# PRICE AND INCOME EFFECTS OF INTERNATIONAL CAPITAL MOVEMENTS: CANADIAN CASE

by

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## PREFACE

The aim of this study is to consider the price and income effects of various types of capital movements under a system of freely fluctuating exchange rates. By way of conclusion, certain implications of the analysis for Canadian monetary policy are considered.

I wish to thank my tutor, Professor D.B. Marsh for his assistance. I owe special thanks to Professor V.W.Malach who discussed some aspects of the thesis with me. I also wish to acknowledge the assistance received through interviews with individuals in the Balance of Payments Section of the Dominion Bureau of Statistics and the Research Department of the Bank of Canada. Thanks are also due to Miss T. Sears and the staff of the Commerce Library.

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# CHAPTER ONE

# INTRODUCTION

## 1. HISTORICAL SURVEY

"The so-called unfavourable balance may mean glorious things for a nation."[1] Since a current account deficit and a net capital inflow are merely opposite sides of the same coin, there can be little doubt that the unfavourable balance, which Canada often has with the rest of the world, has been, in general, a great boon to the Canadian economy. The flow of capital to Canada was and is important and in some periods almost a dominant feature in the progress of the Canadian economy. Canada with a population of less than .6 of one per cent of the world's population now ranks seventh among the industrial nations of the world.[2] As a trading nation Canada in 1955 stood fourth when ranked according to total trade.[3] In 1955, Canada stood first in the production of nickel and asbestos, second in zinc and gold, and fourth in lead and copper. In 1955 Canada was also the seventh most important producer of petroleum; yet ten years before Canadian production was insignificant.[4] These accomplishments probably would not

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1. Stephen Leacock, All Right, Mr. Roosevelt, Oxford Pamphlets on World Affairs No. C.1 (Toronto:Oxford University Press, 1939), p. 33.
2. Canada, Dominion Bureau of Statistics, Canada Year Book 1956, pp. 175-178.
3. Canada, Dominion Bureau of Statistics, Canada 1957, p. 187.
4. Ibid., p. 15.

have been possible or at least would not have been realized as quickly except for the assistance provided by foreign investment. Therefore, by way of introduction, it seems warranted to give a brief historical account of capital movements to Canada.

Statistics concerning capital flows before 1900 are very meager and unreliable.[5] However, there was little capital import in the early years of the nineteenth century. In 1855, an important financial connection was established when Baring Brothers and Company acquired one half of an Upper Canada £400,000, 5% loan for public works.[6] Throughout the 1840's, the House of Baring showed increasing interest in the North American colonies. In 1844, for instance, this banking house bought £75,000 of an Upper Canada loan guaranteed by the British Government, the proceeds of which were to aid in the completion of the Welland Canal.[7] As the railway fever was very intense in this part of the world, there was a clamour for British financing. The Atlantic and St. Lawrence Railway, the first international railway in the world was constructed with British financial assistance.[8]

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5. W.J.Easterbrook and Hugh G.J.Aitken in Canadian Economic History (Toronto:Macmillan,1956), p.316 state that it has been estimated that total capital imports into Canada between 1827 and 1838 were $25 million, between 1841 and 1849; $35 million and in the 1850's, $100 million.
6. Ralph W. Hidy, The House of Baring in American Trade and Finance (Cambridge:Harvard University Press,1949), p. 199.
7. Ibid., p. 371.
8. Leland Hamilton Jenks, The Migration of British Capital to 1875 (New York:Knopf, 1938), p. 198.

The aid to railway construction provided by British capital is well indicated by the activities of just two financial institutions.

Table 1. Canadian Debentures Marketed by Baring Brothers and Company and Glyn, Mills, Halifax and Company from 1852-1857.

| Company | Year | Amount |
|---|---|---|
| Grant Western | 1852 | £ 200,000 |
| | 1854 | 400,000 |
| | 1855 | 170,000 |
| Toronto, Simcoe and Huron | 1852 | 100,000 |
| | 1853 | 175,000 |
| | 1854 | 200,000 |
| Grand Trunk | 1853 | 905,800 |
| | 1854 | 905,700 |
| | 1855 | 900,000 |
| | | £3,956,500 |

Source: Ralph W. Hidy, The House of Baring in American Trade and Finance (Cambridge:Harvard University Press,1949) p. 433.

Baring Brothers and Glyn, Mills not only assisted in railway construction but continued to act as financial agents for the Government of Canada and on its behalf purchased or marketed considerable quantities of bonds. Nova Scotia and New Brunswick also were assisted sporadically by Baring Brothers. From 1853 to 1857, the city of Quebec was materially aided by Baring Brothers who marketed almost £300,000 of its bonds.[9]

The Grand Trunk Railway was the major British investment in Canada before confederation. In the early -

9.Hidy, op.cit., p. 434.

sixties, the amount of British capital invested in the Grand Trunk was calculated to be £12 million.[10] In 1862, the original debentures were converted into preferred shares, but the ill-fated railway never managed to pay a dividend. Successive reorganizations, extending over almost sixty years, failed to make the company a profitable enterprise; and in 1920 it became part of the Canadian National Railway.[11]

Confederation in 1867 and the entry of Manitoba and British Columbia as provinces in 1870 and 1871 necessitated a major tapping of the British capital market in order to lay the steel rails which,it was hoped, would weld the scattered provinces into an economic unit. The Canadian Pacific Railway overshadows all other non-resident investments in Canada, nevertheless, there is little information concerning the extent of the early non-resident financing of this company. In 1885, at a meeting of the shareholders the president, George Stephen, stated that of the $65 million in stock issued by the company about $40 million was held in England, about $10 million in the United States and about $15 million in Canada.[12] At the end of 1899, in addition to the $65 million in capital stock, there was outstanding $26.8 million in 4% preference stock, $54.2 million in mortgage bonds and liabilities of other railroads and $18.3

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10. Jenks, op.cit., p. 204.
11. Jenks, op.cit., p. 204.
12. "Report of Proceedings at the Adjourned Annual and Special Meeting of Shareholders", Saturday, 13 June 1885, C.P.R. Reports 1881-1886, Vol. I.

