some value in examining the question of a shift in Canadian tastes towards certain types of imported products.

Merchandise Imports: Classif	Table V = 2 fied by End-Use, $1951 = 66$ (as a percentage of comparable total domestic spending	r )
		, /
	<u>1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966</u>	
Imports of Industrial Materials GDP at Factor Cost-Mfg. Industry	25.0 18.4 18.2 16.9 18.9 20.2 18.5 17.3 17.6 17.3 18.3 18.5 17.9 18.8 19.2 19.1	•
Imports of Construction Materials Total Construction Expenditures	5.9 5.0 4.8 4.9 4.9 6.7 6.4 4.3 4.2 4.3 3.9 3.8 3.6 3.9 3.8 3.3	;
Imports of Prod. Equip. & Transport. Equip. Total Machinery & Equip. Expenditures	. 45.9 49.9 51.8 52.2 58.5 54.8 49.9 51.9 54.4 51.4 60.6 60.1 54.7 53.0 51.4 50.2	;
Imports of Producers' Equipment Total Machinery & Equip. Expenditures	39.6 38.7 40.9 40.7 45.3 45.4 41.5 42.6 45.9 41.8 45.3 47.6 46.1 48.1 45.5 44.2	
Passenger Autos & parts (plus) Household Durables & semi-durables Expenditures on Consumer Durables	16.6 12.8 14.7 11.9 14.5 16.0 14.2 14.6 17.0 18.3 16.2 18.2 17.7 23.6 29.2 39.9 $\frac{8.6}{25.2}$ $\frac{7.9}{24.3}$ $\frac{9.6}{20.6}$ $\frac{8.8}{23.3}$ $\frac{9.2}{25.1}$ $\frac{8.6}{23.2}$ $\frac{8.6}{26.0}$ $\frac{8.4}{26.7}$ $\frac{8.4}{24.5}$ $\frac{6.9}{25.1}$ $\frac{5.9}{23.6}$ $\frac{9.9}{33.5}$ $\frac{10.3}{31.5}$ $\frac{11.9}{51.8}$	•
Other Consumer Goods Expenditures on Consumer Non-Durables	8.9 8.4 8.9 9.4 9.2 9.7 9.7 9.6 9.7 9.5 9.9 9.7 10.4 7.5 7.0 7.0	I

Note: Revised import classification introduced in 1964. Therefore, data for 1964, 1965 and 1966 not entirely comparable with earlier period.

Source: Table IV - 4

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Dominion Bureau of Statistics, <u>National Accounts Income and Expenditure, 1926-56, 1962, 1966, 1967</u> Dominion Bureau of Statistics and Department of Trade and Commerce, <u>Private and Public Investment in Canada, Outlook 1968</u> (Ottawa: Queen's Printer, 1968).

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Excluding fuels and lubricants, in which there was considerable import substitution coincident with development of the domestic petroleum industry, imports of industrial materials as a percentage of gross domestic product at factor cost originating in the manufacturing sector increased during cyclical expansions and decreased during contractions, without any noticeable shift towards or away from imports. The data seem to indicate a slight shift towards imported producers' equipment about 1955, but the ratio of such imports to total machinery and equipment expenditures was surprisingly stable in the following nine years. Except for 1956 and 1957, imports of construction materials grew less rapidly than total construction expenditures, that is demand shifted away from imports of such materials. In the case of consumer goods, however, there is some evidence of a shift toward imported products. This is particularly true for purchases of passenger automobiles and parts after 1958, and to a lesser extent, for other consumer goods beginning about 1956.

The situation in the automobile industry was something of a special case. After 1956, the industry in Canada simply failed to keep pace with the economy. For example, in 1956 domestic sales of new passenger cars totalled 408,000 units whereas domestic production was 375,000 units. In 1958, sales had fallen to 376,000 units but domestic production dropped to 297,000 units. By 1960, the gap had widened still further, with sales increasing to 448,000 units but production rising only slightly to 326,000 units.<sup>3</sup> A similar trend existed in the

<sup>3</sup> Dominion Bureau of Statistics, <u>Canadian Statistical Review</u>, <u>Historical Summary 1963</u> (Ottawa: Queen's Printer, 1963), pp 58 - 59.

automotive parts industry as well. Another factor was the swing in consumer tastes towards the small European models, sales of which jumped from \$64 million in 1956 to \$226 million in 1959 and \$252 million in 1960.<sup>4</sup>

The cause of the apparent shift towards imports of other consumer goods is less evident. Increased availability of European and Japanese goods might have had some effect after the mid-fifties. The relative cost experience of Canadian producers together with the premium on the Canadian dollar may also have benefited imported goods. The almost continuous rise in the value of consumer goods imports since the Second World War can be more readily explained, however. Post-war recessions have to date been very shallow relative to earlier cyclical downturns and domestic incomes, particularly of consumers, have declined very little, if at all. With little or no decline in aggregate personal income, consumer purchases of goods in general, including imports, have been maintained even in periods of economic recession. Furthermore, consumer expectations concerning the probability of severe economic hardship have undoubtedly declined, further smoothing personal consumption expenditures.

## Relatively High Levels of Investment Expenditure and Capital Inflows, 1956 - 1960

Obviously, a paper such as this does not have the necessary scope to make a thorough examination of the causes of the relatively high level of capital spending in Canada in the latter half of the nineteen-fifties.

Ibid., p. 59.

In the previous chapter, we recognized that investment was high during this period and we noted that a high level of domestic investment relative to income and domestic saving was the equivalent of a large current account deficit. At this point, we merely wish to look more closely at the various types of capital spending to determine where the strength was concentrated, and at the same time to discuss briefly the general underlying bases for this strength.

By the time the economy had successfully passed through the post-Korean slowdown and the 1953 - 54 recession, the final fears of a serious post-war depression had all but vanished. There seems to have been in Canada a significant increase in the marginal efficiency of capital, particularly in the resource industries. Table IV - 5 revealed that capital spending by resource industries doubled from its 1952 -54 level of approximately \$550 million to more in \$1,100 million in both 1956 and 1957. Our earlier examination of merchandise exports revealed that growth in exports of forest products, metals and minerals was surprisingly modest throughout the nineteen-fifties, with much of the increase being concentrated in 1955 when such exports rose almost In fact, if exports of the very rapidly expanding petroleum, nat-20%. ural gas and uranium industries are excluded, forest and mineral product exports increased only 30% between 1951 and 1959. It would appear, therefore, that the heavy resource investment of the mid-fifties was based, to some extent, on high expectations which were not immediately fulfilled.

On the other hand, several other factors accounted for a high level of capital spending in the resource industries from 1955 to 1957.

The Paley Report in the United States, which had suggested an increasing dependence by the U.S. on foreign natural resources, may have stimulated the development of Canadian projects. In addition, as we stated previously, the size and 'lumpiness' of many resource development projects led to a heavy concentration of spending in a relatively short period of time.

We noted in Chapter III that swings in capital spending by resource industries were frequently complemented by large changes in investment for related projects such as transportation facilities and hydro developments. The St. Lawrence seaway, the trans-Canada pipeline, hydro installations like that at Kitimat, and other projects which were largely, though not entirely, related to resource development helped to push the investment spending of utilities<sup>5</sup> from \$1,129 million in 1955 to \$2,303 million in 1957. Although utilities' investment declined from 1958 to 1960, in the latter year it was still more than 50% above its 1951 - 55 level. If we compare the 1951 - 55 period with the 1956 - 60 period as in the previous chapter, we see that capital spending by utilities averaged 4.7% of GNE in the former years and 5.9% of GNE in the latter five year period. In other words, threefifths of the increase of two percentage points in the ratio of investment to GNE between the two periods was concentrated in the utility sector.

<sup>&</sup>lt;sup>5</sup> The term utility as we are using it has rather broad coverage, including electric power, telephones and telegraphs, gas distribution, oil and gas pipelines, municipal waterworks, railways, water transportation and services, urban transit, motor and air transport, toll highways and bridges, grain elevators and warehousing.

As we stated above, part of this very large increase was undoubtedly closely linked to the development of natural resources. On the other hand, some of the increased capital spending in the utility sector presumably represented a catching up and a modernizing of the general infra-structure of the Canadian economy after a long period of low investment expenditures during the nineteen-thirties and nineteenforties. The same situation probably applied to some extent for public investment expenditures, both by government departments and for government-operated institutions such as schools and hospitals. This type of capital spending accounted for 4.1% of GNE from 1951 - 55 and 4.4% of GNE from 1956 - 60.<sup>6</sup>

We observed in Chapter IV that investment by private business enterprises dropped from \$4,524 million (14.1% of GNE) in 1957 to \$3,713 million (11.2% of GNE) in 1958, then grew slightly in 1959 and 1960 in value but remained unchanged as a percentage of GNE. The lag between the downturn in business and the decline in investment of this type, which represents the time needed to complete various projects, was therefore limited to less than one year. However, private nonbusiness and public investment expenditures did not exhibit the same degree of sensitivity to changing business conditions.

The former category, which consists chiefly of housing, had been large relative to GNE (5.5%) from 1953 to 1956, but declined shar-

If investment expenditures of government-owned enterprises are included, public investment accounted for 6.5% of GNE in the former period and 7.6% in the latter. However, a large part of such spending was included in the utility sector.

ply in 1957 to just 4.9% of GNE. In 1958, however, housing expenditures jumped 25% in dollar terms, and private non-business investment accounted for 6.0% of GNE. There was little dollar change in residential construction in 1959 though such spending declined to 5.5% of GNE. There are two principal explanations for the almost contra-cyclical swings in housing investment during this period. As demands for capital increased and interest rates rose, the housing sector was less able to attract large amounts of mortgage money in the capital markets. For example, institutional funds to finance new housing dropped from \$750 million in 1956 to \$525.million in 1957, then rose to \$725 million by 1959.7 The major reason, however, for the large increase in housing expenditures in 1958 and 1959 was the lending programme of the Central Mortgage and Housing Corporation which provided over \$300 million in mortgage funds in both 1958 and 1959, compared with just \$16 million in 1956 and \$60 million in 1957.<sup>8</sup> In other words, investment in housing had become a sort of economic regulator, decreasing as the economy neared full-employment and then increasing after the economy turned down. This behaviour was the result of both natural capital market forces and deliberate contra-cyclical government policy.

Public investment expenditures also failed to decline after the business cycle peak in early 1957, remaining approximately unchanged in dollar terms from 1957 to 1960, though as a percentage of GNE they did

7 Central Mortgage and Housing Corporation, <u>Canadian Housing</u> <u>Statistics, 1967</u> (Ottawa: C.M.H.C., 1968), p. 35.

8 Ibid., p. 35.

decline from 8.2% in the former year to 7.1% in the latter year. Decreased capital spending by government-owned enterprises in 1959 and 1960 was offset by increases in the other two types of public investment expenditures.<sup>9</sup>

We conclude that resource development was partially responsible, both directly and indirectly through its requirements for ancillary facilities, for the high level of investment spending after 1955. We also believe, however, that the large increase in capital formation in the utility sector and, to a lesser extent, in government departments and government-operated institutions reflected the relatively low level of investment during much of the preceding twenty-five year period. Finally, although investment spending by private business enterprises declined after 1957 as one might have expected, the decline was partially offset by increased housing expenditures in 1958 and 1959, due primarily to the extensive mortgage lending operations of the Central Mortgage and Housing Corporation.

Previously, we had stated that cyclical swings in Canadian investment spending, the current account balance and long-term capital inflows usually tended to compliment each other. We went on to emphasize that this complementarity was important in explaining the cyclical behaviour of the current account balance, since without it, large cyclical fluctuations in the current account balance would quickly lead

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<sup>&</sup>lt;sup>9</sup> We also recognize, however, that public investment expenditures and residential construction, the two areas of capital spending which were responsible for the relatively high level of investment after 1957, probably have a somewhat lower import content than other types of capital spending.

to disequilibrium in Canada's overall payments position. It should be worthwhile, therefore, to examine the movement of long-term capital during the nineteen-fifties, relating it to the behaviour of capital spending and the current account balance in the same period.

Table V - 3 provides a summary of net long-term capital inflows beginning in 1952. We immediately note the very great increase in such inflows in 1956. Despite a gradual decline in the following four years, the average long-term capital inflow from 1958 to 1960 was almost \$1.1 billion, more than double the average inflow between 1951 and 1955. It is somewhat surprising to find that direct investment in Canada remained within a range of approximately \$425 million to \$675 million for the entire period from 1953 to 1962. A breakdown by industry is available only for the United States, but it reveals that inflows in the petroleum and natural gas and the mining industries accounted for a large part of the U.S. total and that direct investment in these two resource industries was very stable, remaining in a range of \$250 -\$300 million from 1952 to 1959 before jumping to just over \$350 million in 1960.

Trade in outstanding Canadian securities provided some of the increased inflow after 1955, but the largest change occurred in net new Canadian bond issues placed abroad, which jumped from an average inflow of \$101 million between 1952 and 1955 to \$504 million from 1956 to 1959. A considerably different pattern was shown, however, by the various types of borrowers. The inflow from net new corporate issues jumped roughly \$200 million in 1956 and again in 1957, then dropped by a similar amount in 1958 and also in 1959. Provincial and municipal

Table V - 3 Net Long-Term Capital Inflows, 1952 - 66 (millions of dollars)

	<u>1952</u>	<u>1953</u>	<u>1954</u>	<u>1955</u>	<u>1956</u>	<u>1957</u>	<u>1958</u>	<u>1959</u>	<u> 1960</u>	<u>1961</u>	1962	<u>1963</u>	<u>1964</u>	<u>1965</u>	1966
Direct Investment in Canada: {petrol & nat. gas US mining other other countries Total		171 106 80 <u>93</u> 450	183 66 56 120 425	196 53 68 <u>128</u> 445	232 54 179 <u>185</u> 650	237 56 110 142 545	201 73 30 <u>126</u> 430	170 106 152 <u>142</u> 570	158 196 107 <u>209</u> 670	106 110 150 <u>194</u> 560	112 141 75 <u>177</u> 505	56 46 118 <u>60</u> 280	60 11 117 <u>82</u> 270	535	710
abroad:	<b>-</b> 85	- 70	- 90	- 85	-105	- 80	- 40	- 85	- 50	- 80	<b>-</b> 105	<b>-</b> 135	- 95	<b>-</b> 125	- 20
Trade in o/s Cdn securities-bonds stocks		- 52 21 - 31	- 66 129 63	-165 <u>137</u> - 28	11 <u>187</u> 176	- 45 _142 _97	88 88	92 110 202	3 _51 _54	61 <u>39</u> 100	64 <u>-115</u> - 41	39 <u>-170</u> -131	77 <u>- 98</u> - 21	55 <u>-274</u> -219	-103 -137 -240
Net new bond issues-Govt of Can. Prov-mun. Corp. Total		- 78 176 <u>51</u> 149	- 61 81 <u>98</u> 118	- 95 10 <u>10</u> - 75	- 74 303 <u>232</u> 461	- 13 210 <u>433</u> 630	51 241 <u>211</u> 503	- 45 417 <u>48</u> 420	- 28 143 50 165	- 11 51 <u>218</u> 258	70 159 <u>191</u> 420	97 258 <u>291</u> 646	- 45 502 <u>297</u> 754	850	061
Net new stock issues		40	10	56	65	36	27	31	17	- 11	- 10	<b>-</b> 66	- 36	500	901
Foreign Securities		- 1	- 24	- 5	- 3	l	1	- 34	- 19	- 35	<b>-</b> 65	22	<b>-</b> 52	<b>-</b> 85	-423
Loans, etc. by Govt of Canada		87	72	69	65	49	30	33	21	30	107	7	-	- 4	- 11
Other		25	25	_37	<u>159</u>	42	<u>114</u>	42	<u>71</u>	108	<u>-113</u>	14		<u>- 88</u>	42
Total		649	599	414	1490	1320	1153	1179	929	930	688	637	820	864	1019
Source: Dominion Bureau of Statistics, The Canadian Balance of International Payments, A Compendium Quarterly Estimates of the Canadian Balance of International Payments															

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borrowing abroad rose from practically nil in 1955 to \$300 million in 1956, then declined somewhat in 1957 and 1958, though in both years it still exceeded \$200 million. In 1959, however, net new provincial and municipal issues jumped to more than \$400 million. Changes in Federal Government net new bond issues were much smaller, though we observe that the usual outflow of capital prior to 1958 was replaced by an inflow of \$51 million in that year. As a result of large foreign borrowing after 1955, Canadian payments of interest to non-residents climbed rapidly. In Chapter IV we saw that interest payments increased by more than \$100 million between 1956 and 1960, accounting for all of the deterioration in the interest and dividend account during this period.

In summary, there appears to have been a considerable lag in the decline of long-term capital inflows after the economy turned down early in 1957. Given the time required for reappraisal of investment opportunities and for adjustment of previously adopted plans, one might have expected that the cyclical decline in inflows of long-term capital would be gradual. This seems to have been particularly true in the case of direct investment in Canada, which fell in 1957 - 58 but increased again in 1959 - 60 to a new peak, in spite of lack of prosperity in the domestic economy. However, there was a sharp decline in net new corporate bond issues sold to non-residents and, as a result, the inflow of capital to the private sector turned down after 1957, just as capital formation by private business enterprises declined sharply from its 1957 cyclical peak. Large borrowings by the provinces and municipalities, on the other hand, continued for almost three years after the 1957 peak in the business cycle. In other words, just as investment

spending was partially sustained after 1957 by public investment (including funds advanced through CMHC), the inflow of long-term capital was also sustained to some extent by public borrowings abroad. In a moment, we shall return to an examination of the effects which Canadian economic policy had on capital inflows, notably the influence of tight money and high interest rates in maintaining the inflow of capital.