million in land grant bonds. Of the bonds and debentures, all but about $5 million were issued in terms of sterling.[13] Perusal of the annual reports up to 1900 indicated that most of the 4% preference stock was placed on the London market by the Canadian Pacific Railway's financial agent, Baring Brothers and Company. Merely because the denominations of most of the bonds were in terms of sterling and the preference stock was sold largely in London does not mean that they were purchased by British capital. It need not even represent non-resident capital since Canadians might have bought securities in London. However, there can be little doubt that the monetary capital was predominantly British in origin. If all security holdings were held in the same proportion as the capital stock, non-resident investment in the Canadian Pacific Railway would have exceeded $160 million at the turn of the century.[14]

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13. "Annual Report", 1899, C.P.R. Reports 1893-1901, Vol.III, p. 12.

14. The following passage consists of excerpts from an editoreal in the London Truth, September 1, 1881 entitled "The Canadian Dominion Bubble", (C.P.R.Archives, Serial 36, #17).

> The "Canadian Pacific Railroad Company" has begun, I see, to launch its bonds. A group of Montreal and New York bankers has undertaken to float $10 million dollars worth of the Company's land grant bonds, and the Bank of Montreal with its usual courage, has taken one-fourth of the entire loan. This announcement looks as though the Canadians were going to raise the necessary capital on the other side of the water, but I have a shrewd suspicion that they have no real intention of doing anything of the kind. The New Yorkers are keen enough gamblers, and reckless enough at times, I admit, and yet it is impossible to believe that they are such fools as

Capital from the United States began to flow into the Canadian lumber trade before 1840, and the copper and silver mining areas around Lake Superior also had lured some capital from this source by 1846. However, significant capital movements did not commence until after 1870.[15] The first United States branch plant was established in St. Catherines in 1870 to make files. During the succeeding eight years, ten more branches were established.[16] As a result of the National Policy introduced by Sir John A. Macdonald in 1879, the branch plant movement was accelerated. Macdonald decided that, since the United States was unwilling to give Canada reciprocity in trade, he would give the United States reciprocity in tariffs; and in this way reserve the

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> to put their money in this mad project. I would as soon credit them with a willingness to subscribe hard cash in support of a scheme for the utilization of icebergs...I doubt if $10 million of ready cash could be found in all Canada for this or any other work of utility at a pinch, but the Canadians are not such idiots, to part with one dollar of their own if they can borrow their neighbours. The Canadians spend money and we provide it. That has been the arrangement hitherto, and it has worked splendidly - for the Canadians - too well for them to try any other plan with a scheme like the Pacific Railway which they must know is never likely to yield a single red cent of interest on the money that may be sunk in it...As for the country as a whole it is poor, and it is crushed with debt. The supreme Government owes about £26 million to this country, and about £35 million altogether and every province has its separate debt, as also almost every collection of shanties calling itself a "city"...Nearly every year it comes for a new loan or two, and once it is fairly committed to making this new railroad, I see nothing before it but bankruptcy. This "Dominion" is, in short, a "fraud" all through and it is destined to burst up like any other fraud. Then, and not I suppose until then, the British taxpayer will ask why we "guaranteed" so much of this sham Government's debt.

15. Herbert Marshall, Frank A. Southard,Jr., and Kenneth W. Taylor, Canadian-American Industry (New Haven:Yale Univer-Press,1936), pp.3 - 4.

16. Ibid., p. 12.

Canadian market for the Canadian manufacturer. This attempt to establish an independent economy, however, fostered the branch plant movement, since it was a means by which the tariff could be circumvented. In the following nine years, thirty-seven more concerns controlled from the United States were established, as compared to eleven during the preceding nine years.[17] By the turn of the century, the number of United States branches and controlled companies was estimated to be 66.[18]

Viner has estimated that the total amount of capital invested in Canada at the beginning of the twentieth century was $1,200 million of which $1,050 million was British and $150 million was American.[19] In general, British and United States investment during this early period was distinctly different in form. The United States investment was principally direct while the British was largely portfolio.

The era from 1900 to 1913 was one of spectacular expansion. There was a vast amount of railway construction which assisted in the settlement of the western prairies. The population of the Dominion increased by 2.331 million or by about 44%, largely as a result of the unprecidented immigration.[20] There was a large growth in urban communities necessitating much municipal borrowing. From 1905 to

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17. Ibid., p. 12.
18. Ibid., p. 21.
19. Jacob Viner, Canada's Balance of International Indebtedness 1900-1913 (Cambridge:Harvard University Press,1924), p.99.
20. Canada,Dominion Bureau of Statistics, The Canada Year Book,1936, p. 141.

1913 inclusive municipal flotations in London amounted to £34,642,631. The large municipal borrowers were the relatively new western communities. Flotations by municipalities in the Prairie provinces and British Columbia amounted to £21,246,210 as compared with £13,396,421 for those in the rest of Canada.[21] Canadian municipalities depended largely upon British capital up to World War One. To illustrate this point, total municipal borrowing in 1913 amounted to approximately $116 million of which 59% was obtained in Britain, 22% in Canada and 19% in the United States.[22]

As can be seen from table 2, the capital inflow from 1900 to 1913 inclusive was on a gigantic scale.

Table 2. Capital Invested in Canada 1900-1913

(in thousands)

| | Britain | U. S. | Continental Europe | Total |
|---|---|---|---|---|
| 1. Securities | | | | |
| Public issues | $1,433,884 | $134,213 | | |
| Private sales by issues | 38,755 | 100,000 | | |
| Individual sales | 25,000 | | $62,715 | |
| Treasury bills | 23,000 | | | |
| Sub total | 1,520,639 | 234,213 | 62,715 | 1,817,567 |
| 2. Miscellaneous | | | | |
| Insurance Co. | 32,479 | 50,251 | | 72,730 |
| Other | 200,000 | 345,330 | 100,000 | 645,330 |
| Sub total | 232,479 | 395,581 | 100,000 | 728,060 |
| Total | $1,753,118 | $629,794 | $162,715 | $2,545,627 |

Source: Jacob Viner, Canada's Balance of International Indebtedness 1900-1913 (Cambridge:Harvard University Press,1924), pp. 126-38.