Our final step in this section is to compare the inflow of longterm capital with the behaviour of the current account balance for the period under study. The difference between the two is usually referred to as the basic balance, and a surplus or deficit in this balance must be offset either by short-term capital movements or, failing this, by changes in official exchange reserves. Table V - 4 shows the basic balance, short-term capital movements and changes in reserves including Canada's net IMF position on an annual basis for the post-war period. We used the actual current account deficit as reported, though we have also shown in parentheses the basic balance adjusted for the difference between actual grain exports and our five year moving average of grain exports.

We have already discussed the current account balance between 1956 and 1960, contending that the deficits experienced during this period were abnormally large relative to the degree of prosperity in the domestic economy. We have just completed an examination of longterm capital inflows, observing that they too seemed larger than one might have expected, particularly after the business cycle turned down in 1957. Despite this buoyancy in the inflow of long-term capital, however, Table V - 4 reveals that Canada experienced a basic deficit

	• •	ŗ	Cable V	- 4				
Canadian	Current	Account	Balance	and	Capital	Movements,	1946 - 6	6
		(milli	ions of	dolla	ars)			

Year	Current Account Balance	Long-Term Capital Movement	<u>B</u>	Basic alance (adj. for grain_exports)	Short-Term Capital Movement	Change in Official <u>Reserves</u>
1946 48 49 55 55 55 55 55 55 56 61 23 45 66 66 66 66	363 49 451 177 512 187 - 448 - 424 - 687 -1372 -1451 -1137 -1487 -1233 - 928 - 830 - 521 - 424 - 1130 -1137	- 715 - 721 43 - 29 610 666 455 649 599 414 1490 1320 1153 1179 929 930 688 637 820 864 1019	352 672 494 148 291 154 642 201 175 273 118 308 308 304 2 142 116 396 266 118	(~291) (~687) (550) (126) (500) (189) (395) (58) (287) (~150) (~150) (~150) (~10) (~77) (~77) (~77) (~77) (~259) (~188) (~21) (~10) (163) (235) (~125) (~279)	86 4 - 2 431 - 98 -605 -239 - 51 229 - 51 229 - 70 26 93 297 265 288 297 30 - 33 423 -241	-266 -668 492 128 722 56 37 -38 124 -48 -105 109 -11 -39 290 155 146 363 157 -359

Source: Dominion Bureau of Statistics, <u>The Canadian Balance of Inter-</u> national Payments, A Compendium Quarterly Estimates of the Canadian Balance of International Payments of \$725 million between 1957 and 1961.<sup>10</sup> The deficit in the basic balance was especially large in 1959 and 1960.

Since Canada had a flexible or floating exchange rate during these years, one might have expected some depreciation in the foreign exchange value of the Canadian dollar. Such a depreciation would have done several things: first, it would have automatically improved the competitive position of Canadian goods, thereby tending to increase exports, reduce imports and cut the current account deficit; and second, it would have served as an indication that the Canadian balance of payments position was weakening and might have led to measures designed to restore it to a more viable position.

Effects of Canadian Economic Policies on Current Account Balance After 1956

The continuation after 1956 of a substantial premium on the Canadian dollar seems to have been attributable largely to Canada's monetary and debt-management policies which held Canadian interest rates at relatively high levels, particularly when compared to rates in the U.S., and thereby encouraged the maintenance of large capital inflows. We have already noted that direct investment did not decline substantially between 1956 and 1960; we also saw, however, that large foreign borrowings by provincial and municipal governments were equally important in maintaining the inflow of long-term capital. One of the major

<sup>10</sup> If the basic balance is adjusted for the small grain exports during this period by using our five-year average, the basic deficit between 1957 and 1961 is reduced, but remains in excess of \$550 million. reasons for the use of the American capital market was the availability of large amounts of capital at substantially lower rates than in Canada.<sup>11</sup> Table V - 4 also shows that there were large inflows of shortterm capital, particularly from 1959 to 1961, which more than offset the deficit in the basic balance.

Let us turn briefly to a review of monetary and credit conditions in the latter half of the nineteen-fifties. Admittedly one has the benefit of hindsight, but the general consensus seems to be that the monetary authorities followed an excessively easy policy and were late in attempting to restrain the boom in 1955 and 1956. After a period of relatively restrictive monetary policy, a subsequent easing of credit conditions towards the end of 1957 led to a very substantial increase in the money supply during the first ten months of 1958. Between October, 1957 and October, 1958, the money supply held by the general public increased 13.7% from \$11,224 million (seasonally adjusted) to \$12,763 million (seasonally adjusted).<sup>12</sup>

However, the expansionary effects of this increase were at least partially offset by debt management policies. In the third quarter of

<sup>12</sup> Bank of Canada, <u>Statistical Summary 1966 Supplement</u> (Ottawa: Bank of Canada, 1967), p. 34.

<sup>11</sup> The Report of the Royal Commission on Banking and Finance reveals that the yield differential between the McLeod, Young, Weir average of provincial bonds and Moody's average of Aaa United States corporate bonds exceeded 75 basis points in just two of the seven years between 1950 and 1956. The differential climbed to approximately 100 basis points in 1957 - 58, however and to 125 basis points in 1959 - 60. See Chart V - 3, <u>Report of the Royal Commission on Banking and Finance</u> (Ottawa: Queen's Printer, 1964), p. 80.

1958, the Conversion Loan brought about the exchange of almost \$6 billion of short-term Victory Bonds for longer-term securities, extending the average term of the publicly-held debt from approximately eight years to almost fifteen years. The operation had two major effects, both of which contributed to high interest rates and sustained the inflow of foreign capital. The significant extension in the average term of the government's debt led to a reduction of liquidity in the economy, and general credit conditions became tighter in spite of the rapid expansion of the money supply noted above. In addition, the very size of the conversion and the rapid decline in bond prices after the withdrawal of official support caused a disruption and loss of confidence in the bond market which served to maintain interest rates at a relatively high level for some time.

Shortly after the completion of the Conversion Loan, the monetary authorities returned to a policy of severe restraint. There was practically no increase whatsoever in the money supply held by the general public between the latter part of 1958 and the middle of 1960. We shall not comment on the appropriateness of such a policy in light of domestic price, unemployment and demand trends; nevertheless, it is clear that the extremely tight credit conditions were a major factor in forcing interest rates to very high levels and in widening the differential between Canadian and American rates.

As stated above, the resulting large inflow of foreign capital into Canada prevented a decline in the external value of the Canadian dollar which otherwise would have improved the country's current account position; also, it permitted a continuation of an abnormally

large current account deficit which, had it not been reduced sufficiently by the exchange rate process noted above, might ordinarily have required direct measures by the authorities designed to reduce the deficit.

# Exchange Crisis, 1962, and Subsequent Behaviour of Current Account Balance

As was suggested at the beginning of this chapter, the exchange crisis of 1962 seems to have resulted chiefly from uncertainties and lack of confidence in Canada's political situation and Canadian economic policies, which invited speculative attacks on the dollar. At the same time, the persistent large current account deficits of the preceding five years undoubtedly contributed to this lack of confidence in the value of the Canadian dollar. Furthermore, as Professor Slater argues<sup>13</sup> and as we have suggested on the basis of the current account's behaviour since 1963, the measures adopted to combat the crisis, including devaluation to \$92.5 U.S., were probably excessive in relation to the actual competitive position of the Canadian economy. In fact, had adjustments occurred more gradually over time rather than as policy measures in reaction to a confidence crisis, they probably could and would have been less severe.

Referring again to Table V - 1, we observe that Canada's unit labour costs in manufacturing, after adjusting for exchange devaluation, declined 15% from 1960 to 1964 whereas unit labour costs during this period were unchanged in the U.S. and jumped 13%, 23% and 28% respec-

13 Slater, <u>Canada's Balance of International Payments</u>, p. 35.

tively in Japan, Germany and France. Although manufacturing unit labour costs rose more rapidly in Canada than in the U.S. during 1965 and 1966, the substantial improvement in Canada's competitive position as a result of devaluation contributed significantly to the quadrupling between 1960 and 1966 in exports of 'other manufactured goods and miscellaneous' (as recorded in Table IV - 3). Similarly, the improved competitive position of Canadian producers presumably served to limit growth in imports during the 1963 - 66 expansion in business. Also, as we noted in the previous chapter, there was a sizable improvement in Canada's net.travel balance coincident with the declining exchange value of the Canadian dollar.

Other probable causes of the relatively strong current account position from 1963 to 1966 were: first, more vigorous export promotion programmes together with increased emphasis on 'buy Canadian'; second, large wheat sales to the U.S.S.R. and Communist China; and third, the Canada - United States Automotive Trade Agreement which narrowed Canada's 1966 deficit on trade in motor vehicles and parts with the U.S. to the 1963 level of approximately \$550 million, down from over \$700 million in 1965.<sup>14</sup>

### Summary

We have found in this chapter that the magnitude of the current account deficits in the 1956 to 1961 period, which we previously concluded were abnormally large, cannot be attributed to any single cause.

14 Wilkinson, Canada's International Trade, p. 75.

First, we indicated the existence of several structural weaknesses in Canada's foreign trade position during these years which increased the size of the current account deficit.

Second, it was noted that development of natural resources was partially responsible for the relatively high level of capital spending during the period;<sup>15</sup> however, we also concluded that some of the large investment by utilities, government departments and government-operated institutions represented a catching-up as the result of very low capital spending for such facilities in the depression and war years. In addition, we explained why residential construction expenditures were large in 1958 and 1959. We then found that the inflow of long-term capital was similarly at a relatively high level between 1956 and 1961, largely because of an increase in net new bond issues sold abroad.

Third, this large inflow of foreign capital into Canada, which sustained the value of the Canadian dollar and thereby prevented an improvement in the current account position, was largely the result of restrictive monetary policy and the 1958 Conversion Loan. As a result, credit was difficult to obtain domestically and there was a substantial widening in the Canada - U.S. interest rate differential.

Finally, we attributed Canada's exchange crisis in 1962 to political and economic uncertainties and lack of confidence. The measures adopted to meet the crisis led to such a substantial improvement in

<sup>15</sup> Again we point out that, assuming a normal level of domestic saving in terms of the degree of domestic prosperity, an abnormally high level of investment is equivalent to a large current account deficit.

Canada's competitive position that deterioration in the current account during the strong 1963 - 66 business expansion was somewhat less than one might have expected on the bais of previous experience.

The only remaining step is to integrate this chapter's explanation of recent current account behaviour with the earlier development of our hypothesis in Chapter III. We believe that <u>structural</u> strengths or weaknesses in the current account are somewhat peripheral to this paper which refers to <u>cyclical</u> changes in the current account balance of payments. This is not to say that the underlying structural position will have no effect on cyclical fluctuations in the current account balance--for example, the deterioration accompanying any significant expansion of business activity will obviously be greater if there are structural weaknesses in Canada's current account than if the basic position is one of strength.

Over brief periods of time such as those in our study of shortrun <u>changes</u> in the current account balance, structural effects are likely to be relatively insignificant compared to current account fluctuations stemming from the business cycle. The only probable exceptions occur when important structural changes are concentrated in a very brief interval---for example, the emergency measures instituted in 1962 were large enough to overwhelm normal cyclical changes in the current account balance. On the other hand, our index method of analysing the <u>level</u> of the current account balance relative to domestic prosperity over longer periods of time will obviously reflect changes in the underlying longterm or structural position of the current account. Furthermore, the possible effects of any such structural influences are likely to increase

as the interval of time being examined increases.

We conclude, therefore, that it is not possible nor is it necessary for our hypothesis to refer specifically to the effects of structural changes on the cyclical behaviour of the current account balance. It must be realized however, that occasionally a shift in the underlying position may be sufficiently large that it dominates the short-run cyclical behaviour of the current account balance. Similarly, any longerterm analysis of the balance must recognize that the basic structure of the country's foreign trade position may differ considerably from one period to another.

The relatively high level of capital spending in the latter half of the nineteen-fifties reflected in part the low level of investment during most of the preceding twenty-five years. In terms of our analysis, the former may be thought of in two ways: first, as an abnormally high level of autonomous investment; and second, as a temporary increase in the marginal propensity of induced investment. As we have observed several times, the direction of change in the current account balance after 1957 was normal---that is, the balance improved in conjunction with a declining level of business activity. However, the extent of the improvement was restricted by the abnormally high level of investment, and whether it was autonomous or induced, our previous analysis showed the effect on the current account balance.

Cyclical fluctuations in the inflow of long-term capital were described as a key component of our hypothesis. Although the inflow turned down after 1957, the relatively limited nature of the decline was a partial contradiction of our hypothesis and, as explained above,

contributed to the continued large current account deficits of the period. The large inflows of capital which persisted in the face of a slow-down in economic activity were primarily the result of restrictive monetary policy. Once again, our hypothesis does not refer explicitly to variations in monetary, fiscal or other government policies, but we recognize that their effects cannot be ignored in instances such as this. Instead of expanding the hypothesis, however, the simplest way of dealing with the problem is to refer to influences like economic policies or structural changes only when they have significant effects on the cyclical behaviour of the current account balance.

In summary, we conclude that our observations of the current account balance in the post-war period do not suggest any basic changes in our hypothesis concerning the cyclical behaviour of the balance. With only a few readily explained exceptions, the current account tended to deteriorate in periods of business expansion and to improve in periods of business contraction. At the same time, we found that the magnitude of the current account's response to similar cyclical conditions varied considerably within the period and compared to our earlier studies. Consequently, it may be necessary, particularly when dealing with periods of more than one or two years, to recognize the various influences which may alter the magnitude (though usually not the direction) of the current account's response to changing business conditions.

#### CONCLUSION

In this concluding chapter, we shall review briefly our findings regarding the cyclical behaviour of Canada's current account balance of payments. The reader will recall from the first chapter the three purposes of the thesis: first, to examine statistical data in order to determine if any recognizable pattern exists between the business cycle and changes in the current account balance; second, to develop an hypothesis which will explain the observed cyclical behaviour of the current account balance; and third, to determine whether any change has occurred in the relationship between the current account and the business cycle since 1956. 1. **101212. E** 11.1.

We do not intend to describe any of the specific results of the rather lengthy statistical examination of the comparison between swings in the domestic business cycle and changes in the current account balance from 1870 to 1939. In the most general terms, our investigation revealed a strong tendency for domestic economic expansions during this period to be accompanied by deterioration in the trade and current account balances; conversely, contractions in the Canadian economy were almost always coincident with improvement in the trade and current account balances. Naturally, there were several exceptions to this pattern but in such cases, special circumstances were evident which seem to explain the apparent abnormalities.

VI

An examination of the data in Chapter II also revealed that Canada's current account balance was in a deficit position for much of the period studied and that a surplus position was reached only when the domestic economy was seriously depressed. In addition, although the analysis in this area was somewhat subjective, we showed that over relatively long periods of time, the magnitude of the current account balance was closely related to the level of prosperity in the Canadian economy. In summary, our findings in the second chapter provided strong support for our preliminary hypothesis---that as domestic prosperity increases, Canada's current account balance tends to deteriorate, and vice versa; and that Canada usually experiences a deficit on current account.

In Chapter III, we proceeded to explain this pattern of cyclical behaviour documented in the second chapter by developing in detail the above hypothesis. Initially, we indicated the existence in Canada of abundant sources of energy, food and raw materials; we then went on to describe the consequences of this abundance of natural resources relative to other factors of production vis-a-vis other countries. One result has been a concentration of production in relatively few resource-based raw materials and related products which implies, in turn, a need to export large volumes of such commodities and to import many other goods and services. Fluctuations in the demand for Canadian exports make national income vulnerable (both directly and indirectly through the effect on investment spending for resource development) to cyclical changes abroad, particularly in Canada's major customers, the United States and the United Kingdom.

A second major result of Canada's rich endowment of natural resources has been the relatively large proportion of national income ordinarily devoted to domestic investment. Although there are other reasons as well, one of the basic causes of the relatively high level of investment spending in Canada has been the necessity to develop resource industries in order to realize the potential of the country's abundant natural resources.

Expanding the basic national accounts identity 'saving equals investment', we showed that  $S_D - I_D \equiv X - M$ ; in other words, the current account balance (X - M) must equal expost the difference between domestic saving and domestic investment  $(S_D - I_D)$ . Therefore, from our observation in Chapter II of current account deficits in most years, we know that domestic investment tended to exceed domestic saving. As mentioned above, the most important reason seems to be the fact that natural resource development has required a relatively high level of domestic investment in most years. At the same time, domestic saving has been limited by Canada's relatively small population, despite the fact that per capita incomes are large.

We concluded, therefore, that Canada's customary current account deficit was equivalent to a shortfall of domestic saving relative to the amount of domestic investment required to develop the country's natural resources. Canada was able to finance its chronic import balance, however, through inflows of foreign long-term capital attracted by a higher marginal efficiency of capital in Canada, particularly in the resource industries, than elsewhere.

After establishing the nature of Canada's international transactions, we turned to a consideration of the short-run cyclical behaviour of the current account balance. Transposing our previous identity to the form  $\Delta I_D + \Delta X \equiv \Delta S_D + \Delta M$ , we noted that any change in exports and/or domestic investment (which are exogenous or partially exogenous and therefore income-determining) will cause national income to increase or decrease by an amount sufficient to induce an equal change in domestic saving plus imports. Consequently, the previously observed tendency for cyclical fluctuations in Canada's imports to exceed fluctuations in its exports (thereby causing the current account balance to deteriorate during a business expansion and to improve during a business contraction)<sup>1</sup> is equivalent to a tendency for cyclical changes in domestic investment to exceed changes in domestic saving.

Two principal causes of this tendency were described in Chapter III: first, the importance of a foreign trade acceleration effect in the Canadian economy; and second, accommodating cyclical swings in the inflow of long-term capital from abroad.

Assuming as we did that any major cyclical upturn or downturn in the Canadian economy is dependent upon a change in exports, we demonstrated that, in the absence of a change in investment, any increase in exports would be only partially offset by an induced increase in imports, and therefore the current account would improve. This initial

<sup>1</sup> This assumes that changes in each of the four variables,  $I_D$ ,  $S_D$ , X and M, are positive in the case of a business expansion and negative in the case of a business contraction.

assumption of constant domestic investment is not realistic, however. In the first place, autonomous investment may be changing. More important, though, is the increase in domestic investment that will ordinarily be induced by rising exports, both directly in the export industries themselves, and indirectly in other industries because of the resulting growth in overall national income. This influence of exports on domestic investment is termed the foreign trade acceleration effect, and it will usually cause an increase in exports, through higher investment, income and consequently imports, to bring about a deterioration rather than an improvement in the trade and current account balances.

It was demonstrated that the effect of a change in exports on the current account balance is determined by the size of the marginal propensity to save a relative to the size of the marginal propensity to invest v. Specifically, when v is greater than s, then the current account balance will deteriorate as exports and income increase and it will improve as exports and income decrease. The foregoing analysis assumes no change in autonomous investment A; in fact, over relatively short periods of time,  $\Delta A$  may be quite small, though ordinarily not zero. In any event, we suggested that the domestic acceleration effect, stemming from changes in autonomous investment, was probably less important in Canada than the foreign trade acceleration effect. Nevertheless, the former will usually augment the latter in explaining the greater cyclical variability of Canadian domestic investment than domestic saving and its counterpart, the greater cyclical variability of imports than exports.

Several reasons were mentioned for the importance of this foreign trade acceleration effect in the Canadian economy. First, the export sector, as we have seen, represents a very significant part of the total Canadian economy. Second, cyclical fluctuations in exports, especially of resource products, tend to be large. Third, investment spending for resource development projects and required ancillary projects such as transportation facilities is closely related to changes in exports of natural resource products. In addition, these large complementary cyclical fluctuations in exports and investment directly related to exports lead to sizable variations in domestic income, which in turn induce swings in the investment expenditures of other non-export industries.

During a business expansion, the normal short-fall of domestic saving relative to domestic investment tends to increase, primarily because of the foreign trade acceleration effect described above, and the current account balance deteriorates. In order to finance its increasing import balance, however, Canada must obtain an increased flow of capital from abroad. If additional foreign capital, primarily in longterm forms, is not obtained, the resulting deterioration in Canada's overall payments position would soon limit further expansion in domestic business activity.

In fact, the cyclical variability of Canada's current account balance has ordinarily been approximately offset by swings in the inflow of long-term capital from abroad. In other words, as the current account balance deteriorates during business expansions, capital inflows tend to increase; conversely, improvements in the current account
balance coincident with declining business activity are usually accompanied by a reduction in the inflow of foreign long-term capital.

This variability in capital inflows is related to changes in the difference between the marginal efficiency of capital in Canada and the marginal efficiency of capital in alternative areas of investment. During periods of rapidly expanding exports of resource products, the marginal efficiency of capital in Canada, particularly in the resource industries, rises sharply and attracts increased foreign capital to share in the development of resource and other projects. On the other hand, when exports are depressed, the marginal efficiency of capital falls significantly and investment in Canada becomes less attractive to foreign capital than investment in other parts of the world.

Therefore, we concluded that domestic investment opportunities and domestic investment spending, both dependent primarily on the level of exports, provide a link between the inflow of foreign investment capital into Canada on the one hand, and the outflow of foreign funds to finance the country's import balance on the other hand. Furthermore, we contended that the resulting complementarity of cyclical variations in the capital and current accounts is necessary to permit the large fluctuations that we observe in the current account balance.

Having completed our basic explanation of the observed cyclical behaviour of the current account balance, we went on in Chapter III to examine several other related topics. We studied briefly the available data on domestic investment and domestic saving, commenting briefly on the cyclical variability of the various components of each. A marked difference was also observed in the product mix of Canadian im-

ports relative to Canadian exports. A larger proportion of imports than exports is concentrated in those products for which the cyclical variability of demand is relatively high. Consequently, the value of m, the marginal propensity to import, in Canada is large compared with many other countries, and this in turn limits the change in income induced by a shift in exports or investment. In effect, Canada 'exports' a significant part of its domestic inflation or deflation, thereby limiting the magnitude of its own cyclical fluctuations in income.

Next, our analysis was expanded to explain how exceptions may occur in the observed pattern of cyclical behaviour of the current account balance. Attention was concentrated on changes in autonomous investment opposite in direction to that in exports, and on cyclical changes in s, m, and v. When changes in autonomous investment are introduced into the analysis, the effect of a change in income on the current account balance, that is  $\Delta X - \Delta M$ , was found to equal  $\Delta X$  (s - v) - m  $\Delta A$ . Therefore, given an expansion of business, the current account balance would improve when  $\Delta X$  (s - v)>m  $\Delta A$  and deteriorate when  $\Delta X$  (s - v)<m  $\Delta A$ .<sup>2</sup> As long as X and A change in the same direction, we concluded that the observed cyclical behaviour of the current account balance would occur when s  $\leq$  v or when s > v but  $\Delta X$  (s - v)<m  $\Delta A$ .<sup>3</sup> How-

<sup>2</sup> We note that when  $\Delta A = 0$ , it is simply the size of s relative to the size of v which is the basic determinant, as we stated previously.

 $^{3}$  We previously noted that  $\Delta A$  is probably quite small relative to  $\Delta X$  in most cases; therefore, the fact that in Canada v tends to be large relative to s remains as the dominant consideration in our analysis.

ever, we illustrated that if autonomous investment moves in the opposite direction to exports, then  $(\Delta X + \Delta A)$  and thus  $\Delta Y$  may be either positive or negative, and even the more restrictive s < v will no longer ensure that the current account balance will react in the manner described in our hypothesis.

Specifically, we observed that a difference between North American and European business activity might cause exports to respond to the latter whereas investment could follow the former and move in the opposite direction. In fact, we suggested that such a situation probably existed in the mid-1890's, explaining the large and continuous improvement in the trade balance during this period.

Although our earlier analysis assumed that s, m and v were constant, in fact each of these propensities is likely to vary over the course of the business cycle. All three probably react positively to business conditions, that is increasing as incomes rise and vice versa. We suggested that since cyclical variations in s and v are likely to be partially offsetting, the effects upon the critical (s - v) may be quite limited and ordinarily not sufficient to offset the normal inequality  $s \langle v$ . However, when actual output is substantially below its potential, a recovery in business is not likely to have much initial effect upon v, which remains at a low level because of continued expectations of poor profits and because of continued large excess capacity. At the same time, s may remain high for a while since liquidity must be restored and since expectations of future income remain relatively low. Consequently, s may exceed v and although business is recovering and incomes are rising, the current account balance will continue to im-

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prove. This type of situation appears to have existed after 1933 and explains the failure of the current account balance to deteriorate dur-

Finally in Chapter III, we showed that several other possible explanations of the observed cyclical behaviour of the current account balance, including a consistently greater amplitude of cyclical variations in Canada than in other countries, did not in fact appear to offer a reasonable alternative.

In completing our statistical analysis of the current account balance from 1946 to 1966, we reached several conclusions. The postwar and Korean War period from 1946 to about 1953 was one of adjustment for the Canadian current account balance of payments. The period began with Canada in a strong surplus position generated by the war, and the deterioration in the following years represented largely a return to more normal peacetime conditions, though several times the trend was temporarily reversed for reasons not directly related to the domestic business cycle. From 1953 to 1966, we found that the response of the current account balance to changes in domestic economic activity clearly supported our hypothesis in terms of the direction of change, but that the magnitude of the response was frequently somewhat different than one might have expected.

In particular, we noted that deterioration in Canada's current account balance in 1956 and the first half of 1957 seemed even more rapid than the strongly expanding economy would have suggested; second, that continued weakness, particularly in the non-merchandise account, was apparent from 1958 to 1961, despite relatively slow growth in the

economy; third, that an apparently normal relationship between the current account balance and the degree of domestic prosperity was not restored until after strong policy measures were taken in connection with the 1962 exchange crisis; and fourth, that the deterioration in the current account associated with the 1963 to 1966 economic expansion was not as large as one might have expected.

Our analysis of the non-merchandise balance of payments and its components since 1953 revealed essentially non-cyclical behaviour---in other words, there appeared to be no consistent pattern of change related to the Canadian business cycle. This finding confirmed our preliminary conclusion, made on the basis of limited data in Chapter II, that the non-merchandise account was relatively unimportant in determining cyclical movements in the total current account balance. At the same time, however, we noted that the non-merchandise balance since 1953 exhibited longer-term trends which contributed to the apparent abnormalities mentioned in the previous paragraph.

Other important findings in our detailed examination of data for the post-war period were: first, investment spending accounted for a relatively large proportion of total GNE between 1956 and 1960, particularly in light of economic conditions after 1956; second, merchandise exports were surprisingly weak, declining steadily relative to GNE from the end of the war until 1959; and third, imports of consumer goods failed to decline after 1956 and in fact rose significantly.

Finally, in Chapter V an attempt was made to explain the behaviour of the current account balance beginning in 1956, based on the statistical findings described above. Initially, we described several

structural weaknesses in Canada's current account position during the latter half of the nineteen-fifties. Underlying trends in world trade patterns limited growth in Canadian exports; Canada's competitive position deteriorated relative to some other industrial nations; and demand in Canada for certain products, notably automobiles and parts, shifted in favour of imports. We concluded that structural changes such as these lie outside the scope of our hypothesis on <u>cyclical</u> changes in the current account balance. They are not likely to have much effect on short-run fluctuations in the current account but are evident in a longer term comparison between the level of the current account balance and the degree of domestic prosperity such as we carried out in our 'index' method of analysis.

Concerning the relatively high level of capital spending from 1956 to 1960, we concluded that resource development was an important cause, but we also attributed some investment during this period to a catching-up process. In terms of our previous analysis, one could say that both autonomous investment and the marginal propensity to invest were temporarily high during these years, thereby sustaining relatively large current account deficits.

As predicted by our hypothesis, the inflow of long-term capital declined after 1956; however, the reduction was limited (and partially off-set by increased inflows of short-term funds) as the result of high Canada - U.S. interest rate differentials caused by restrictive monetary policy in this country. These large inflows of foreign capital sustained the exchange value of the Canadian dollar, preventing the improvement in Canada's competitive position that one might have

expected with a floating exchange rate. In addition, the inflows disguised the weakening structural position of the current account. Finally, the eventual devaluation to \$92.5 U.S. and other measures such as the 'buy Canadian' policy strengthened Canada's competitive position so substantially that current account deterioration in the subsequent 1963 -66 expansion was relatively limited.

We concluded that the cyclical fluctuations of the current account balance in the post-war period did, in fact, fit in with our hypothesis, and that no revision of the hypothesis was required. At the same time we recognized that other influences, usually of a structural nature, would frequently alter the magnitude of the cyclical response of the current account; also, that differences in the underlying strength or weakness of the current account make any comparison of relative levels of the current account balance over longer periods of time rather difficult.

Fiscal Year	Export Prices	Import Prices	Terms of Trade		Fiscal Year	Export Prices	Import <u>Prices</u>	Terms of Trade
1869	89.4	133.0	67.2		1992	103.0	97.8	105.3
70	88.4	117.6	75.2		93	100.7	96.3	104.6
71	93.4	137.2	68.1		94	101.0	93.7	107.8
72	95.5	145.7	65.6		95	96.5	85.3	113.1
73	99.1	140.1	71.7		. 96	93.1	87.9	105.9
74	101.0	132.9	76.1		97	90.9	83.8	108.5
75	105.8	135.4	78.2		98	97.0	88.8	109.2
76	109.1	132.9	82.1		99	95.4	89.6	106.5
- 77	98.1	119.2	82.3		1900	100.0	100.0	100.0
78	100.9	113.5	88.9		Ol	102.5	101.0	101.5
79	91.6	104.4	87.8		02	104.3	98.0	106.4
80	93.8	109.4	85.7		03	107.6	100.7	106.8
81	97.5	113.3	86.1		04	108.7	103.1	105.3
82	107.2	117.4	91.3		05	105.3	102.7	102.5
83	109.6	117.8	93.1		06	113.4	107.7	105.3 .
84	104.8	114.3	91.7	•	07	118.5	113.8	104.1
85	99.2	107.3	92.5		08	124.2	117.0	106.2
86	96.1	101.5	94.7		09	123.5	108.6	113.7
87	96.3	97•7	98.6		10	124.8	109.3	114.2
88	101.6	95.9	106.0		11	123.7	110.5	111.9
89	101.3	102.1	99.2		12	120.7	107.2	112.6
90	103.5	102.4	101.1		13	122.5 🚕	110.0	111.4
91	104.0	104.2	99.8		14	116.9 -	112.9	103.5

Appendix A - Table (i) Indexes of Export and Import Prices and the Terms of Trade, 1869 - 1913 (base 1900 = 100)

<sup>1</sup> From 1869 to 1907 the data are for fiscal years ending June 30 of the year given, and from 1908 to 1914 the data are for fiscal years ending March 31 of the year given.

Source: M.C. Urquhart and K.A.H. Buckley, eds., <u>Historical Statistics of Canada</u> (Toronto: Macmillan, 1965).

Appendix A - Table (ii)

Indexes of Export and Import Prices and the Terms of Trade, 1919 - 39 and 1946 - 66

Year	Export <u>Prices</u> (base 19	Import <u>Prices</u> 26 = 100)	Terms of Trade		Year	Export Prices (base 19	Import Prices 48 = 100)	Terms of Trade
1919	139.5	137.1	101.8		1946	79.9	76.9	103.9
20	156.2	167.8	93.1	•	47	91.6	88.0	104.J
21	112.1	122.4	91.6		48	100.0	100.0	100.0
22	93.7	103.1	90.9		49	103.3	102.6	100.7
23	93.1	112.5	82.8		50	108.3	.110.3	98.2
24	95.0	108.0	88.0		51	123.0	126.2	97.5
25	103.2	106.1	97.3		52	121.8	110.4	110.3
26	100.0	100.0	100.0		53	118.3	109.4	108.1
27	96.3	95.4	100.9		54	115.1	109.5	105.1
. 28	93.2	93.9	99.2		55	117.7	110.5	106.5
29	91.7	91.4	100.3		56	121.3	113.0	107.3
30	76.9	80.0	96.1		57	121.3	116.4	104.2
31	63.8	67.6	94.4		- 58	120.6	116.5	103.5
32	57.4	66.2	86.7		59	122.8	114.4	107.3
33	56.8	63.4	89.6		60	123.0	115.5	106.5
34	60.7	67.3	90.2		61	124.0	119.1	104.1
35	61.8	66.0	93.6		62	128.1	124.5	102.9
36	65.2	67.2	97.0		63	128.9	129.4	99.6
37	76.1	73.7	103.2		64	130.7	130.8	.99•9
38	67.1	68.5	98.0		65	132.4	130.8	101.2
39	64.2	68.5	93•7		66	137.9	132.5	104.1
Source:	M.C. Urquh 1965). Bank of Ca:	art and K.A.T nada. Statis	H. Buckley, ed tical Summarv	ls., <u>Hist</u> 1967 Sup	orical Statisti plement (Ottawa	cs of Canad : Bank of	a (Toronto: Canada, 1968	Macmillan,



Appendix A - Chart (i) Terms of Trade Related to Index of Prosperity, 1869 - 1913



Appendix A - Chart (ii) Terms of Trade Related to Index of Prosperity, 1919 - 66

Appendix	В		Table '	(i)	)
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Merchandise Exports, Imports and the Balance of Merchandise Trade, 1869 - 1900