21. Fred W.Field, Capital Investments in Canada (Toronto:Monetary Times, 1914), p. 110.

22. Ibid., p. 116.

Non-resident capital invested in Canada increased from $1,200 million at the end of 1899 to $3,746 million at the end of 1913 or by more than 210%. Over 70% of this huge capital inflow occurred in the last six years of this period. The last two years alone accounted for 34%[23] As in previous periods, British investment consisted primarily of the purchase of Canadian securities, while United States investment in Canada represented more direct participation. These features are borne out by table 2, for almost 90% of the increase in British investment in Canada resulted from an increase in their holdings of Canadian securities. On the other hand, 55% of the increase in United States investment came about through a rise in other miscellaneous investments. The composition of this particular classification is indicated by table 3.

Table 3. United States Miscellaneous Investment at the end of 1913
(excluding insurance companies)
(in thousands)

| | |
|---|---|
| Branch companies (450) | $135,000 |
| British Columbia mills & lumber | 71,000 |
| British Columbia mines | 62,000 |
| Land deals in British Columbia | 60,000 |
| Land deals in the Prairie provinces | 41,000 |
| Lumber and mines in the Prairie provinces | 10,500 |
| Theatrical enterprises | 3,500 |
| Packing plants | 6,750 |
| Agricultural implement distributing houses | 9,255 |
| Miscellaneous industrial investments | 12,200 |
| Purchase of city and town property | 20,000 |
| Investment in the Maritime provinces | 14,125 |
| | $445,330 |

Source: Fred W. Field, Capital Investments in Canada (Toronto: Monetary Times, 1914), p. 25.

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23. Viner, op. cit., p. 139.

During the first fourteen years of the twentieth century, Britain provided approximately 70% and the United States 25% of the total monetary capital placed at the disposal of Canada by non-residents. However, it would do a great injustice to the facts to believe that this was the ratio in which these countries provided Canada directly with real capital. An excellent illustration of this, as applied to a single industry, has been given by C.K.Hobson. Although Canada borrowed over £75 million in Britain for railway construction from 1901 to 1911 inclusive, Canadian imports of railway bars and rails from Britain amounted to only £1.87 million out of a total import of bars and rails of £4.85 million. The difference, almost £3 million were imported mainly from the United States, although comparatively little capital was borrowed in that country. British exports of other railroad equipment to Canada were equally small as compared with the amount obtained in the United States.[24]

A more conclusive indication that Britain and the United States did not provide Canada directly with real capital in the same ratio as they provided monetary capital is revealed by looking at Canada's current account. In every calendar year from 1900 to 1913 inclusive, Canada had an export surplus on commodity trade with Britain which over the entire period amounted to $670 million. At the same time, Britain invested an additional $1,753 million in Canada. It was largely in the form of imports from the United States

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24. C. K. Hobson, The Export of Capital (London: Constable, 1914), p. 14.

that monetary capital raised in the United Kingdom entered Canada. During the fourteen year period, there was a deficit on commodity trade of $1,723 million with the United States and of $302 million with the rest of the world.[25]

The process by which the United Kingdom indirectly exported real capital to Canada is well illustrated by the following quotation:

> Canada is borrowing money in London to finance her farmers, and with the capital borrowed in London, Canadian farmers are purchasing American machinery and the capital actually passes into Canada in this form. This means we have to remit to the United States the capital we have lent to the Canadian farmer. But the United States do not require to import much English produce. They need silk, however, and this they purchase. And we have now to settle with Japan. Japan takes payment for the silk sold in America in raw cotton from India, and India receives payment for her raw cotton in cotton piece goods from Lancashire. Thus we export capital to Canada by exporting Manchester goods to Bombay.[26]

This excerpt clearly indicates that multilateral trade and currency convertibility are prerequisites for the type of capital inflow experienced by Canada in the early years of the twentieth century. The purpose of stressing this feature of the capital inflow from 1900 to 1913 is that it stands in marked contrast with the capital movement since World War Two. In the eleven years since the end of World War Two, there has been a net capital inflow of $2,592 million. Of this $2,887 million has come from the United States, while there

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25. Viner, op.cit., p. 282.
26. Viner, op.cit., p. 280,(footnote).

has been a net capital outflow to the United Kingdom and other sterling area countries of $289 million and to the rest of the world of $6 million. During the same period, Canada had a cumulative current account deficit of $9,321 million with the United States. Of this amount $6,434 million was settled in the usual triangular fashion through net foreign exchange earnings from the United Kingdom and the rest of the world.[27] Thus, the United States provided not only real capital, as she has in the past, but also the monetary capital. A capital inflow similar to that of the early twentieth century is not possible until a solution is found to the "dollar shortage."

World War One brought about a profound change in capital movements into Canada. New York replaced the London market as the chief source of outside capital. In 1914, public offerings of Canadian securities in the United States amounted to merely $13.4 million. However, since access to the British capital market was severed as a result of the war, and since Canada's own capital market was still in a rudimentary state, the New York market was tapped to an increasing extent, largely to assist in financing the Canadian war effort. Canadian issues publicly offered in New York in 1915 amounted to $156 million, an increase of more than 1000% over the preceding year. The amounts floated in the United States in 1916 and 1917 were $162 million and $212 million respectively. Most of the borrowing was on government account, although corporate issues amounted to $38 million in 1917.[28] From 1914

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27. Canada, Dominion Bureau of Statistics, The Canadian Balance of International Payments 1956, pp. 38-41.
28. William O. Scroggs, "The American Investment in Canada", Foreign Affairs, Vol. xi (July, 1933), p. 717.