Fiscal	Non-Grain	Grain_	Exports	Total Exports		Merch. Trade	Index of Merch.
Year	Exports	actual	5 yr. avge.	(adj.)	Imports	Balance	Trade Balance
	(\$mill)	(\$mill)	(\$mill)	(\$mill)	(\$mill)	(\$mill)	(%)
1869	44.4	11.9	11.4	55.8	63.2	- 7.4	-12.4
70	52.2	13.4	11.8	64.0	66.9	- 2.9	- 4.4
71	58.5	8.9	12.3	70.8	84.2	-13.4	-17.3
72	65.8	12.8	13.7	79.5	105.0	-25.5	-27.6
73	71.4	14.6	14.4	85.8	124.5	-38.7	-36.8
74	68.3	19.0	17.7	86.0	123.2	-37.2	-35.6
75	60.2	16.7	18.6	78.8	117.4	-38.6	-39.3
76	54.2	25.6	20.9	75.1	92.5	-17.4	-20.8
77	58 <b>.</b> 1	17.0	21.9	80.0	94.1	-14.1	-16.2
78	53.2	26.0	24.7	77.9	90.4	-12.5	-14.8
· 79	46.5	24.3	25.5	72.0	78.7	- 6.7	- 8.9
80	55.4	30.7	28.4	83.8	69.9	13.9	18.1
81 18	67.9	29.4	28.6	96.5	90.5	6.0	6.4
82	70.4	31.4	27.3	97.7	111.1	-13.4	-12.8
83	70.0	27.4	24.7	94.7	121.9	-27.2	-25.1
84	71.8	17.5	22.8	94.6	106.0	-11.4	-11.4
85	69.3	17.9	20.9	90.2	99.8	- 9.6	-10.1
86 .	65.3	19.9	19.1	84.4	96.0	-11.6	-12.9
87	67.7	21.8	18.5	86.2	105.1	-18.9	-19.8
88	71.8	18.4	18.0	89.8	100.7	-10.9	-11.4
89	72.5	14.7	16.8	89.3	109.1	-19.8	-20.0
90	79.2	15.1	18.1	97.3	111.7	-14.4	-13.8
91 <sup>°</sup>	83.3	14.2	19.0	102.3	111.5	- 9.2	- 8.6
92	84.1	28.0	20.8	104.9	115.2	-10.3	- 9.4
93	91.6	22.9	20.7	112.3	115.2	- 2.9	- 2.5
94 -	91.7	24.0	20.9	112.6	109.1	3.5	3.2
. 95	94.7	14.6	19.4	114.1	100.7	13.4	12.5
96	101.4	14.9	22.9 -	124.3	105.4	. 18.9	16.4
97	113.6	20.8	24.4	138.0	106.6	31.4	25.7
98	119.2	40.4	28.0	147.2	126.3	20.9	15.3
99	123.5	31.4	31.9	155.4	149.4	6.0	3.9
1900	150.5	32.7	36.1	186.6	172.7	13.9	7.7

Fiscal Year	Change in <u>Total Exports</u> (%)	Change in Imports (%)	Rate of Change in Merch. Trade Balance (%)
1870	+14.7	+ 5.9	+ 7.2
71	+10.6	+25.9	-14.7
72	+12.3	+24.6	-14.2
73	+ 7.9	+18.6	-13.4
74	+ 0.2	- 1.1	+ ];4
75	- 8.4	- 4.7	- 1.4
76	- 4.7	-21.2	+23.3
77	+ 6.5	+ 1.7	+ 3.9
78	- 2.6	- 4.0	+ 1.9
79	- 7.6	-12.9	+ 7.3
80	+16.4	-11.2	+27.1
81	+15.2	+29.4	··· 9,3
82	+ 1.2 .	+22.8	19.6
83	- 3.1	+ 9.6	-13.0
84	O.l	<b>∞13.</b> 0	+15.1
85	- 4.7	··· 5.9	+ 1.8
86	- 6.4	- 3.8	··· 202
87	+ 2.1	+ 9.5	··· 7.8
88	+ 4.2	- 4.2	+ 8.4
89	- 0.6	* 8.4	₩ 9 <b>,</b> 2
90	+ 9.0	+ 2.4	+ 5.3
91	+ 5.1	- 0.1	+ 4.9
92	+ 2.5	+ 3.2	- 1.0
93	+ 7.0	0	+ 6.6
94	+ 0.3	- 5.3	+ 5.7
95	+ 1.3	- 7.7	+ 9.1
96	+ 8.9	+ 4.6	+ 4.9
97	+11.0	+ 1.2	+10.5
98	+ 6.7	+18.5	8.1
99	+ 5.6	+18.3	10.3
1900	+20.1	+15.5	+ 4.8

#### Appendix B - Table (ii) Changes in Merchandise Exports, Imports and the Balance of Merchandise Trade, 1870 - 1900

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Source: (for all tables in Appendix B)

1870-1900	K.W. Taylor, Statistical Contributions to Canadian Economic
	History (Toronto: Macmillan, 1931), II
19001939	M.C. Urquhart and K.A.H. Buckley, eds., Historical Statistics
	of Canada (Toronto: Macmillan, 1965)
1946-1966	Dominion Bureau of Statistics, The Canadian International
	Balance of International Payments A Compendium of Statistics
	from 1946 to 1965 (Ottawa: Queen's Printer 1967).

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# Appendix B - Table (iii) Merchandise Exports, Imports and the Balance of Merchandise Trade, 1900 - 39

Year	Non- Grain <u>Exports</u> (\$mill)	<u>Grain</u> Actual (\$mill)	Exports 5 yr avge. (\$mill)	Total Exports (incl. <u>5 yr.avge.</u> (\$mill)	Imports (\$mill)	Trade Balance (\$mill)	Index of Trade Balance (%)
1900 01 02 03 04 05 06 07 08 09 10 11 12 13	163 169 184 196 172 190 228 214 201 211 211 227 216 258 316	25 29 32 30 24 34 42 53 63 73 70 84 114 153	29 29 28 30 32 36 43 53 60 69 81 98 105 117	192 198 212 226 204 226 271 267 261 280 308 314 363 433	186 193 213 263 260 277 327 378 297 355 448 529 654 684	6 5 - 1 - 37 - 56 - 51 - 56 - 111 - 36 - 75 - 140 - 215 - 291 - 251	3.2 2.6 - 0.5 -15.1 -24.1 -20.3 -18.7 -34.4 -12.9 -23.6 -37.0 -51.0 -57.2 -57.2
19 20 21 22 23 24 25 26	1061 1002 595 658 759 773 897 911	304 396 309 331 360 373 467 481	336 335 367 354 368 402 425 465	1397 1337 962 1012 1127 1175 1322 <u>1326</u>	1077 1599 944 839 1006 889 978 1094	320 -262 18 173 121 286 344 282	25.9 17.8 1.9 18.7 11.3 27.7 29.9 22.8
26 27 28 29 30 31 32 33 35 37 35 37 38 39	917 898 920 973 754 550 436 502 640 739 882 1122 968 1036	481 446 557 334 235 162 156 174 180 284 176 132 156	465 457 411 347 291 211 179 168 192 194 189 186 187 155	1382 1355 1331 1320 1045 761 615 670 832 933 1071 1308 1155 1191	1078 1166 1325 1402 1076 659 464 434 563 608 709 913 754 832	304 189 6 - 82 - 31 102 151 236 269 325 362 395 401 359	24.7 15.0 0.5 - 6.0 - 2.9 14.4 28.0 41.6 38.6 42.2 40.7 35.6 42.0 35.5

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Appendix B -- Table (iv) Current Account Balance and Changes in Merchandise Exports, Imports, Merchandise Trade Balance and Current Account Balance, 1900 -- 39

Year	Current Acct. Balance (\$mill)	Index of Current Acct. Balance (%)	Change in Merch. Exports (%)	Change in Merch. Imports (%)	Rate ( Merch, Bal. (%)	of_change_in Curr.Acct.Bal. (%)
1900 01 02 03 04 05 06 07 08 09 10 11 12 13	- 21 - 22 - 26 - 61 - 81 - 85 - 96 - 163 - 114 - 153 - 223 - 320 - 430 - 422	- 9.4 - 9.9 - 20.4 - 28.2 - 26.5 - 25.2 - 39.4 - 35.3 - 43.6 - 56.2 - 63.8 - 57.1	+ 3.1 + 7.1 + 6.6 - 9.7 +10.8 +19.9 - 1.5 - 2.2 + 7.3 +10.0 + 1.9 +15.6 +19.3	+ 3.8 +10.4 +23.5 - 1.2 + 6.5 +18.0 +15.6 -21.4 +19.5 +26.2 +18.1 +23.6 + 4.6	-0.5 -2.9 -15.8 -8.0 +2.1 -1.8 -17.7 +24.9 -13.1 -18.7 -18.8 -16.3 +7.5	0.4 1.6 12.5 6.8 1.3 3.1 16.9 +12.3 9.6 14.8 14.8 17.7 + 1.1
19 20 21 22 23 24 25 26	85 -403 -122 48 4 191 248 - <u>187</u> -	5.6 -23.4 -10.1 4.1 0.3 14.5 17.0 _11.8	- 4.3 28.0 + 5.2 +11.4 + 4.2 +12.5 + 4.1	+48.5 -41.0 -11.1 +19.9 -11.6 +10.0 +11.9	-43.0 +23.1 +16.5 - 5.2 +15.7 + 5.3 - 5.2	
26 27 28 29 31 32 33 34 35 37 38 39	111 -178 -298 -281 -125 - 84 10 86 139 149 190 155 125	7.0 0.1 -10.3 -16.5 -18.8 -11.5 - 9.7 1.2 8.6 12.8 11.8 12.6 11.6 9.0	- 2.0 1.8 0.8 -20.8 -27.2 19.2 + 8.9 +24.2 +12.1 +14.8 +22.1 -11.7 + 3.1	+ 8.2 +13.6 + 5.8 23.3 38.8 29.6 6.5 +29.7 + 8.0 +16.6 +28.8 17.4 +10.3	- 9.2 -14.1 - 6.5 + 4.2 +15.0 + 7.8 +15.6 + 5.3 + 7.6 + 3.6 + 3.6 - 4.3	- 6.8 10.6 - 6.8 + 1.1 +12.1 + 4.2 +11.1 + 8.3 + 5.1 + 0.8 + 3.0 - 2.4 - 2.2

# Appendix B - Table (v) Non-merchandise Receipts, Expenditures and Non-merchandise Balance, 1900 - 26

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	•	Interest	Balance on			
	Travel	& Divd.	other current	Total nor	n-merchandise	Non-merch.
Year	Balance	<u>Balance</u>	items	Receipts	Expenditures	balance
	(\$mill)	(\$mill)	(\$mill)	(\$mill)	(\$mill)	(\$mill)
1.900	l	- 32	5	22	. 49	- 27
01	2	- 34 .	. 4	25	53	- 28
02	3	- 34	6	38	63 🌾	- 25
03	3	- 36	8	42	66	- 24
04	4	- 38	9	43	68	- 25
05	2	- 42	5	52	86	- 34
06	· l	- 46	4	62	101	- 39
07	0	- 51	1	65	117	- 52
08	1	- 71	≈ 8	65	143	- 78
09	0	<b>~</b> 76	<b>~</b> 2	77	155	- 78
10	0	82	- 1	91	175	<b>⊷</b> 84
11	<b>⊷</b> 2	- 93	-10	95	200	-105
12	<b>.</b> 4	-109	<b>~</b> 26	96	235	-139
_ 13_	7	28		95	267	172
19	24	-172	87	150	385	-235
20	29	-166	<u> </u>	184	325	-1.41
21	41	-187	6	186	326	-140
22	54	-190	1.2	188	314	-126
23	69	-214	28	21.7	334	-117
24	81	-202	25	238	334	- 96
25	101	-210	14	264	360	<b>-</b> 96
26	1.03	-218	21	299	394	- 95

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	Append	dix B 🛶 Table	(vi)	
Non-merchandise	Receipts,	Payments and	Non-merchandise	Balance,
•		1926 - 39	241	

		Travel	anne ava a .	Interes	st_&_Div	<u>d</u>		other	Circle Barts
<u>Year</u>	Receipts (\$mill)	Expend. (\$mill)	Bal. (\$mill	Receipts) (\$mill)	Expend. (\$mill)	<u>Bal.</u> (\$mill	Receipts	Expend. (\$mill)	Bal. (\$mill)
1926	152	99	53	32	240	-208	83	121	<b></b> 38
27	163	100	63	41	257 .	-216	85	120	35
28	177	98	79	46	275	-229	88	122	34
29	198	108	90	61	322	-261	80	125	45
30	180	92	88	59	348	-289	69	118	49
31	153	71	82	48	330	⊷282	59	86	-27
32	114	49	65	37	302	⊷265	54	89	-35
33	89	44	45	38	264	-226	44	89	⊷45
34	106	50	56	57	268	-211	43	71	⊷28
35	117	64	53	64	270	-206	45	78	⊷33
36 37 38	142 · 166	75 87 86	67 79 63	75 76	311 302	-236 -226	47 53 46	91 111 114	-58 -68
39	149	81	68	57	306	-249	-10 59	112	⊷53

					Chang	ge	
	Non-me	erchandi	se	Index of non-	_in non-n	nerch.	Rate of change
Year	Receipts	Expend.	Bal.	merch. bal.	Receipts	Expend.	in non-merch bal.
	(\$mill)	(Imill)	(\$mill	.) (%)	(%)	(%)	(%)
1926	267	460	-193	53.1			
27	289	477	-188	-49.1	+ 8,2	+ 3.7	+ 1.3
28	311	495	-184	-45.6	+ 7.6	+ 3.8	+ 1.0
29	339	555	-216	-48.3	+ 9.0	+12.1	- 7.5
30	308	558	-250	-57.7	•• 9.2	+ 0.5	- 7.7
31	260	487	-227	<b>60.</b> 8	-15.6	-12.7	+ 5.7
32	205	440	-235	-72.9	-21.2	- 9.7	- 2.3
33	171	397	226	-79.6	-16.6	- 9.8	+ 3.0
34	206	389	-183	-61.5	+20.5	- 2.0	. +14.8
35	226	412	186	-58.3	+ 9.7	+ 5.9	- 1.0
- 36	264	477	-213	<b>⊷</b> 57•5	+16.8	+15.8	- 7.8
37	295	500	-205	-51.6	+11.7	+ 4.8	+ 2.1
38	261	507	-246	64.1	-11.5	+ 1.4	-10.5
39	265	499	-234	-61.2	+ 1.5	- 1.6	+ 3.1

Appendix B - Table (vii) Changes in Exports, Merchandise Trade Balance and Current Account Balance Excluding Grain Exports, 1900 - 39

Year	Change in	Rate_of_Change_	(excl. grain exports) in
	Non-grain Merch. Exports	Merch. Balance	Current Account Balance
	(%)	(%)	(%)
1901 02 03 04 05 06 07 08 09 10 11 12 13	+ $3.7$ + $8.9$ + $6.5$ -12.2 +10.5 +20.0 $6.2$ $6.1$ + $5.0$ + $7.6$ $4.8$ +19.4 +22.5	- 0.6 $- 2.6$ $- 17.8$ $- 9.4$ $+ 0.4$ $- 4.7$ $- 22.7$ $+ 24.9$ $- 18.0$ $- 24.8$ $- 25.9$ $- 20.0$ $+ 5.9$	- 0.5 - 1.3 - 1.3 - 13.9 - 7.9 - 2.8 - 5.4 - 20.6 +11.4 -12.8 - 19.0 - 23.0 - 23.0 - 20.5 - 0.6
20	5.6	-49.0	=40.8
21	40.6	+24.0	+19.3
22	+10.6	+22.1	+18.1
23	+15.3	- 8.1	= 5.4
24	+ 1.8	+15.3	+13.5
25	+16.0	+ 4.0	+ 2.9
26	+ 1.6	10.5	= 7.8
27 28 29 30 31 32 33 34 35 36 37 38 39	$\begin{array}{r} - 2.1 \\ + 2.4 \\ + 5.8 \\ - 22.5 \\ - 27.1 \\ - 20.7 \\ + 15.1 \\ + 27.5 \\ + 15.5 \\ + 19.4 \\ + 27.2 \\ - 13.7 \\ + 7.0 \end{array}$	10.5 12.7 2.1 + 8.8 +28.0 +15.4 +20.9 + 1.7 + 8.5 + 5.7 + 4.0 + 0.5 1.1	$\begin{array}{r} - 7.3 \\ - 9.0 \\ - 3.6 \\ + 4.9 \\ + 20.3 \\ + 8.3 \\ + 13.8 \\ + 6.3 \\ + 5.5 \\ + 1.4 \\ + 3.4 \\ - 2.7 \\ + 0.2 \end{array}$

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Merchandise Exports, Imports and the Balance of Merchandise Trade, 1947 - 56

Year/	Non-Grain	_Grain_E	xports	Total Exports		Merch. Trade	Index of Merch.
Quarter	Exports	actual	5 yr. avge.	(incl 5 yr.avge.)	Imports	Balance	Trade Balance
	(\$mill)	(\$mill)	(\$mill)	(\$mill)	(\$mill)	(\$mill)	(%)
46 IV	2358	442	503	2861	2041	820	33.4
47 I	2390	445	521	2911	2234	677	26.3
II	2500	497	512	· 3012	2494	518	18.8
III	2539	532	508	3047	2679	368	12.8
IV	2614	530	515	3129	2813	316	10.6
48 I	2711	527	518	3229	2824	405	13.4
II	2773	468	507	3280	2808	472	15.5
III	2889	430	509	3398	2833	565	18.1
IV	3021	464	520	3541	2877	664	20.7
49 I	2996	474	542	3538	2957	581	17.9
TT	2971	544	560	3531	3028	503	15.3
TTT	2887	601	569	3450	3002	448	13.9
TV	2821	610	588	3409	2949	460	14-5
50 T	2829	595	619	344.8	2938	510	16.0
TT	2876	565	654	3530	2998	532	16.3
TTT	2002	520	662	3654	3176	478	14.0
TV	3098	488	697	3795	3433	362	
51 T	3235	504	732	3967	3761	206	5 3
	3385	526	7764 7144	シノン7 ムコン9	L172	43	- 1 0
ትት ምግግ	3567	615		4374	4460	-155	_ 3 5
1111 777	2007		777		4409 4455	-1)	
EO T	7022	710	ワーク	4400	4404	26/1	, V•/ 5 8
)∠ ⊥ ⊤⊤	1008	870	740	4000	4202	552	
11 777	4000	078	740	4600	4202	630	
·	7970 7870	1000	752	4090	4000	· 706	20
<u>_</u>	2012	1000	()) 122	4027	4229	· 290	
55 <u> </u>	5770	292	750	+224 hhor	4545	. 702 .	
· 11	5750 7051	1075	722	4491	4729	- <u>2</u> 0	- 0.0
	2724	990	729	インエン	4040		
	5700	914	(/1	·····	4500	-117	
54 1	2029	900	772	4471	4500	- 77	- 1
11	3652	705	760	4412	4400	12	
III ·	3703	670	750	4459	4200	1/9	· ~ ~
IV	3784	618	730	4514	4272	242	5.5
55 I	3894	619	705	4599	4320	271	0.1
II	4033	603	672	4705	4425	280	0.L
III	4193	591	672	4005	4001	204	4.2
IV	4350	535	658	5008	4958	50	1.0
56 I	4450	538	633	5083	5253	-170	- 3.3
II	4548	618	618	5166	5671	-505	- 9.3
III	4617	681	621	5238	5878	-640	-11.5
IV	4709	732	624	5333	6067	-734	-12.9