to 1918 inclusive, total United States investment in Canada increased from $780 million to $1,630 million. There was also a small increase in British investment during the period. In 1916, British investment in Canada reached its zenith of $2,840 million. The following two years saw a reduction in British investment and at the end of 1918 it amounted to $2,729 million.[29]

From 1919 until 1926, United States investment rose by $1,834.5 million, an increase of over 100%.[30] A large proportion represents direct investment, for from 1919 to 1926 inclusive, 364 more United States controlled companies were established in Canada. Direct investment also increased as a result of reinvestment of profits. While United States capital was growing, British capital in most years continued to decline. The year 1922 marked the time when United States investment first exceeded British. The total decrease in British investment in Canada in the eight years following World War One amounted to $374.3 million.[31] The initiative in this reduction did not originate entirely in Britain, for from 1919 to 1924 the pound sterling was at a discount in terms of the Canadian dollar, and it was considered profitable for Canadians to repurchase sterling and optional payment bonds sold originally in London.[32]

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29. Frank A. Knox, Excursus to Herbert Marshall, Frank A. Southard, Jr., Kenneth W. Taylor, Canadian-American Industry (New Haven: Yale University Press, 1936), pp. 309-310.
30. Ibid.
31. Ibid.
32. Canada, Dominion Bureau of Statistics, British and Foreign Capital Invested in Canada and Canadian Capital Invested Abroad 1926-1936, p. 2.

The Dominion Bureau of Statistics estimated that total non-resident investment in Canada at the end of 1926 was $6,003 million, 44% owned by residents of the United Kingdom, 53% by residents of the United States and 3% by all other non-residents. Of the total non-resident investment approximately 70% was portfolio and 30% was direct; while 88% of British investment and 56% of United States investment was portfolio.[33] It is interesting to note that although direct investment was still relatively a more important component of United States investment than of British investment, it was no longer the largest part of United States investment. This did not occur as a result of a diminution in the flow of United States direct investment to Canada, but from the much accelerated flow of portfolio investment because of the virtual cessation of the flow of British loans.

During the period from 1927 to 1930 inclusive, non-resident investment increased by $1,611 million. Over 90% of the increase is accounted for by a rise in United States investment. Total direct investment increased by $645 million, portfolio investment by $931 million, and miscellaneous by $35 million.[34] The early years of this period were characterized by rapid economic growth. As a result, foreign capital flowed to Canada to share directly in the profits of the buoyant economy. In addition, Canadian industries and pro-

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33. Canada, Dominion Bureau of Statistics, Canada's International Investment Position 1926-1954, pp.74-77.

34. Ibid.

vincial and municipal governments called on foreign capital to assist in financing their investment programmes. As usual, during periods of rapid growth, there was a deficit on current account. However, it would be misleading to call a deficit on current account an "unfavourable" balance of trade; for in Canada a deficit on current account is a fairly accurate indication of prosperity. K. W. Taylor constructed an index of prosperity for the period from 1872 to 1929 and found a high inverse correlation between a current account surplus and prosperity.[35]

From 1930 to 1939, non-resident investment in Canada was reduced by $701 million. Direct investment decreased by $131 million of which $112 million was a decrease in United States direct investment.[36] The decrease was not accompanied by a cessation in the establishment of branches and plants. Actually, the tariff policy adopted during the depression was eminently successful in enticing more American corporations to establish plants in Canada. In 1931, the Financial Post printed an article entitled, "Claim Tariff Brings Canada 90 New Plants; Government Points with Pride to Long List".[37] Thus the diminution in United States direct investment must have occurred as a result of withdrawals and losses substantially

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35. K. W. Taylor and H. Mitchell, Statistical Contribution to Canadian Economic History, Vol II (Toronto:Macmillan,1931) p. 3.
36. Canada,Dominion Bureau of Statistics, Canada's International Investment Position 1926-1954, pp.74-77.
37. Marshall, Southard and Taylor, op.cit., p. 275

in excess of the net decrease of $112 million. Portfolio investment declined to a greater extent and at the end of 1939 amounted to $2,629 million, a reduction of $557 million. Of the total decrease of $701 million in non-resident investment in Canada during the 'thirties', $509 million and $290 million represented decreases in United States and British investment respectively. The increase in investment owned by all other non-residents was $98 million. It was mainly European in origin and was concentrated in the later 'thirties'.[38] Thus, it is probable that the primary motive for the capital movement was security.

World War Two had a very pronounced impact upon Canada's balance of payments. There was a greatly expanded demand for Canadian production, particularly food, raw materials and munitions on the part of Britain. At the same time, of course, Britain had to divert resources from the production of export commodities to war materials. As a result, the current account surplus with the sterling area during the war amounted to a staggering $5,808 million. In the early years of the war, Britain covered part of this deficit by official repatriations of $703 million which consisted of all the Dominion government direct issues and almost all of the Canadian National Railway issues owned in Britain.[39] Private repatriation during the war amounted to about $300 million, approximately one-half arising from redemptions and the remainder from

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38. Canada, Dominion Bureau of Statistics, Canada's International Investment Position 1926-1954, pp.74-77.

39. Canada, Dominion Bureau of Statistics, The Canadian Balance of International Payments 1926-1945, p. 14.

repurchases. In 1942, the Canadian parliament extended a $700 million loan and appropriated $1,000 million as a gift to Britain. During the succeeding war years Canada extended a further $2,175 million in Mutual Aid to the sterling area. Britain paid to the Canadian government in gold and United States dollars an amount totalling $504 million.[40]

During the same period United States investment increased by $839 million. Slightly over half of this increase was in the form of direct investment, and the largest part of this arose from the reinvestment of earnings, rather than from direct inflows. Portfolio and miscellaneous investment increased by $416 million.[41]

The development of the Canadian bond market is graphically indicated by a comparison of the change in the external holdings of government securities during World Wars One and Two. From 1914 to 1918 inclusive, government securities held abroad increased by over 90%, whereas, from 1940 to 1945 inclusive, there was a slight reduction in government bonds externally held.[42-43]

From 1946 to 1949 inclusive, non-resident investment increased by $871 million. This change in the amount of non-resident investment was accounted for almost entirely by an

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40. Ibid., p. 10.