Non-merchandise Receipts, Expenditures and Balance and Total Current Account Balance, 1947 - 56

Year/		Non-merchar	ndise		Total_Current_Account				
Quarter	Receipts	Expend.	Balance	Index	Receipts	Expend.	Balance	Index	
	(Smill)	(\$mill)	(\$mill)	(%)	(\$mill)	(\$mill)	(\$mill)	(%)	
46 IV	527	718	-191	-30.7	<b>33</b> 88	2759	629	20.5	
47 T	519	742	-223	-35.4	3430	2976	454	14.2	
тт ·	497	794	-297	-46.0	3509	3288	221	6.5	
TTT	517	815	-298	-44.7	3564	3494	70	2.0	
 TV	545	813	-268	-39.5	3674	3626	48	1.3	
1.Q T	557	760	-203	-30-8	3786	3584	202	5,5	
40 L TT	508	700	-178	-25.9	3878	3584	294	7.9	
11 777	642	759	-117	-16.7	4040	3592	448	11.7	
	672	768	-130	-18.5	4179	3645	534	13.6	
	640	700	-1.0		41 87	3753	434	10.9	
49 1	049	790 854			ил 85	3882	303	7.5	
	654	024	-200	~~~	1087	. <u>JOOL</u> zozh	עטע .		
III	637	912	-2/2		4007	2271	162	4 J	
ΪÅ	628	925	-297	-20.2	4057	2074	105	701	
50 I	594	959	-205	-47.0	4042	2097 2047	142	201 11 7	
II	586	943	-357	-46.7	4116	3941	175	4.2	
III	577	957	-380	-49.5	4231	4133	- 98	2.5	
IV	593	1077	48 <u>1</u>	58.0	4388	4510	-122	- 2.7	
51 I	611	1113	-502	-58.2	4578	4874	-296	- 6.3	
II	602	1113	-511	-59.6	4731	5285	-554	-11.1	
III	622	1164	-542	-60.7	4936	5633	697	-13.2	
IV	635	1148	-513	-57.5	5121	5603	-482	- 9.0	
52 I	623	1136	-513	<b>-</b> 58.3	5291	5540	-249	- 4.6	
TT	641	1151	-510	-56.9	5395	5353	42	··· 0 <b>.</b> 8	
TTT	640	1165	-525	-58.2	5330	5225	105	2.0	
TV	671	1170	-499	-54.2	5296	5399	-103	- 1.9	
57 T	685	1178	-493	-52,9	5219	5523	-304	- 5.7	
	687	1202	-515	-54.5	5178	5731	-553	-10.1	
ትት ምጥጥ	723	1213	-490	-50.6	5236	5859	-623	-11.2	
L_L_ TT	ע <i>ב</i> ן רכרי	1202	-475	-49.2	5198	5788	-590	-10.7	
	747	1202	_400	-50.4	5159	5726	-567	-10,4	
54 1	720	1210	-480	-40.0	5151	5619	-468	- 8.7	
11 	729	1219	· //00	-50.8	5101	5511	-320	- 6.0	
	752	1201			5275	5540	-314	- 5.8	
VI	721	12/7	-550	-22.0	5275	ランテラ	-358	- 6.5	
55 I	717	1346	-029	-01.0	ラリエロ	5700	-220	- 6 2	
II ·	735	1305	-050	-00.0	5440	5070	-250	- 0.2	
III	755	1409	-054	-00.4	5020 E020	6707		- (•)	
IV	· 774	1433	-659	-29.7	5702	0)YI	-009	-10.0	
56 I	796	1452	-656	58.4	5879	6705	-826	-13.1	
II	806	1502 ·	<b>-</b> 696	-60.3	5972	7173	-1201	-18.3	
TTT	818	1576	-758	-63.3	6056	7454	<b>-</b> 1398	-20.7	
· TV	805	1611	-806	-66.7	6138	7678	-1540	-22.3	

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Receipts, Expenditures and Balance for Travel, Interest and Dividends and Other

Non-merchandise Transactions, 1947 - 56 (millions of dollars)

Year/		Travel		Inter	est & Divi	ldends		Other	
Quarter	Receipts	Expend.	Balance	Receipts	Expend.	Balance	Receipts,	Expend.	Balance
46 IV	221	135	86	70	312	-242	236	271	- 35
47 I	215	<b>13</b> 8 .	77	76	342	-266	228	262	- 34
II	212	154	58	72	372	-300	213	268	- 55
III	250	174	76	63	353	-290	204	288	- 84
IV	251	167	84	64	337	-273	230	309	- 79
48 I	253	161	92	61	298	-237	243	301	- 58
II	257	150	107	63	319	-256	278	307	- 29
III	274	135	139	68	315	-247	300	309	- 9
IV	279	134	145	70	325	-255	289	309	- 20
49 I	279	140	139	72	340	-268	298	316	- 18
II	289	158	131	81	372	-291	284	324	- 40
III	286	182	104	80	395	-315	271	335	- 64
IV	285	193	92	80	390	-307	260	342	- 82
50 I	285	199	86	80	409	-329	229	351	-122
II	276	203	73	83	386	-306	230	354	-124
III	271	213	58	94	384	-301	223	360	-137
VI	275	226	49	96	475	-381	224	376	-152
51 I	275	244	31	95	481	385	240	388	-148
II	275	260 .	15	97	457	-362	232	396	-164
III	280	277	3	115	471	-374	245	416	-171
VI 	274	280	- 6	117	452	-337	246	416	-170
52 I	275	289	- 14	125	434	-317	231	• 413	-182
11	277	312	- 35	133	424	-299	239	415	-176
	276	326	- 50	152	428	-295	231	411	-180
	275	341	- 66	161	413	-261	244	416	-172
53 1	277	346	- 69	161	417	-256	- 247	415	-168
·	281	344	- 63	157	431	-270	245	427	-182
	297	358	- 61	164	420	-203	269	435	-100
	302	505	- 63	101	406	-242	200	4 <u>ク</u> エ	-1/1 - 27
24 L TT	300	302 7(0	- 62	101	400	-24/	207	440	
11 777.	302 702	209 .	- 07	101	400	-239	270	450	-1/4 7 81
111 ·	502 705	579	- 77	147	402	-271 071	209	450	-101
EE T	205	509	- 0 <del>4</del>	149	424	-271 715	209	404	-19 <u>/</u>
- 22 ⊥ ττ	507 	402	- 95	153	04 165	-919	201	400	-219
<u>+</u> + TT	214 Z24	419	-105	161	409	-910	278	401	-209
111 TV	224 Z28	441	-1-1/	102	409 473	-312	270 28年	511	-227
	2020	1.61	-126	/ 	160	- <u>-</u> -20	207	 	
20 ⊥ +T	220 707	404 109	-120	1/2	400	-200	270	520	-252
11 	241 276	470	-171	178	475	-297	- 301	549	-248
스 스 스 	220 227	491 408	400 - 61	1/0	ラエラ	-557 -252	306	572	-266
Υ Υ.	557	490 <sub>.</sub>	-LOT	142	524	-502	326	589	-263

Rates of Change in Current Account Components, 1947 - 56

Year/	Merch.	Merch.	Non-merch.	Non-merch.	Merch. Trade	Non-merch.	Curr. Account
Quarter	Exports	Imports	Receipts	Expend.	Balance	Balance	Balance
47 I	+7.0%	+37.8%	-6.1%	+13.4%	-22.8%	-20,4%	-22.3%
II	+13.8	+46.6	-17.0	+28.0	-23.9	-46.4	-28.2
III	+4.6	+29.7	+16.1	+10.6	-21.4	-0.6	-17.4
VI	+10.8	+20.0	+21.7	-1.0	-7.1	+17.8	-2.5
48 I	+12.8	+1.6	+8 • 8	-26.1	+11.9	+38.9	+16.8
II	+6.3	-2.3	+291.4	+8,4	+8 <b>.</b> 8	+14.9	*9.9
III	+-14.4	+3.6	+29.4	-8,8	+12.1	+35.2	+16.3
IV	+16.8	+6.2	-2:5	+4.7	·+12.5	-7.4	+8.9
49 I	-0.4	+11.1	+6.9	+14.6	-10.3	-9.5	
II	-0.8	+9.6	+3'.1	+29.1	-9.6	-28.7	-13.1
III	-9.2	-3.4	-10,4	+27.2	6,8	-39.3	-12.9
VI	-4.8	-7.1	-5.7	+5.7	+1.5	-11.3	-1.0
50 I	+4.6	-1.5	-21.7	+14.7	+6.3	-35.0	<b>-1.</b> 8
II	+8.3	+8.2	-5,4	-6.7	+2.7	+4.2	+3.0
III	+14.0	+23.7	-6.1	+5.9	-6.5	-12.0	-7.5
IV	+15.4	+32.4	+11,1	+50.2	-13.2	-51.9 .	-20,4
51. I	+18.1	+38.2	+12.1	+13.4	-16.7	-8.5	-15.2
·	+16.3	+43.7	-5.9	-	-24.9	-4.2	-21.2
III	+17.9	+28.5	+13.3	+18.3	-10.5	-14.2	-11.1
IV	+15.9	-1.3	+8.4	-5.5	+16.8	÷13.0	+16.2
52 I	+16,2	-4.6	-7.6	-4.2	+20.7	-	+17.3
TT	+7.4	-18.3	+11.6	+5.3	+25.6	+1.4	+21.6
TTT	-5.4	-13.5	-0.6	+4.9	+7.0	-6.7	+4.7
TV	-5.6	+16.6	+19.4	+1.7	-21.3	+11.4	-15.7
53 T	-7.9	+11.0	+8.3	+2.7	-18.7	+2.6	-15.0.
IT	-3.8	+16.9	+1.2	+8 <b>.</b> 1	-20.3	-9.4	-18.4
ттт	+1.9	+10.4	+21.0	+3.7	-8.4	+10.5	-5.1
TV	-3.8	-5.2	+2.2	-3.6	+1.6	+6.2	+2.4
54 T	-3.6	-6.8	+0.5	+5.3	+3.4	-6.2	+1.7
TT	-1.7	-9.4	+6.0	+0.3	+8.0	+4.1	<del>*</del> 7•3
ттт	+4.2	-10.9	-3.8	+3.9	+15.2	-7.8	+11.0
TV	+4.9	-0.7	-6.0	+14.9	+5.8	-23.0	÷0.4
55 T.	+7.5	+5.2	·	+21.6	+2.6	-28.8	-3.2
	+9.2	+9.0	+10.0	+5.6	<b>+0.</b> 8	-0.4	+0.6
ттт	+13.6	+21.3	+10.9	+12.9	-6.5	-9.0	-7.0
TV.	+11.8	+25.5	+10.0	+6.8	-12.6	-1.8	-10.7
56 T	+6.0	+23-8	+11.4	+5.3	-17.3	+1.1	-14.0
	+6.5	+31.8	+5,0	+13.8	-25.3	-14.0	-23.3
፝ዹዹ ፞፞፞፝፝፝፞ጞ፞፝፝ጞ፞፝ጞ	+5 6	+74.6	+6.0	+19.7	-9.8	-21.1	-11.8
TV	+7.3	+12.9	-6.4	+8.9	-6.7	-16.0	-8.3

Appendix B - Table (xii) Merchandise Exports, Imports and the Balance of Merchandise Trade, 1957 - 66

Year/ Quarter	Non-Grain Exports (Smill)	<u>Grain</u> <u>Actual</u> (\$mill)	coorts <u>5 yr.avge.</u> (\$mill)	Total Exports (incl 5 yr.avge.) (\$mill)	Imports (\$mill)	Merch. Trade Balance (\$mill)	Index of Merch. Trade Balance (%)
57 I	4763	732	621	5384	6164	-780	-13.5
II	4807	634	617	5424	6153	-729	-12.6
III	4896	587	619	5515	6155	-640	-11.0
IV	4921	562	616	5537	6003	-466	- 8.1
58 I	4893	571	616	5509	5811	-302	- 5.4
. II	4873	648	622	5495	5621	-126	- 2.3
III	4794	637	625	5419	5465	- 46	- 0.8
IV	4805	643	620	5425	5526	-101	- 1.8
59 I	4767	645	626	5393	5594	-201	- 3.6
II	4887	615	637	5524	5803	-279	- 4.9
III	4960	610	644	5604	6003	-399	- 6.9
IV	5108	611	660	5768	6097	-329	- 5.6
60 I	5349	607	659	6008	· 6218	-210	- 3.4
II	5354	565	673	6027	6179	-152	- 2.5
III	5488	565	679	6167	6107	60	+ 1.0
IV 1 IO 1 1 1	5434 5407 5476	562 571 640	678 688 728	6112 6095 6204	6073 6011 5986	39 84 218	+ 0.6 + 1.4 + 3.6
III	5560	731	751	6311	6099	212	+ 3.4
IV	5728	809	786	6514	6284	230	+ 3.6
62 I	5848	827	832	6680	6433	247	+ 3.8
II	6030	832	849	6879	6631	248	+ 3.7
III	6181	754	857	7038	6780	258	+ 3.7
IV	6313	738	870	7183	6798	385	+ 5.5
63 I	6405	743	888	7293	6813	480	+ 6,8
II	6570	737	936	7506	6861	645	+ 9.0
III	6710	781	950	7660	6975	685	+ 9.4
IV	6877	922	968 4	7846	7227	619	+ 8.2
64 I	7046	1005	1005	8051	7518	533	+ 6.8
II	7342	1157	1021	8363	7874	489	+ 6.0
IV - 65 I	7573 7811 7993	1330 1216 1138	1055 1070 1058	0005 8866 9063	8216 8400 8590	550 650 663 605	+ 0.0 + 7.6 + 7.6
III IV 66 I	8362 8557 8028	909 842 994	1000 1105 ' 1135	9467 9692	8885 9388 9755	582 304 316	+ 6.3 + 3.2 + 3.2
II III IV	925 <b>3</b> 9524 9970	1135 1320 1237	1092 1083 1076	10345 10607 11046	10206 10594 19927	139 13 13 119	+ 1.4 + 0.1 + 1.1

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Appendix B - Table (xiii) Non-merchandise Receipts, Expenditures and Balance and Total Current Account Balance, 1957 - 66

Year/		Non-merchai	ndise		Te	otal Current	Account	
Quarter	Receipts	Expend.	Balance	Index	Receipts	Expend.	Balance	Index
	(\$mill)	(\$mill)	(\$mill)	(%)	(\$mill)	(\$mill)	(\$mill)	(%)
57 I	835	1651	- 816	-65.6	6219	7815	-1596	-22.7
II	867	1727	<del>-</del> 860	-66.3	6291	7880	-1589	-22.4
III	883	1760	- 877	-66.4	6398	7915	-1517	-21.2
IV	877	1787	- 910	-68.3	6414	7790	-1376	-19.4
-58 I	874	1792	- 918	-68.9	6383	7603	-1220	-17.4
II .	853	1787	- 934	-70.8	6348	7408	-1060	15.4
III	835	1816	÷ 981	-74.0	6254	7281	-1027	-15.2
IV	875	1849	- 974	-71.5	6300	7375	-1075	-15.7
59 I	872	1888	-1016	-73.6	6265	7482	-1217	-17.7
II	899	1912	1013	-72,1	6423	7715	-1292	-18.3
III	963	1949	- 986	-67.7	6567	· 7952	-1385	-19.1
VI	959	1996	-1037	-70.2	6727	8093	-1366	-18.4
60 I	976	2018	-1042	-69.6	6984	8236	-1252	-16.5
II	986	2063	-1077	-70.6	7013	8242	-1229	-16.1
III	994	2082	-1088	-70.7	7161	8189	-1028	-13.4
IV	1009	2074	-1065	-69.1	7121	8147	-1026	-13.4
.el I	1030	2134	-1104	-69.8	7125	8145	-1020	-13.4
II	1065	2157	-1092	-67.8	7269	8143	- 874	-11.3
III	1103	2183	-1080	-65.7	7414	8282	- 868	-11.1
IV	1127	2221	-1094	-65.4	7641	8505	- 864	-10.7
62 I	1127	2216	-1089	-65.2	7807	8649	- 842	-10.2
II	1146	2280	-1134	-66.2	8025	8911	- 886	-10.5
III	1204	2257	-1053	-60.8	8242	9037	- 795	- 9.2
IV	1246	2252	-1006	-57.5	8429	9050	- 621	- 7.1
63 I	1264	2269	-1005	-56.9	8557	9082	- 525	- 6.0
II	1283	2238	- 955	-54.2	8789	9099	- 310	- 3.5
III	1323	2275	- 952	-52.9	8983	9250	- 267	- 2.9
U.L	1346	2346	-1000	-54.2	9191	9573	- 382	- 4.1
64 I	1389	2455	-1066	-55.5	9440	9972 -	- 533	- 5.5
II	1418	2523	-1105	-56.1	9781	10397	- 616	- 6.1
III	1468	2611	-1143	-56.0	10073	10666	- 593	- 5.7
IV ·	1569	2705	· <b>-</b> 1136	-53.2	10435	10921	- 486	- 4.6
65 I	1603	. 2739	-1136	-52.3	10666	11139	- 473	- 4.3
II	1665	2815	-1150	-51.3	10860	11405	- 545	- 4.9
III	1779	2888	-1109	-47.5	11246	11773	- 547	- 4.6
VI	1754	2948	-1194	-50.8	11446	12336	- 890	- 7.5
66 I	1779	2979	-1200	-50,4	11850	12734	- 884	- 7.2
II	1836	3022	-1186	-48.8	12181	13228	-1047	- 8.2
III	1893	3084	-1191	-47.9	12500	13678	-1178	- 9.0
IV	1942	3171	-1229	-48.1	12988	14098	-1110	- 8.2

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Appendix B - Table (xiv)

Receipts, Expenditures and Balance for Travel, Interest and Dividends and Other Non-merchandise Transactions, 1957 - 66 (millions of dollars)

Year/		Travel		Inter	rest & Divi	idends	·	Other	
Quarter	Receipts	Expend.	Balance	Receipts	Expend.	Balance	Receipts	Expend.	Balance
57 I	342	505	-163	129	534	-405	364	612	-248
II	353	514	-161	130	572	-442	384	641	-257
III	359	523	-164	137	587	-450	387	650	-263
IV.	363	525	-162	153	594	-441	361	668	-307
58 I	364	525	-161	160	595	-435	350	672	-322
. II	364	523	-159	158	583	-425	331	681	-350
III	353	536	-183	154	593	-439	328	687	. <b>-</b> 359
TV VI	349	542	-193	167	614	-4447	359	693	-334
59 I	349 759	559	-210	165	633	-468	358	696	-338
	350 79-	505	-205	170	650	-400	371	699	-328
1.1.1 	202	500	-205	102	640	-400	· <u>)</u> 90	713	-517
	291 205	590	-207		671	-491	200 200	727	-229
	292	600	-205	180	671 670	-407	297 105	747	-220
11 777	401	627	-227	174	686	-512	405 411	700	-222 -364
 TV	420	627	-2.2	בייד רייר	656	- <u>485</u>	418 418	107	-373
· 61 T	423	637	-207	100	714	-537	430	783	-353
TT	435	637	-202	107	. 725	-528	433	795	-362
TTT	469	644	-175	204	736	-532	430	803	-373
TV	482	642	-160	213	764	-551	432	815	-383
62 I	489	639	-150	203	736	-533	435	841	-406
II	513	653	-140	193	774	-581	440	· 853	-413
III	555	630	- 75	193	770	-577	456	857	-401
VI	562	605	- 43	202	783	-581	482	864	-382
63 I	567	593	- 26	218	804	-586	479	. 872	-393
II	569	569	0	224	792	-568	490	877	-387
· III	597	576	21	227	808	-581	499	891	-392
IV	609	585	24	230	860	-630	507	<u> </u>	-394
64 I	617	621	4	252	903	-651	520 -	931	-411
II	628	650	- 22	257	924	-667	533	949	-416
III	654	684	30	267	962	-695	547	965	-418
· VI	662	712	- 50	332	1010	-678	575	903	-408
65 I	666	719	- 55	<i>555</i>	1031	-696	602	909	-307
11	684	751	- 67	351 700	1050	-705	630	1000	-570
	748	789	- 41	570	1002	-092	601	1057	-270 781
IV TV	747	796	- 49	222 707	1002	-/04	602	1000	-201 272
00 I	750	020	- 72	242	1075	-750	090	10/0	-270
	784 824		- 67	320 770	T0/A	-751	724	1092	-jbö
111 777	024	009	- 65	310 707	1084	-774	759	1111	-352
۷ ـد	840	903	- 65 ·	525	1135	-012	779	1133	-354

Appendix B - Table (xv) Rate of Change in Current Account Components, 1957 - 66

Year/	Merch.	Merch.	Non-merch.	Non-merch.	Merch. Trade	Non-merch.	Curr. Account
Quarter	Exports	Imports	Receipts	Expend.	Balance	Balance	Balance
57 I	+3.8%	+6.4%	+14.9%	+9.9%	-3.2%	-3.3%	-3.2%
II	+3.0	-0.7	+14.3	+18.4	+3.5	-13.9	+0.4
III	+6.7	+0.1	+7.4	+7.6	+6.1	-5.2	÷4.0
IV	+1.6	-9.9	-2.7	+6.1	+12.0	<del>.</del> 9.9	÷7•9
58 I	-2.0	-12.8	-1.4	+1.1	+11.5	-2.4	+8.9
II	-l.O	-13.1	-9.6	-1.1	+12.6	· <b>_4</b> .8	+9.2
III	-5.5	-11.1	-8.4	+6.5	+5.8	-14.2	+1.9
IV	<b>⊹0</b> •4	+4.5	+19.2	+7.3	-4.0 .	+2.1	-2.8
59 I	-2.4	+4.9	-1.4	+8.4	-7.3	-12.3	-8.3
II	+9.7	+14.9	+12.4	+5.1	-5.6	+0.9	-4.3
III	+5.8	+13.8	+28.5	+7.7	-8.4	÷7•5	-5.2
IV	+11.7	÷6.3	-1.7	+9.6	+4.8	-13.9	+1.0
60 I	+16.6	+7•9	+7.1	-+4.4	+7.9	-1.3	+6.1
II	+1.2	-2.5	+4.1	+8 <b>。</b> 9	+3.8	-9.3	+1.2
III	+9.3	-4.7	+3.2	+3.7	+13.8	-2.9	+10.5
IV	-3.6	-2.2	+6.0	-1.5	-1.4	+6.0	÷Ool
61 I	-1.1	-4.1	+8.3	+11.6	+3.0	-10.0	+0.3
; II	+7 <b>.</b> l	-1.7	+13.6	+4.3	+8.8	+3.0	+7.6
III	+6.9	+7.5	+14.3	+4.8	-0.4	+3.0	+0.3
IV	+12,8	+12.1	+8.7	+7.0	+1.1	-3.4	+0.2
62 I	+10.2	+9.5	-	-0.9	+1.0	+1.2	+1.1
II	+11.8	+12.3	*6.7	+11.6	+0.1	-10.6	-2.1
III	+9.2	+9.0	+20.2	-4.0	÷0.6	+18.8	+4.3
IV	÷8.2	+l.l	+14.0	-0.9	+7.3	+10.8	+8.0
63 I	+6.1	+0 <b>.</b> 9	+5.8	+3.0	<b>*</b> 5°4	+0.2	+4.4
II	+11.7	+2.8	÷6.0	-5.5	÷9 <b>.</b> 3	+11.3	+9.7
III	+8.2	+6.6	+12.5	÷6.6	+2.2	+0.7	+1.9
IV	+9•7	+14.4	÷7.0	+12.5	-3.6	-10.5	-5.0
64 I	+10.4	+16.1	+12.8	+18.6	-4.5	-14.0	-6.3
IÌ	+15.5	+18.9	+8.3	+11,1	-2.2	-8.0 -	3.4
III	+11.6	+9.2	+14.1	+13.9	+3.0	-7.6	+0.9
IV	+12.1	. +8.0	+27.5	+14.4	+4.7	+1.3	+4.1
65 I·	+8.9	+9.0	+8.7	+5.0	÷0.6		+0.5
· II	+5.8	+9.0	+15.5	+11.1	-2.6	-2.5	-2.6
III	+11.8	+13.7	+27.4	+10.4	-1.0	+7.2	+0.6
IV ·	+9.5	+22.6	5.6	+8.3	-11.9	-14.5	-12.4
66 I	+15.6	+15.6	+5.7	+4,2	÷0,5	-1.0	+0.2
II	+10.9	+18.5	<b>+12.</b> 8	+5.8	-7.0	+2.3	-5.2
III	+10.1	+15,2	+12.4	÷8.2	-4.8	<b>-0</b> ,8	-4.1
VI	+16.6	+12.6	+10.4	+11.3	+3.9	-6.0	+2.0

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Appendix B - Table (xvi) Current Account Components as a Percentage of GNE, 1926 - 66

24.8 22.7	20.9 21.3 22.6	5.9 3.5 0.1	5.2 5.3 5.3	Expend. 8.9 8.7 8.4	Balance -3.7 -3.4 -3.1
21.2 18.2 15.9 16.1 18.9 20.9 21.6	22.5 18.7 13.8 12.2 12.2 14.1 14.1	-1.3 -0.5 2.1 4.0 6.7 6.7 7.5	5.4 5.3 5.4 5.4 4.8 5.2 5.2 5.2	8.9 9.7 10.2 11.5 11.2 9.8 9.5	-3.5 -4.3 -4.7 -6.2 -6.4 -4.6 -4.3
22.8 24.4 22.0 21.8	15.1 17.0 14.3 15.3	7.7 7.4 7.6 6.6	5.6 5.5 5.0 4.9	10.1 9.3 9.6 9.1	-4.5 -3.8 -4.7 -4.3
24.0 23.7 23.4 20.8 21.0 21.5 19.8 18.1 18.0	17.1 21.3 19.0 18.0 19.0 21.3 18.1 18.6 17.0	6.9 2.4 4.4 2.8 2.0 0.2 1.7 -0.5 1.0	4.5 4.6 4.4 3.6 3.1 2.8 3.0 2.9	6.2 6.4 5.2 5.8 6.3 5.6 5.1 4.9 5.1	-1.6 -1.8 -0.9 -1.8 -2.7 -2.5 -2.2 -1.9 -2.2
18.5 17.7 17.3 16.4 16.5 16.8 17.2 17.7 18.2 18.7 18.5	18.3 20.1 18.7 16.7 17.4 16.7 16.6 16.8 16.7 17.3 17.9	0.2 -2.4 -1.4 -0.3 -0.9 0.1 0.6 0.9 1.4 1.4 0.6	2.9 2.7 2.6 2.7 2.7 2.7 2.9 3.0 3.1 3.3 3.3 3.3	5.3 5.3 5.5 5.5 5.7 5.7 5.9 5.6 5.4 5.4 5.7 5.6	-2.4 -2.6 -2.8 -2.9 -3.0 -3.0 -2.9 -2.6 -2.3 -2.4 -2.3
	22.7 21.2 18.2 15.9 16.1 18.9 20.9 21.6 22.8 24.4 22.0 21.8 24.0 23.7 23.4 20.8 21.0 21.5 19.8 18.1 18.0 18.5 17.7 17.3 16.4 16.4 16.5 16.8 17.7 17.7 18.2 18.7 18.5 19.1	22.7 $22.6$ $21.2$ $22.5$ $18.2$ $18.7$ $15.9$ $13.8$ $16.1$ $12.2$ $18.9$ $12.2$ $20.9$ $14.1$ $21.6$ $14.1$ $22.8$ $15.1$ $24.4$ $17.0$ $22.0$ $14.3$ $21.8$ $15.3$ $24.0$ $17.1$ $23.7$ $21.3$ $23.4$ $19.0$ $20.8$ $18.0$ $21.0$ $19.0$ $21.5$ $21.3$ $19.8$ $18.1$ $18.1$ $18.6$ $18.0$ $17.0$ $18.5$ $18.3$ $17.7$ $20.1$ $17.3$ $18.7$ $16.4$ $16.7$ $16.5$ $17.4$ $16.8$ $16.7$ $17.2$ $16.6$ $17.7$ $16.8$ $18.2$ $16.7$ $18.7$ $17.3$ $18.5$ $17.9$ $19.1$ $18.9$	22.7 $22.6$ $0.1$ $21.2$ $22.5$ $-1.3$ $18.2$ $18.7$ $-0.5$ $15.9$ $13.8$ $2.1$ $16.1$ $12.2$ $4.0$ $18.9$ $12.2$ $6.7$ $20.9$ $14.1$ $6.7$ $21.6$ $14.1$ $7.5$ $22.8$ $15.1$ $7.7$ $24.4$ $17.0$ $7.4$ $22.0$ $14.3$ $7.6$ $21.8$ $15.3$ $6.6$ $24.0$ $17.1$ $6.9$ $23.7$ $21.3$ $2.4$ $23.4$ $19.0$ $4.4$ $20.8$ $18.0$ $2.8$ $21.0$ $19.0$ $2.0$ $21.5$ $21.3$ $0.2$ $19.8$ $18.1$ $1.7$ $18.1$ $18.6$ $-0.5$ $18.0$ $17.0$ $1.0$ $18.5$ $18.3$ $0.2$ $17.7$ $20.1$ $-2.4$ $17.7$ $20.1$ $-2.4$ $17.7$ $16.7$ $0.1$ $17.7$ $16.6$ $0.6$ $17.7$ $16.6$ $0.6$ $17.7$ $16.8$ $16.7$ $16.8$ $16.7$ $0.1$ $17.2$ $16.6$ $0.6$ $17.7$ $16.8$ $0.9$ $18.2$ $16.7$ $1.44$ $18.7$ $17.3$ $1.44$ $18.7$ $17.9$ $0.6$ $19.1$ $18.9$ $0.2$	22.7 $22.6$ $0.1$ $5.3$ $21.2$ $22.5$ $-1.3$ $5.4$ $18.2$ $18.7$ $-0.5$ $5.3$ $15.9$ $13.8$ $2.1$ $5.4$ $16.1$ $12.2$ $4.0$ $5.4$ $18.9$ $12.2$ $6.7$ $4.8$ $20.9$ $14.1$ $6.7$ $5.2$ $21.6$ $14.1$ $7.5$ $5.2$ $22.8$ $15.1$ $7.7$ $5.6$ $24.4$ $17.0$ $7.4$ $5.5$ $22.0$ $14.3$ $7.6$ $5.0$ $21.8$ $15.3$ $6.6$ $4.9$ $24.0$ $17.1$ $6.9$ $4.5$ $23.7$ $21.3$ $2.4$ $4.6$ $23.4$ $19.0$ $2.8$ $4.0$ $21.0$ $19.0$ $2.0$ $3.6$ $21.5$ $21.3$ $0.2$ $3.1$ $19.8$ $18.1$ $1.7$ $2.8$ $18.1$ $18.6$ $-0.5$ $3.0$ $18.0$ $17.0$ $1.0$ $2.9$ $18.5$ $18.3$ $0.2$ $2.9$ $17.7$ $20.1$ $-2.4$ $2.7$ $17.3$ $18.7$ $-1.4$ $2.7$ $17.3$ $18.7$ $-1.4$ $2.7$ $17.7$ $16.6$ $0.6$ $2.9$ $17.7$ $16.8$ $0.9$ $3.0$ $18.2$ $16.7$ $1.4$ $3.3$ $18.5$ $17.9$ $0.6$ $3.3$ $19.1$ $18.9$ $0.2$ $3.4$	22.7 $22.6$ $0.1$ $5.3$ $8.4$ $21.2$ $22.5$ $-1.3$ $5.4$ $8.9$ $18.2$ $18.7$ $-0.5$ $5.5$ $9.7$ $15.9$ $13.8$ $2.1$ $5.4$ $10.2$ $16.1$ $12.2$ $4.0$ $5.4$ $11.5$ $18.9$ $12.2$ $6.7$ $4.8$ $11.2$ $20.9$ $14.1$ $6.7$ $5.2$ $9.8$ $21.6$ $14.1$ $7.5$ $5.2$ $9.5$ $22.8$ $15.1$ $7.7$ $5.6$ $10.1$ $24.4$ $17.0$ $7.4$ $5.5$ $9.3$ $22.0$ $14.3$ $7.6$ $5.0$ $9.6$ $21.8$ $15.3$ $6.6$ $4.9$ $9.1$ $24.0$ $17.1$ $6.9$ $4.5$ $6.2$ $23.7$ $21.3$ $2.4$ $4.6$ $6.4$ $23.4$ $19.0$ $4.4$ $4.4$ $5.2$ $20.8$ $18.0$ $2.8$ $4.0$ $5.8$ $21.0$ $19.0$ $2.0$ $3.6$ $6.3$ $21.5$ $21.3$ $0.2$ $3.1$ $5.6$ $19.8$ $18.1$ $1.7$ $2.8$ $5.1$ $18.1$ $18.6$ $-0.5$ $3.0$ $4.9$ $18.5$ $18.3$ $0.2$ $2.9$ $5.3$ $17.7$ $20.1$ $-2.4$ $2.7$ $5.7$ $16.8$ $16.7$ $0.1$ $2.7$ $5.7$ $16.8$ $16.7$ $0.1$ $2.7$ $5.7$ $16.8$ $16.7$ $0.2$ $5.6$ $5.5$

# Appendix C - Table (i)

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Description of the Business Cycle in Canada, 1869 - 1900

Year	Economic Activity
1869	moderate expansion
70	expansion
71	strong expansion
72	continuing strong expansion
73	expansion
74	levelling in the rate of expansion, peak in latter half of year
75	contraction
76	contraction
77	contraction
78	contraction
79	contraction, revival towards the end of the year
80	expansion
81	uneven expansion
82	expansion, peak sometime after the middle of the year
83	moderate contraction
84	continuing mild contraction, lessening towards the end of the year
85	revival early in the year, moderate expansion
86	moderate expansion
87	peak early in the year, mild contraction
88	revival early in the year, moderate expansion
89	lessening expansion, stagnation in some sectors by year-end
90	further slowing in expansion, mild contraction after middle of year
91	continuing dullness early in the year, revival about mid-year
92	moderate expansion
93	rapid transition to contraction early in the year
94	contraction, slight revival after mid-year
95	very mild & incomplete expansion in first half, then slight contr.
-96	continuing moderate contr., some signs of improvement by year-end
97	revival early in year, moderate expansion strengthening through year
98	strong expansion
99	strong expansion
1900	continuing expansion, slight contraction in latter part of year
Source:	Willard Thorp, <u>Business Cycle Annals</u> (New York: National Bur- eau of Economic Research, 1926).