41. Canada, Dominion Bureau of Statistics, Canada's International Investment Position 1926-1954, pp. 74-75.

42. Ibid.

43. Frank A. Knox, Excursus in Canadian-American Industry, Herbert Marshall, Frank A. Southard, Jr., Kenneth W. Taylor (New Haven: Yale University Press, 1936), pp. 309-310.

increase in direct investment, all but $266 million represented reinvestment of profit. United States direct investment increased by $791 million, British by $80 million and others by $2 million. The increase in United States portfolio investment was offset by a reduction in that of Britain and other countries. Although the total amount of portfolio investment remained stable over the period, there was some change in its composition. The most significant change was an increase of almost $250 million in Dominion government securities held abroad which was balanced by decreases in foreign holding of provincial and municipal securities and in those of public utilities.[44]

In 1950, the rate of increase of foreign investment in Canada was greatly accelerated. From 1950 to 1956 inclusive, non-resident long-term investment increased from $7,963 million to approximately $15,400 million or by about 93%. Total United States investment increased by about 97%, British by 56% and all other non-resident investment by 122%. Direct investment increased by 143% during the seven year period and accounted for 72% of total increase in non-resident long-term investment. Of the increase in direct investment of approximately $4,900 million about $2,200 million represented a reinvestment of profit. More than 80% of the increase in direct investment was made by residents of the United States. The increase in portfolio and miscellaneous investment from

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44. Canada, Dominion Bureau of Statistics, Canada's International Investment Position 1926-1954, pp. 74-79.

1950 to 1956 was about $2,120 million and represented an increase of almost 50%. Over one-third of the increase occurred in 1956 alone. The percentage share of the increase in portfolio investment attributable to United States residents was 67% as compared with 80% of the direct investment.[45]

In order to summarize the two most significant changes which have taken place in non-resident investment, table 4 is presented.

Table 4. Foreign Capital Invested in Canada at Selected Year Ends 1900-1955
(millions of dollars)

| Year | Amounts Owned By | | | | | | |
|---|---|---|---|---|---|---|---|
| | U.K. | % | U.S. | % | Other | % | Total non-resident Investment |
| 1900 | 1,050 | 85 | 168 | 14 | 14 | 1 | 1,232 |
| 1914 | 2,778 | 72 | 881 | 23 | 178 | 5 | 3,837 |
| 1918 | 2,729 | 60 | 1,630 | 36 | 177 | 4 | 4,536 |
| 1926 | 2,637 | 44 | 3,196 | 53 | 170 | 3 | 6,003 |
| 1930 | 2,766 | 36 | 4,660 | 61 | 188 | 3 | 7,614 |
| 1939 | 2,476 | 36 | 4,151 | 60 | 286 | 4 | 6,913 |
| 1945 | 1,750 | 25 | 4,990 | 70 | 352 | 5 | 7,092 |
| 1950 | 1,748 | 20 | 6,548 | 76 | 365 | 4 | 8,661 |
| 1955 | 2,347 | 17 | 10,289 | 77 | 832 | 6 | 13,468 |

| | Type of Non-Resident Investment | | | | | | |
|---|---|---|---|---|---|---|---|
| | Direct Investments | % | Portfolio Investments | % | Miscellaneous Investments | % | Total |
| 1926 | 1,782 | 30 | 3,961 | 66 | 260 | 4 | 6,003 |
| 1930 | 2,427 | 32 | 4,892 | 64 | 295 | 4 | 7,614 |
| 1939 | 2,296 | 33 | 4,332 | 63 | 285 | 4 | 6,913 |
| 1945 | 2,713 | 38 | 4,095 | 58 | 284 | 4 | 7,092 |
| 1950 | 3,975 | 46 | 4,336 | 50 | 320 | 4 | 8,661 |
| 1955 | 7,715 | 57 | 5,112 | 38 | 641 | 5 | 13,468 |

Source: Canada, Dominion Bureau of Statistics, Canada's International Investment Position 1926-1954, pp.74-77.
Canada, Dominion Bureau of Statistics, The Canadian Balance of International Payments 1956, pp. 48-49.

45. Canada, Dominion Bureau of Statistics, The Canadian Balance of International Payments 1956, pp. 38-53.

In the first half of table 4, the decline in the importance of United Kingdom investment is clearly indicated. The second half of the table reveals the increasing importance of direct investment vis a vis portfolio investment.

No mention has yet been made of Canada's external assets. Probably the most concise way in which to indicate the significance of these assets is to compare Canada's per capita foreign investment position with that of the United States. As indicated in table five, Canada's external assets considered on a per capita basis compare most favourably with the world's foremost creditor nation. However, the distribution of these assets is considerably different.

Table 5. International Investment Position of Canada and the United States

(Expressed per capita in domestic dollars at the end of 1954)

| | Assets | | Liabilities | |
|---|---|---|---|---|
| | Canada | U. S. | Canada | U. S. |
| Direct Investment | 107 | 108 | 434 | 24 |
| Portfolio Securities | 60 | 31 | 338 | 40 |
| Government Credits | 134 | 95 | | |
| All Other, except gold | 80 | 24 | 111 | 99 |
| Sub total | 381 | 258 | 883 | 163 |
| Gold Holdings | 68 | 133 | | |
| Total | 449 | 391 | 883 | 163 |

Source: Canada, Dominion Bureau of Statistics, Canada's International Investment Position 1926-1954, p. 17.

The Canadian government's participation is relatively greater and portfolio investment is relatively more important than in the United States investment. The fact that Canada is a

debtor nation and the United States a creditor nation is clearly revealed when the per capita liabilities are considered. The net international liabilities of Canada amounted to $434 per capita while the net international assets of the United States were $228 at the end of 1954.