Edward J. Chambers, "Late Nineteenth Century Business Cycles in Canada", <u>Canadian Journal of Economics and Political Science</u>, XXX (August 1964).

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#### Appendix C - Table (ii) Business Cycle Indicators, 1869 - 1900

Quantitative Approximation of Change in Business Cycle

Year	Fiscal Years	Calendar 	Years "f", "_" method	Taylor Index of Prosperity	Buckley Index of Urban Bldg. Activity
Year 1869 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 90 91 92 93 94 95 97 98	Years 0 + + + 0 - - 0 + 0 - 0 + 0 0 + 0 0 + 0 0 + 0 0 + 0 - 0 + 0 - 0 + 0 - 0 + 0 - - 0 - - 0 - - - - - - - - - - - - -	<pre>method</pre>	<pre>method</pre>	104.4 104.4 106.1 108.9 106.2 102.5 99.8 98.9 96.6 96.4 99.6 103.7 103.9 100.7 98.7 99.1 99.9 99.9 99.9 99.9 99.9 99.9 99.9 99.9 99.9 99.9 99.9 99.9 99.9 99.9 99.9 99.9 99.2 99.7 99.7 101.1 101.3 100.3 99.2 98.0 98.0 97.3	50 61 108 74 82 86 74 47 34 25 23 24 21 25 23 26 32 44 71 123 112 126 115 111 104 98 66 69 55 64 93
99 1900	+ +	+ 0	+ +	97.1 99.3	111 100

Source:

K.W. Taylor, <u>Statistical Contributions to Canadian Economic</u> <u>History</u> (Toronto: Macmillan, 1931), II. K.A.H. Buckley, "Urban Building and Real Estate Fluctuations in Canada", <u>Canadian Journal of Economics and Political Science</u>, XVIII (February 1952).

#### Appendix C - Table (iii)

Description of the Business Cycle in Canada, 1900 - 25

#### Economic Activity Year

- 1900 Expansion; very moderate contraction after mid-year 01 Revival early in the year; strong expansion during the rest of the year
  - 02 Strong expansion; some speculation accompanied by financial distress late in the year
  - 03 Continued expansion
  - 04 Uneven expansion; certain sectors of the economy were depressed 05
  - Strong expansion
  - 06 Continued expansion
  - 07 Expansion; slackening by autumn; speculation and financial stringency lead to panic
  - 80 Short but severe contraction; some improvement by the end of year
  - 09 Gradual revival; full expansion by mid-year
  - 10 Expansion
  - 11 Strong expansion
  - 12 Continued strong expansion; all sectors active
  - 13 Expansion continues until mid-year; gradual slackening gives way to contraction
  - 19 Dullness early in the year gradually replaced by expansion
  - 20 Strong expansion during first half; peak in the summer; contraction by year-end
  - 21 Severe contraction, apparent in all sectors
  - 22 Gradual revival in early part of the year; expansion
  - 23 Fairly moderate expansion; peak in the summer; contraction by year-end
  - 24 Mild contraction; revival towards the end of the year
  - 25 Expansion

Willard Thorp, Business Cycle Annals (New York: National Bureau Source: of Economic Research, 1926).

K.A.J. Hay, "Early Twentieth Century Business Cycles in Canada", Canadian Journal of Economics and Political Science, XXXII (August 1966).

Edward J. Chambers, "Canadian Business Cycles Since 1919", Canadian Journal of Economics and Political Science, XXIV (May 1958).

Appendix C - Table (iv) Diffusion Index of Changes in Business Cycle, 1900 - 39

Year	Ch. bank Cdn. deposits	Bank clearings (1902-23) & bank debits (1924-39)	Current Value of loans in new & repair <u>Canada construction</u> (1926=100)	Value of clay bricks & cement produced		
1900 01 02 03 04 05 06 07 08 09 10 11 12 13	15.2 $17.2 1$ $18.9 1$ $20.3 1$ $23.3 1$ $26.2 1$ $30.2 1$ $28.9 0$ $32.8 1$ $39.4 1$ $42.5 1$ $47.7 1$ $52.3 1$ $51.6 0$	13.4 14.2 1 14.4 ½ 17.5 1 20.8 1 22.6 1 21.8 0 27.3 1 32.1 1 38.6 1 47.4 1 47.6 ½	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$15.0$ $15.7 1$ $19.0 1$ $20.8 1$ $21.6 \frac{1}{2}$ $30.0 1$ $37.2 1$ $41.1 1$ $35.0 0$ $52.1 1$ $63.1 1$ $72.5 1$ $90.7 1$ $94.1 \frac{1}{2}$		
18 19 20 21 22 23 24 25 26 27 28 29 30 32 34 35 37 36 37 38	91.0 98.5 1 98.4 0 91.6 0 88.1 0 90.6 ½ 94.4 1 97.4 100.0 ½ 108.8 1 112.1 0 105.1 0 105.1 0 102.2 0 95.4 ½ 101.2 1 109.0 1 114.7 1 117.9 ½ 123.4 1 140.7 1	70.7 87.7 1 106.4 1 91.6 0 85.5 0 91.0 1 89.4 0 $92.6$ $\frac{1}{2}$ 100.0 1 116.1 1 138.6 1 $141.7$ $\frac{1}{2}$ 113.4 0 95.0 0 72.9 0 83.1 1 90.1 1 95.6 1 108.4 1 106.4 0 97.5 0 100.1 16	110.9 $79.4$ $124.4$ $87.9$ $1$ $134.2$ $140.2$ $1$ $121.0$ $89.8$ $0$ $109.8$ $88.8$ $0$ $109.8$ $88.8$ $0$ $109.8$ $99.1$ $17$ $96.8$ $99.1$ $17$ $96.8$ $99.1$ $17$ $96.8$ $99.1$ $17$ $96.8$ $99.1$ $17$ $96.8$ $99.1$ $17$ $96.8$ $99.1$ $17$ $96.8$ $99.1$ $17$ $91.1$ $09.1$ $17$ $91.1$ $09.1$ $17$ $100.0$ $111.4$ $111.4$ $126.9$ $133.7$ $1144.6$ $118.4$ $132.0$ $0111.5$ $108.1$ $0$ $99.4$ $069.7$ $0$ $92.6$ $54.5$ $0$ $86.5$ $63.1$ $1$ $84.5$ $70.3$ $1$ $69.6$ $78.0$ $1$ $77.2$ $96.1$ $1$ $83.1$ $90.9$ $0$ $90.0$ $1$ $93.2$	$\begin{array}{c} 49.1\\ 76.5\\ 10.7\\ 99.8\\ 0\\ 12.6\\ 1\\ 104.5\\ 0\\ 97.9\\ 0\\ 102.3\\ 1\\ 100.0\\ 0\\ 102.3\\ 1\\ 100.0\\ 0\\ 109.2\\ 1\\ 122.9\\ 1\\ 122.9\\ 1\\ 139.9\\ 1\\ 139.9\\ 1\\ 19.2\\ 0\\ 102.9\\ 0\\ 44.6\\ 0\\ 29.0\\ 0\\ 36.1\\ 1\\ 36.5\\ \frac{1}{2}\\ 44.3\\ 1\\ 58.7\\ 1\\ 58.7\\ 1\\ 54.2\\ 0\\ 57.2\\ 1\\ 57.2\\ $		

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### Appendix C - Table (iv) (cont'd)

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Year	Volume Railroa freigh	of d t	Volume pig iro produce	of n d (19	Volume steeli & casti produce 926=100)	of ngots ngs d	Wholesa Prices (excl.	le gold)	Number Expanding	Diffusion Index
1900 01 02 03 04 05 06 07 08 09 10 11 12 13	30.2 34.6 38.6 39.3 41.6 47.3 52.2 51.5 54.5 60.8 65.2 72.9 87.3 82.8	1111011110	11.4 32.3 42.2 35.1 35.8 61.9 70.6 76.9 74.4 89.3 94.4 108.2 119.6 133.1	1011111	3.0 3.4 23.4 19.1 52.0 73.5 81.3 67.7 86.8 94.6 101.5 110.2 134.5	⊥ 1 2 1 1 1 1 1 1 1	47.9 48.9 51.1 51.8 52.4 54.0 54.2 58.6 58.5 59.6 62.2 65.4 64.0	1 1 1/2 1/2 1 1/2 1 0 1/2 1 0	7 8 6½ 6 9 8½ 2 9 8½ 9 8½ 9 8½ 9 3	88 100 72 67 100 94 72 22 100 94 100 100 33
18 19 20 22 23 24 25 26 27 28 29 31 22 33 4 35 37 38 39	104.0 91.0 104.0 84.2 88.6 96.6 86.9 100.0 102.9 115.3 112.6 94.1 70.2 55.3 52.2 62.0 62.8 69.4 75.1 69.3 79.2	010110110000011/2101	141.0 108.2 128.6 78.4 50.6 116.2 78.3 75.4 100.0 93.7 137.0 142.6 98.7 55.1 19.0 30.0 53.5 79.2 89.6 118.7 93.1 93.1	01001001000111100	215.5 118.5 141.8 86.0 61.8 113.6 85.0 96.9 100.0 117.0 159.1 177.5 130.1 86.6 43.7 52.8 97.6 121.3 143.7 180.7 148.8 178.4		127.4 134.1 155.9 10.0 97.3 98.0 99.4 102.7 100.0 97.7 96.4 95.6 86.6 72.1 71.7 72.2 74.2 83.2 76.0	1 0 1 1 0 0 0 0 0 0 0 0 0 1 2 1 2 1 1 0 0 0 0	6 8 0 2 6 1½ 5½ 6 7 8 5½ 6 7 8 5½ 0 0 0 4 8 6½ 8 7½ 2 7	66 89 22 67 17 61 67 89 61 0 0 44 92 83 28 83 27 83 27

Source: M.C. Urquhart and K.A.H. Buckley, eds., <u>Historical Statistics</u> of Canada (Toronto: Macmillan, 1965).

## Appendix C - Table (v) Actual as a Percentage of Potential Real Non-agricultural Gross Domestic Product, 1919 - 39 (base 1926 = 100)

Year	Net domestic income less agriculture	GNP less net farm income	Weighted Price Index (cons.prices & prod. equip. prices)	Price Index (GNP less net farm income)	const. 1926 Net domestic income less agriculture	GNP less net farm income	Actual real non-agric. GDP 1926=100	Potential real non-agric. 1926=100	Actual as % of Potential	
1919 20 21 22 23 24 25 26 27 28 29 31 25 27 28 29 31 33 34 35 37 38 37 38	89.6 102.1 81.7 83.2 88.4 86.6 91.6 100.0	100.0 108.9 119.1 126.4 118.5 101.4 82.0 75.8 84.0 90.2 98.0 109.6 108.4	103.5 119.8 110.0 100.6 100.4 99.2 99.0 100.0 99.0 97.5 98.6 97.6 89.6 83.2 79.6 81.1 81.7 83.0 85.8 86.8	100.0 98.4 98.2 99.4 97.2 91.2 82.7 81.1 82.3 82.7 85.4 87.7 87.8	86.6 85.2 74.3 82.7 88.0 87.3 92.5 100.0	100.0 110.6 121.1 127.0 121.9 111.0 99.0 93.5 102.1 108.9 114.7 124.8 123.3	86.6 85.2 74.3 82.7 88.0 87.3 92.5 100.0 110.6 121.1 127.0 121.9 111.0 99.0 93.5 102.1 108.4 116.3 127.1 123.1	88.1 91.3 94.5 98.0 101.5 105.1 108.9 112.8 116.9 121.1 125.0 129.0 133.1 137.4 141.8 146.4 151.1 155.9 160.9 166.1	98.3 93.3 78.6 84.4 86.7 83.1 84.9 88.7 94.6 100.0 101.6 94.5 83.4 72.0 65.9 69.8 71.8 74.6 79.0 74.2	
30 39 Sourc	ce: M.C. Urqu	100.4 116.1 shart and	86.4 K.A.H. Buckle	87.4 97.4	storical Stati	132.8 Istics of	129.1 129.5 Cànada (Toro	171.4	75.6 illan, 1965)	).

(Ottawa: Queen's Printer, 1963).

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Year	-	Index of Inve 1926 = 100	estment	Taylor 1 Actual	ndex of Pro	sperity
$ \begin{array}{c} 1900\\ 01\\ 02\\ 03\\ 04\\ 05\\ 06\\ 07\\ 08\\ 09\\ 10\\ 11\\ 12\\ 13\\ 19\\ 20\\ 21\\ 23\\ 24\\ 25\\ 26\\ 27\\ 28\\ 28\\ 28\\ 28\\ 28\\ 28\\ 28\\ 28\\ 28\\ 28$		20 22 24 29 32 39 46 55 53 9 74 87 103 103 51 68 64 89 84 74 80 100 112 127		99.3 101.3 103.1 101.1 99.8 99.7 101.5 100.6 99.3 98.3 100.8 105.2 111.6 109.8		100.4 101.2 102.2 102.7 103.0 104.1 105.0 105.4 105.0 105.9 106.8 107.9 108.9 108.5
29 30 31 32 33 34 35 37 38 39	- ·	155 122 85 36 26 34 43 43 44 60 53 57	· · · · · · · · · · · · · · · · · · ·	• • • • •	· · · ·	- · · · ·

Appendix C - Table (vi) Other Business Cycle Indicators, 1900 - 39

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Source:

Dominion Bureau of Statistics, <u>Canada Year Book, 1937</u> (Ottawa: King's Printer, 1938), p. 480. (index of investment after 1911 based on value of construction contracts awarded; linked with estimates of gross fixed capital formation for 1900-13 from A.K. Cairncross, <u>Home and Foreign Investment 1870-1913</u> (Cambridge: Cambridge University Press, 1953). K.W. Taylor, <u>Statistical Contributions to Canadian Economic</u> History (Toronto: Macmillan, 1931) II, 4.

Appendix C - Table (vii)							
Actual	as	a	Percentage of	Potential	Real	Non-agricultural	Gross
			Domestic	Product,	1946 .	- 66 ,	

	Index of real	Index of Potential	Actual as 2	of Potential_ FCC
Year	<u> </u>	<u>1949=100</u>	estimate	estimate
1946	87.4	90.1	97.0	97
47	92.7	93.0	99.7	101
48	96.0	96.0	100.0	100
49	100.0	101.6	98.4	98
50	106.5	107.4	99.2	100
51 ·	114.1	113.6	100.4	102
52	120.1	120.1	100.0	101.
53	126.3	127.1	99.4	99
54	127.2	134.5	94.6	94
55	-138.0	142.3	97.0	97
56	150.5	150.5	100.0	100
57	153.4	159.2	96.4	96
58	154.6	166.1	93.1	93
59	164.0	173.3	94.6	95
60	166.6	180.9	92.1	94
61	171.6	188.7	90.9	93
62	181.5	197.0	92.1	94
63	191.1	205.5	93.0	95
64	204.8	214.5	95.5	97
65	219.0	223.8	97•9	98
66	233.6	233.6	100.0	99

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#### Appendix C - Table (vii) (cont'd)

#### Quarterly estimates

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<u>no</u> 1.1, 3.6,	on-agri	<u>c. GDI</u> 8.4.	) 
1.1, 3.6,	6.6,	8.4.	)
3.1, 0.8, 2.0, 7.02, 5.03, 5.06, 5.06, 5.07, 5.00,5,00,5,	5.0, 5.5, 9.5, 9.6, 3.6, 9.5, 9.7, 2.0, 5.6, 1.2, 5.6, 1.2,	3.6, 8.0, 5.0, 5.2, 9.4, 0.2, 9.4, 0.2, 9.4, 0.2, 0.4, 0.2, 0.4, 0.2, 0.4, 0.2, 0.4, 0.2, 0.4, 0.2, 0.4, 0.2, 0.4, 0.4, 0.4, 0.4, 0.4, 0.4, 0.4, 0.4	7.5) 4.2) 9.4) 2.9) 2.4) 2.4) 2.0) 2.4) 2.0) 2.0) 2.0) 3.0) 8.0) 8.0) 4.1) 5.9) 5.5)
6.8, 4.8, 8.1, 5.5, 7.8.	6.4, 4.7, 7.2, 6.3, 7.3,	4.8, 4.0, 6.8, 6.9, 5.6,	4.4) 7.3) 5.9) 8.2) 5.4)
	3.41,       3.02,       3.02,       3.03,       3.04, <td< td=""><td>3.4, 5.5, 3.1, 4.9, 5.5, 3.1, 4.9, 5.6, 5.8, 9.6, 2.0, 3.8, 7.0, 6.3, 5.2, -1.3, 5.0, 9.7, 5.3, 0.1, 5.6, 5.8, 1.0, 5.8, 1.0, 5.8, 1.0, 5.8, 1.6, 5.8, 4.0, 5.8, 4.7, 5.8, 4.7, 5.5, 7.8, 7.3, 7.3, 7.8, 7.3, 7.8, 7.3, 7.8, 7.3, 7.8, 7.3, 7.3, 7.3, 7.3, 7.3, 7.3, 7.3, 7.3</td><td>3.4, 5.5, 4.5, 3.1, 4.9, 8.0, 5.8, 9.6, 5.0, 2.0, 3.8, 6.1, 7.0, 6.3, 5.2, 5.2, 5.3, 9.5, 9.6, 3.0, 9.7, 9.4, 5.3, 2.8, 1.3, 1.0, 0.1, 0.2, 5.6, 5.8, 6.3, 1.0, 5.6, 5.8, 6.3, 1.0, 5.6, 5.8, 6.3, 1.0, 0.1, 0.2, 5.6, 5.8, 6.4, 4.8, 5.8, 6.4, 4.8, 5.5, 6.3, 6.9, 7.8, 7.3, 5.6, 5.6, 5.6, 5.6, 5.6, 5.6, 5.6, 5.6</td></td<>	3.4, 5.5, 3.1, 4.9, 5.5, 3.1, 4.9, 5.6, 5.8, 9.6, 2.0, 3.8, 7.0, 6.3, 5.2, -1.3, 5.0, 9.7, 5.3, 0.1, 5.6, 5.8, 1.0, 5.8, 1.0, 5.8, 1.0, 5.8, 1.6, 5.8, 4.0, 5.8, 4.7, 5.8, 4.7, 5.5, 7.8, 7.3, 7.3, 7.8, 7.3, 7.8, 7.3, 7.8, 7.3, 7.8, 7.3, 7.3, 7.3, 7.3, 7.3, 7.3, 7.3, 7.3	3.4, 5.5, 4.5, 3.1, 4.9, 8.0, 5.8, 9.6, 5.0, 2.0, 3.8, 6.1, 7.0, 6.3, 5.2, 5.2, 5.3, 9.5, 9.6, 3.0, 9.7, 9.4, 5.3, 2.8, 1.3, 1.0, 0.1, 0.2, 5.6, 5.8, 6.3, 1.0, 5.6, 5.8, 6.3, 1.0, 5.6, 5.8, 6.3, 1.0, 0.1, 0.2, 5.6, 5.8, 6.4, 4.8, 5.8, 6.4, 4.8, 5.5, 6.3, 6.9, 7.8, 7.3, 5.6, 5.6, 5.6, 5.6, 5.6, 5.6, 5.6, 5.6

Source: Dominion Bureau of Statistics, <u>Annual Supplement to the Monthly</u> <u>Index of Industrial Production</u> (Ottawa: Queen's Printer, 1966). <u>Index of Industrial Production April 1968</u> (Ottawa: Queen's Printer, 1968).

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ULLINI, E. J.I
Appendix D - Table (i) Disposition of National Saving (ie Investment), 1926 - 66 (millions of dollars)

Year	New non-resid. constr. and mach. & equip.	Phys. change in non- farm invent.	New resid. constr.	Govt. fixed capital form	Residual	Total Invest.	Curr. Acct. Bal.	GNE (adj.)
19222333333333334444444444555555555555566666666	501 626 787 931 735 464 229 162 206 262 327 469 444 418 617 845 850 667 633 713 1020 1591 2010 2238 2465 3064 3518 3832 3552 3832 5248 5926 5212 5160 5249 5177 53834 205	154 163 126 146 41 -54 -54 -127 -68 19 34 813 -21 101 87 130 -202 28 -101 87 130 -202 28 -101 87 130 -202 28 -148 360 437 85 150 399 5640 3510 1308 3097 425 4308 3097 425 4308 3097 425 4300 -1325 4300 -1325 4300 -1325 4300 -1325 4300 -1325 -101 -125 -101 -125 -102 -102 -102 -102 -102 -102 -103 -103 -103 -102 -103 -103 -103 -103 -103 -103 -103 -103 -103 -103 -102 -103 -104	$\begin{array}{c} 201\\ 204\\ 220\\ 230\\ 191\\ 158\\ 90\\ 72\\ 92\\ 107\\ 131\\ 164\\ 148\\ 174\\ 186\\ 240\\ 214\\ 220\\ 267\\ 318\\ 368\\ 494\\ 609\\ 794\\ 8895\\ 9336\\ 1227\\ 1378\\ 1526\\ 1409\\ 1734\\ 1458\\ 1577\\ 107\\ 1734\\ 1458\\ 1577\\ 107\\ 107\\ 107\\ 107\\ 107\\ 107\\ 107\\ 1$	106 135 156 183 228 125 85 106 122 116 176 162 154 225 380 470 547 418 286 355 468 507 588 780 1040 978 942 1034 1260 1382 1389 1537 1755 1802 183 183 154 106 154 106 106 106 106 106 106 1076 106 106 106 106 1076 106 1076 106 106 1077 107555 107555 1075555 107555555555555555555555555555555555555	157 53 41 -27 -24 -114 -73 -77 -101 -99 -71 -70 -33 -98 -74 -100 -131 -197 -31 -27 89 44 68 90 -142 109 -142 109 -142 109 -142 109 -142 109 -142 109 -142 109 -142 109 -142 109 -142 109 -142 109 -142 109 -142 109 -142 -101 -15 -263 -243 -10	1119 1130 1463 1463 171 636 244 174 322 426 571 852 700 819 1017 1521 1232 1331 1159 1271 2003 2904 3261 3733 4403 5393 5380 6185 5694 6486 8700 8993 8066 8869 8627 8626 9288 9880 747 746 8626 9288 928 9288 9288 9288 9288 928 9288 9288 9288 9288 9288 928 9288 9288 928 9288 9288 928	112 -181 -283 -285 126 -285 192	5155 5470 5247 5247 5247 5247 5247 5254 57867 5247 5254 5755 52554 5770 912938 1229384 15142 1229384 15142 1229384 15142 2336455 2702037 3229928 354575 352545770 9129384 151422 250777 3229928 3525928 35254575 51525455 51525455 2702037 3229928 3525928 35254575 35254555 512525 270701 3229928 3535325 355555 3555555 3555555555555555555555555555555555555
65 66	8527 10322	905 77 <b>7</b>	2124 2171	221.4 2597	64 ==240	13834 15627 -	-994 1368	52301 57796

Source: '(Tables (i),(ii),(iii) and (iv) of Appendix D)

Dominion Bureau of Statistics, National Accounts Income and Expenditure, 1926-56, 1962 and 1967 (Ottawa: Queen's Printer, 1958, 1963, 1968).

		Appendiz	c D 🛥 Ta	ble (ii)		
Disposition	of	National Savi	ing (ie	Investment),	1926	- 66
		(as a per	centage	of GNE)		

Year	New non-resid. constr. and mach. & equip.	Phys. change in non-farm invent.	New resid. constr.	fixed capital form.	Residual	Total Invest.	Curr. Acct. Bal
19262233333333333344444444444444955555555555	9.7 11.4 13.4 14.9 12.8 9.7 6.0 4.6 5.2 6.0 7.0 8.7 8.4 7.7 9.4 10.1 8.5 5.9 5.3 5.8 8.5 12.1 13.3 13.6 13.6 14.7 15.1 15.5 14.2 14.2 17.4 18.5 15.8 14.7 13.3 13.6	3.0 $3.0$ $2.1$ $2.3$ $0.7$ $-1.1$ $-3.3$ $-0.5$ $0.8$ $1.4$ $2.1$ $-0.4$ $1.8$ $1.3$ $1.5$ $-2.0$ $0.2$ $-0.4$ $1.8$ $1.3$ $1.5$ $-2.0$ $0.2$ $-0.4$ $1.2$ $3.0$ $3.3$ $0.6$ $0.9$ $2.2$ $2.7$ $0.4$ $1.4$ $-0.2$ $0.5$ $2.7$ $0.9$ $1.2$ $0.9$ $1.2$ $0.9$ $1.2$ $0.9$ $1.2$ $0.9$ $1.2$ $0.9$ $1.2$ $0.9$ $1.2$ $0.9$ $1.2$ $0.9$ $1.2$ $0.9$ $1.2$ $0.9$ $1.2$ $0.8$ $0.6$	3.9 3.7 3.7 3.7 3.7 3.7 3.7 2.2 2.2 3.2 2.2 2.2 2.2 2.2 2.2 2.2 2.2	2.2.2.4.3.3.2.2.2.3.3.2.3.4.4.4.3.2.2.2.3.3.3.4.4.3.3.4.4.4.4	3.0 1.0 0.7 -0.4 -2.4 -1.9 -2.5 -2.5 -1.2 -1.2 -1.6 -0.5 -1.6 -0.5 -1.6 -0.5 -1.6 -0.5 -1.6 -0.4 -0.4 -1.6 -0.4 -0.4 -1.6 -0.5 -1.6 -0.4 -0.4 -0.4 -1.6 -0.5 -0.4 -0.4 -0.5 -1.6 -0.5 -0.4 -0.5 -0.5 -0.6 -0.5 -0.6 -0.5 -0.6 -0.5 -0.6 -0.5 -0.6 -0.5 -0.6 -0.5 -0.6 -0.5 -0.6 -0.5 -0.6 -0.5 -0.6 -0.5 -0.5 -0.6 -0.5 -0.5 -0.6 -0.5 -0.6 -0.5 -0.6 -0.5 -0.5 -0.6 -0.5 -0.5 -0.6 -0.5 -0.5 -0.6 -0.5 -0.5 -0.5 -0.5 -0.5 -0.6 -0.5 -0.	$\begin{array}{c} 21.7\\ 21.6\\ 22.7\\ 23.4\\ 20.4\\ 13.3\\ 6.4\\ 9.8\\ 12.2\\ 15.9\\ 13.3\\ 14.9\\ 22.9\\ 23.1\\ 22.9\\ 23.1\\ 22.9\\ 23.1\\ 22.9\\ 23.1\\ 22.9\\ 23.1\\ 22.9\\ 23.1\\ 22.9\\ 2$	2.2 3.1 4.9 2.2 0.3 4.9 2.2 0.1 2.2 0.1 2.2 0.1 2.2 0.2 3.2 2.2 0.2 3.2 2.2 0.5 3.0 1.9 7.3 3.4 2.2 2.2 0.2 3.2 2.2 0.5 7.9 5.7 1.6 3.0 1.9 7.3 3.4 2.2 2.2 2.5 0.5 7.1 6.3 0.1 9.7 3.5 4.2 1.8 3.4 0.9 2.2 7.9 5.7 1.6 3.0 1.9 7.3 3.4 2.2 2.5 7.9 5.7 1.6 3.0 1.9 7.3 3.4 2.2 2.5 7.9 5.7 1.6 3.0 1.9 7.3 3.4 2.2 2.5 7.9 5.7 1.6 3.0 1.9 7.3 3.4 2.2 2.5 7.1 1.8 7.4 .4 .4 .4 .4 .4 .4 .4 .4 .4
65 66	16.3	1.7 1 3	4.1	4.2	0.1	26.4	-1.9

Appendix D - Table (iii) Source of National Saving, 1926 - 66 (millions of dollars)

				•		· 1		
	Pers. net	Capital	Undistrib.	Invent.		Grain	-	
	saving	cons.	corp.	val.	Govt	export		Total
Year	(adi,)	allow.	profits	adjust.	saving	adjust.	Residual	Saving
	under and the second states of	and an	and best der management	1.				1071
1926	450	567	194	46	146	-10	-150	1231
27	185	611	231	29	166		-52 1-	TTOT
28	164	671	277	- 1	223	<b>⊷1</b> 46	41	1149
29	14	717	231	-15	175	13	, 28	1163
- 30	-132	711	2	239	-13	56	×, 25	888
31	-203	646	-119	172	-149	49	114	510
32	-281	576	-158	109	-172	12	73	159
- 33	269	528	35	-22	-107	12	77	184
34	-146	522	52	39	<b>⊷</b> 98	18	101	410
35	-79	531	85	20	-65	14	1.00	566
36	16	555	145	36	65	<del>~</del> 95	71	721
37	108	594	223		125	10	71.	1044
- 38	-17	604	115	67	•-4	55	34	854
39	-37	637	· 275	56	94	-1	29	941
40	152	750	173	<u>_]2]</u>	143	673	99	1196
41	494	893	281	-156	425	215	75	2012
42	1014	1043	365	-122	-1114		100	1286
43	1694	1037	331	-83	-1252	673	131	1858
44	1866	1005	349	-52	-2167	-	150	1151
45	1871	968	376	<b>⊷</b> 37	-1418	452	198	1958
46	941	998	488	-254	132	61	31	2397
47	562	1223	628	-571	1108	-15	-27	2908
48	866	1441	790	<b>≈</b> 506	1176	56	89	3734
49	91.6	1673	587	-112	880	-22	-43	3879
50	677	1.91.3	752	374	1173	209	⊷68	4282
-51-	972	2203	662	-643	1765 -	35 -	<b>~</b> 90 -	- 4904
52	912	2422	618	106	1293	-247	202	5306
53	1056	2673	729	-11	11.53	-143	142	5599
54	907	2905	571	86	811	112	-13	5379
55	736	3266	962	-189	1140	123	-108	5930
56	1064	3642	1131	-238	1610	-108	141	7242
57	1276	4009	854	-78	1482	54	28	7625
58	1759	3899	876	-35	382	-23	102	6960
50	1416	4204	986	-122	967	49	<b>••</b> 30	7470
60	7459	4423	837	-70	853	116	<b>~</b> 39	7579
61	1084	4540	763	-89	532	-23	-15	7692
62	2101	4892	964	-130	901	132	-263	8597
62	2370	5108	1127	-200	1112	47	-243	9420
رن راب	2200	5600	1374		1877	-161	24	10883
65	2001	6110	1438		2539	141	-64	12840
66	マロント	6623	1208		2945	-161	241	14259

T THERE IS NOT

	Pers. net	Capital	Undistrib.	Invent.	· · ·	Grain		
	saving	cons.	corp.	val.	Govt.	export		Total
Year	(adj.)	allow.	profits	adjust.	saving	adjust.	Residual	Saving
1926	8.7	11.0	3.8	0.9	2.8	-0.3	3.0	23.9
27	3.4	11.2	4.2	0.5	3.0	0.2	1.0	21.6
28	2.8	11.4	4.7	<b>6</b> 22	3.8	-2.5	-0.7	19.6
29	0.2	11.5	3.7	-0.2	2.8	0.2	0.4	18.6
30	∞2₀3	12,4	<b>8</b> 33	4.1	-0°5	1.0 %	0.4	15.4
31	-4.2	13.5	-2.5	3.6	-3.1	1.0	2,4	10.7
32	-7.4	15.2	-4.2	2.9	-4°2	0.5	T.9	4.2
<u>55</u>	, <b>∞</b> /₀6	14.9	~1.°O	-0.6	->01 0 1	0.5	2.2	202
34 75		12.1	1.3	-1°0	⊷∠₀4 ⊓ ⊑	0.7	207	121
27 26	⊷⊥₀O	גני⊃⊥ ארר	20U Z 1	-0.8	≕⊥oり 1 上	-20	2.0	15.3
20	20	11 7	1.2	-0.0 -1.6	2.3	0.2	1.3	19.4
38	-200 	11.5	2.2	1.3	-0.1	1.0	0,6	16.2
39	⊷0°2	11.7	5.0	-1.0	1.7		0.5	17.2
40	2.3	11.4	2.6	-1.8	2.2	82	1.5	18.2
41	5.9	10.7	3.4	-1.9	5.1	600 C	0.9	24.0
42	10.2	10.4	3.6	-1.2	-11.1	610°	1.0	12.9
43	15.0	9.2	2.9	-0.7	-11,1	6-3	1.2	16.4
44	15.6	8.4	2.9	0.4	-18.1	<b>#</b> 38	1.2	9.6
45	15.2	7.9	3.0	-0.3	-11.5		1.6	12.9
46	7.9	8.3	4.1	-201	2 L L	0.5	0.3	20.1
47	4.2	905	4.0	-4.j z z	0.4 7 8		-0.6	24.6
40	2.7	7•2 2 01	Joc 36	-07	7.0 5.3	-0.1		23.6
50	37	10.6	4.2	-2.1	6.5	1.2	-0.4	23.7
51	4.7	10,5	3.2	-3-1	-8,5	- 0,2	- <del>0</del> -4	23.5
52	3,9	10.4	2.6	0.5	5.5	-1.0	0.9	22.7
53	4.3	10.8	3.0	F#	4.7	-0.6	0.6	22.7
54	3.6	11.6	2.3	0.3	3.2	0.4	-0.1	21.5
55	2.7	12.1	3.6	-0.7	4.2	0.4	O°A+	21.9
56	3.5	12.1	3.7	-0.8	5.3	-0.4	0.5	24.0
57	4.0	12.5	2.7	-0.2	4.6	0.2	0.1	23.8
58	5.3	11.8	2.6	-0.1	1.2	-0.1	0.3	21.1
59	4.0	12.0	2.8	-0.3	2.8	0,1	-0.1	21.3
60	4.0	12.2	2.3	-0.2	2.5	0.3	-Ool	20.9
61	5.2	12.0	2.0	-0°5	1.04	⊷U₀⊥ O Z		2005
02 67	ン。イ 5 5	1201 727	2.6	-0.5	2.6	0.7	-0.6	21.8
605 614	ມ. 4.ດ	בפג 11.8	2,9	0~3	4.0	-0.3	0.l	23.0
65	5.7	11.7	2.7	-0.6	4.9	0.3	-0.1	24.6
66	6.4	11.5	2.1	-0.6	5.1	-0.3	0.4	24.7

Appendix D - Table (iv) Source of National Saving, 1926 - 66 (as a percentage of GNE)

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