## 2. PROSPECTS FOR FUTURE CAPITAL MOVEMENTS

A brief historical survey of foreign investment in Canada has been given. But before turning to the central topic of this thesis which is the consideration of the domestic price and income effects of the recent capital inflow into Canada, it would seem warranted to inquire whether or not the capital inflow is likely to continue. If it is a transient phenomenon, then although consideration of it may be a reasonably good academic exercise, it will lack all practical significance.

In 1934, Canada became a net exporter of capital. As a result, it was not very long before several economists had concluded that this was a sign of Canada's economic maturity and that in the future Canada would depend less and less on capital imports. Two such statements by reputable economists will be quoted, by way of example: first, "It is probable that capital imports are entirely a thing of the past"[46] and second, "It is very unlikely that the Dominions will ever again import capital on the scale which prevailed in the past."[47]

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46. Marshall, Southard and Taylor, op.cit., p.295.
47. Wynne Plumptre, "The Nature of Political and Economic Development in the British Dominions," The Canadian Journal of Economics and Political Science, Vol.III (November, 1937) p. 497.

The authors of the first quotation above appear to have based their conclusions on the projection of a trend. Now, with the assistance of hindsight, it appears that the trend was the result of an abnormal situation, world depression, and that the verdict drawn from the trend was consequently erroneous. In contrast, Plumptre considered that large capital movements were a thing of the past because of the disillusionment which investors experienced during the great depression. Undoubtedly, the depression did have a very discouraging effect on international investment and it may continue to have a great influence on the form in which investment is made. However, to consider that, because creditors have been disappointed in the past, they shall henceforth be unwilling to make any significant amount of investment in the future, seems overly pessimistic.

Plumptre, in the same article, criticizes Viner for believing that it was necessary to explain the increasing value of Canadian exports during the 1900 to 1913 period which Viner did in a chapter entitled the "Restrictive Effect of Capital Borrowings on Exports". Plumptre states that:

> Surely this movement of export values, together with new discoveries and innovations was the root of the whole matter. Capital imports came in to take advantage of new opportunities associated directly or indirectly with the expansion of exports in the expectation that exports would continue to grow. Had the value of exports decreased the import of capital would have disappeared. [48]

Since foreign trade is so important to Canadian prosperity, Plumptre's argument that exports must go on

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48. Ibid., p. 492.

increasing if capital imports are to continue seems very reasonable. It was probably the great depression from 1929 to 1933 which, by drastically reducing Canadian exports, eliminated the opportunities for foreign investment in Canada. However, this does not explain why once Canadian export trade revives, the profit possibilities accompanying this revival should be ignored. If Canada had defaulted on a great many loans, a pessimistic view concerning future investment in Canada might be warranted. Canadian credit, however, suffered much less than that of other borrowing countries. For instance, in 1932 the only new foreign issues publicly sold in the United States were Canadian.[49]

The two statements, previously quoted, concerning capital imports, have been considered in order to see if they were prompted by factors which might be instrumental in stemming the flow of capital to Canada in the future. Marshall, Southard and Taylor seemed to consider the cessation of net capital import as a sign of economic maturity. But in view of subsequent events it seems more reasonable to ascribe the reversal in the capital movement during the thirties, to the decline in Canadian exports which temporarily eliminated the opportunities for profit. Since that time Canada has imported an enormous amount of capital, particularly during the period from 1950 to 1956. Thus, it is not unwarranted to consider the question of whether or not Canada has reached that stage in her development in which

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49. William O. Scroggs, "The American Investment in Canada", Foreign Affairs, Vol. xi (July, 1933), p. 717.

she will no longer be a large net importer in capital.

Sir Geoffrey Crowther has recently published a series of lectures, one of which discusses how economic development may reflect itself in a nation's balance of international payments.[50] Crowther sets out six stages of a nation's development and the corresponding balance of payments situations. Although he indicates that there are only six different balance payments situations, he likens national development to Shakespeare's seven ages of man.[51] Shakespeare's last stage of a man's estate, "second childishness, and mere oblivion, sans teeth, sans eyes, sans taste, sans everything", Crowther states might correspond to a mature creditor nation which might be so overwhelmed by the calamities of war that it reverts to the status of a debtor-borrower. He says that his account is purely schematic and that actual figures to prove that a nation has regularly progressed through the various stages are not available. Nevertheless, consideration of the changes in Canada's balance

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50. Geoffrey Crowther, Balances and Inbalances of Payments (Norwood:Plimpton Press, 1957).

51. Stephen Leacock has also indicated the similarity between the development of man and that of the state. In All Right, Mr. Roosevelt, Oxford Pamphlets on World Affairs No. C.1 (Toronto:Oxford University Press, 1939), p. 34, he states that: "The infancy of a nation spells an adverse balance, from the efforts made on its behalf: just as human infancy means an adverse balance of care and kisses. And if a nation turns old, so old that its efforts end, and it sits still and lives on its investments abroad, its feet in warm water and its gruel at its side, - then that again leaves the adverse balance, for the gruel. Thus in the life of trade as in the life of man, do youth and age contrast, and age presents its sorry parody of second childhood.

of payments over the years, in the framework suggested by Crowther, might be useful in coming to some conclusion about the behaviour of the capital account in the future. A table which Crowther presents may be helpful in considering the probable changes in a nation's balance of international payments.

Table 6. Types of Balances of Payments

| Class | Balance of Trade Visible and Invisible | Interest and Dividends | Capital Movement |
|---|---|---|---|
| | + = Favourable | + = Net Receipt | + = Borrowing (or accepting payment) |
| | - = Unfavourable | - = Net Payment | - = Lending (or repaying) |
| A- Immature Debtor-Borrowers | - | - | + |
| B- Mature Debtor-Borrowers | + | - - | + |
| C- Debtor-Lenders & Debtor-Repayers | + + | - | - |
| D- Immature Creditor-Lenders | + | + | - |
| E- Mature Creditor-Lenders | - | + + | - |
| F- Creditor-Borrowers | - - | + | + |

(Two symbols signify a larger payment than one)

Source: Geoffrey Crowther, Balances and Imbalances of Payments (Norwood:Plimpton Press, 1957), p.64.

As will be noticed three sets of terms are used to describe the different stages: debtor or creditor, borrower or lender and immature and mature. Debtor or creditor status is determined by whether a nation's balance of international indebtedness is negative or positive. A test (although not

strictly accurate) of debtor or creditor status is whether or not a country pays more or less interest and dividends to non-residents than it receives from them. Borrower or lender status is determined by whether or not the capital account of a nation's balance or international payments is positive or negative. Borrower or lender indicates whether a country is on balance importing or exporting capital during a particular interval of time. In contrast, debtor or creditor indicates whether a country in the past has on balance been a borrower or lender. The distinction between an immature and a mature debtor-borrower is that in the first case the balance of trade visible and invisible (excluding interest and dividend receipts and payments) is negative, and in the second case it is positive. In both cases, the current account is passive; but in the case of the mature debtor-borrower, the net importation of capital is not in excess of the deficit of interest and dividends.

It will be noticed by referring to table [illegible] that according to Crowther's classification, Canada during the twentieth century has been in class A, an immature debtor-borrower for twenty-one years; in class B, a mature debtor-borrower for eleven years; and in class C, a debtor-lender or debtor-repayer for twenty-five years. There has certainly not been a regular evolution from class A to higher classes in the way in which Shakespeare described the ages of man. Canada seems to have passed back and forth indiscriminately between "the infant mewling and puking in the nurse's arms",

Table 7. Canada's Balance of Payments 1900-1956 (a)

| Year | Balance of Trade Visible & Invisible (excluding interest and dividends) | Balance of Interest & Dividends | Capital = Borrowing - = Lending (Repaying) | Class |
|---|---|---|---|---|
| 1900 | -5 | -32 | 37 | A |
| 1901 | 12 | -34 | 22 | B |
| 1902 | 7 | -34 | 27 | B |
| 1903 | -34 | -36 | 70 | A |
| 1904 | -53 | -39 | 92 | A |
| 1905 | -41 | -42 | 83 | A |
| 1906 | -66 | -46 | 112 | A |
| 1907 | -132 | -51 | 183 | A |
| 1908 | -60 | -71 | 131 | A |
| 1909 | -84 | -76 | 160 | A |
| 1910 | -168 | -83 | 251 | A |
| 1911 | -262 | -93 | 355 | A |
| 1912 | -327 | -109 | 436 | A |
| 1913 | -286 | -129 | 415 | A |
| 1914 | -119 | -161 | 280 | A |
| 1915 | 134 | -162 | 28 | B |
| 1916 | 291 | -170 | -121 | C |
| 1917 | 520 | -180 | 340 | C |
| 1918 | 282 | -185 | -97 | C |
| 1919 | 337 | -182 | -155 | C |
| 1920 | -31 | -185 | 216 | A |
| 1921 | 70 | -205 | 135 | B |
| 1922 | 140 | -210 | 70 | B |
| 1923 | 260 | -226 | -34 | C |
| 1924 | 336 | -229 | -107 | C |
| 1925 | 480 | -231 | -249 | C |
| 1926 | 335 | -208 | -127 | C |
| 1927 | 206 | -216 | 10 | B |
| 1928 | 197 | -229 | 32 | B |
| 1929 | -50 | -261 | 311 | A |
| 1930 | -48 | -289 | 337 | A |
| 1931 | 108 | -282 | 174 | B |
| 1932 | 169 | -265 | 96 | B |
| 1933 | 224 | -226 | 2 | B |
| 1934 | 279 | -211 | -68 | C |
| 1935 | 331 | -206 | -125 | C |
| 1936 | 480 | -236 | -244 | C |
| 1937 | 406 | -226 | -180 | C |
| 1938 | 341 | -241 | -100 | C |
| 1939 | 375 | -249 | -126 | C |
| 1940 | 410 | -261 | -149 | C |
| 1941 | 717 | -226 | -491 | C |
| 1942 | 302 | -203 | -99 | C |
| 1943 | 890 | -202 | -688 | C |
| 1944 | 251 | -193 | -58 | C |
| 1945 | 855 | -177 | -678 | C |

Table 7. (Continued)

| Year | Balance of Trade Visible & Invisible (excluding interest and dividends) | Balance of Interest & Dividends | Capital = Borrowing = Lending (Repaying) | Class |
|---|---|---|---|---|
| 1946 | 605 | -242 | -363 | C |
| 1947 | 322 | -273 | -49 | C |
| 1948 | 706 | -255 | -451 | C |
| 1949 | 484 | -307 | -177 | C |
| 1950 | 50 | -384 | 334 | B |
| 1951 | -182 | -335 | 517 | A |
| 1952 | 432 | -268 | -164 | C |
| 1953 | -204 | -239 | 443 | A |
| 1954 | -156 | -276 | 432 | A |
| 1955 | -375 | -323 | 698 | A |
| 1956 | -982 | -390 | 1372 | A |

Source: Frank A. Knox, Excursus to Herbert Marshall, Frank A. Southard,Jr., and Kenneth W. Taylor, Canadian-American Industry (New Haven:Yale University Press, 1936), pp. 314-318.

Canada, Dominion Bureau of Statistics, The Canadian Balance of International Payments 1926-1948, pp. 154-158.

Canada, Dominion Bureau of Statistics, The Canadian Balance of International Payments 1956, p. 38.

(a) From 1900-1925 there are large differences between the estimated current account balance and the estimated capital account balance. It is assumed since the Dominion Bureau of Statistics corrects the capital account balance to the current account balance by including the difference between direct measurement of current and capital accounts in other capital movements, that the current account is more amenable to measurement than the capital account. Consequently, instead of using the capital account balance from 1900-1925 the current account balance with the opposite sign has been used. The difference between the two estimates was so large on four occasions - 1916,1919, 1923 and 1924 that the current account balance in these years indicated a net outflow of capital while the capital account balance revealed a net inflow of capital

"the whining schoolboy, with his satchel, and shining morning face, creeping like snail unwilling to school," and "the lover sighing like furnace with a woeful ballad made to his mistress' eyebrow".

At first, it appears as if the movement from one class to another has occurred at random. However, more careful consideration reveals that to a large extent Canada's balance of payments fell into category C when disruptive forces were prevalent in the world economy. Of the twenty-five years in which Canada was in class C, nine were during world wars, five were during difficult transitional years from war to peace, and six were during the 1930's when commerce throughout the world was depressed. The only years in which such an explanation does not appear applicable are those from 1923 to 1926, and 1952.[52]

A consideration of Canada's balance of payments during the twentieth century indicates that a pattern of development as outlined by Crowther cannot be distinguished. This in no way invalidates Crowther's account of the behaviour of a nation's balance of payments over time. His account is secular, and the Canadian nation has not had a

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52. The outflow of capital in 1952 was largely of a short-term equalizing nature. It resulted from a large inflow of long-term capital which continued in spite of the current account surplus that developed. The current account surplus probably also stemmed from an unusual occurrance. In 1952, there was a dramatic change of the terms of trade in Canada's favour. The price index of both exports and imports declined but the decline in import price was significantly the greater and as a result there was an improvement of 13% in the terms of trade.

sufficiently long economic history for the progression to have manifested itself. It also appears from this brief study of Canada's balance of payments that in normal times Canada was in class A or B, an immature or mature debtor-borrower and that generally when Canada was in class C, a debtor-lender, this was an aberration caused by unusual circumstances.

It would appear from the cursory study of the Canadian balance of payments over time that the natural role for Canada up to 1956 was that of borrower, assuming that world wars and severedepression are not normal phenomena. However, it is Canada's role in the future which is of more interest. There is no possibility of projecting a trend, for no trend in the balance of payments has been revealed. Thus, in order to make some estimate about the future, probably the best approach is to consider Canada's factor endowment relative to the rest of the world and to the United States in particular.

When the abundance or scarcity of various factors of production is considered relative to those of the United States and many other countries, it is difficult to conceive of Canada's becoming an important net exporter of capital for many years to come. Canada has vast mineral resources yet untapped and bountiful supplies of energy yet unharnessed. Capital is very definitely a scarcer factor compared with the wealth of natural resources in Canada, vis à vis the United States and many other nations. Consequently, during normal times capital is likely to

flow to Canada to share in a relatively higher rate of profit.

Another feature which should be mentioned is that the United States economy has an enormous appetite for Canadian raw materials. This demand results in an inflow of direct investment from the United States; the main purpose of which is to supply the United States market. The number and quantity of raw materials required by the United States economy may increase as the United States gradually depletes its own resources. Consequently, direct investment may increase also. The Mesabi Range, for instance, no longer contains huge quantities of high grade iron ore, and as a result, United States steel companies have had to seek alternative sources of supply. Several United States steel companies have been instrumental in setting up the Iron Ore Company of Canada and have invested a large amount of money in the Quebec-Labrador region.

It, therefore, appears warranted to assume that Canada is not likely to become a net exporter of capital within the next decade or so. Consequently, a study emphasizing the effects which different types of capital inflow have upon prices and incomes, may have some practical significance. However, as implied in the argument above, this is contingent upon the avoidance of disruptive influences on trade, such as wars and severe depressions.

# CHAPTER TWO

## SOME GENERAL CONSIDERATIONS

### THE EFFECT OF A FOREIGN EXCHANGE TRANSACTION ON THE CANADIAN MONEY SUPPLY

Before considering the various types of capital movements, it is necessary to examine the effect of a foreign exchange transaction on the Canadian money supply. Mr. Coyne, the Governor of the Bank of Canada, claims that there will be no change in the money supply as long as the central bank or government does not enter the foreign exchange market. He states that, "Since every import of foreign currency must be exchanged for Canadian dollars out of the existing supply in private banks, it is evident that borrowing abroad does not expand the total supply of money in Canada." [1]

For this statement to be strictly accurate the total supply of money must be defined as currency outside the banks and all current and savings deposits. If the chartered banks have excess reserves, a qualification is also necessary. Not only must the central bank and government not enter the foreign exchange market but the chartered banks must be passive agents

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1. Canada, Bank of Canada, Annual Report of the Governor to the Minister of Finance 1956, p. 19.
Mr. Coyne, in replying to a question by Mr. MacEachen about the effect of capital inflows on the money supply stated: "Somebody else, the buyer of the United States funds, had to give up bank deposits in Canada. If it is all done by the general public without the central bank or the exchange fund account having to do with it, it all balances off. For every person who increases his bank deposit in Canada there will be somebody else who decreases his bank deposit in Canada by having to pay for those funds."
Canada, Canadian Parliamentary Committee on Banking and Commerce Proceedings 1955-56, pp. 385-86.

in the market. If the chartered banks are increasing their holdings of foreign exchange, with no other change taking place in their assets, there is an increase in the Canadian money supply. For instance, if a Canadian took foreign exchange to a chartered bank, the bank would give him the Canadian dollar equivalent of this sum, either by crediting his account or by giving him Canadian currency. In either case, at that moment the Canadian money supply has been increased. The Canadian money supply will be diminished if the chartered bank sells the additional foreign exchange; for the buyer's account will be debited or the currency in his hands will be reduced. However, the chartered banks may decide to alter their holdings of foreign exchange. If they increase their holdings of foreign exchange, the Canadian money supply is increased; while a reduction in their foreign exchange holdings means a decrease in the Canadian money supply.

The Canadian money supply can only be increased by an increase in the chartered banks' holdings of foreign exchange, if they have excess cash reserves. If a bank has no excess cash reserves and if it increases its holdings of foreign exchange, it must undertake a compensating transaction. This compensating transaction may take the form of a sale of securities or of calling a loan. In the case, where there are no excess cash reserves, the increase in Canadian bank deposits created to pay for the foreign exchange is

cancelled by the decrease in bank deposits as a result of the sale of securities to the public or the repayment of a loan.

Since, in recent years, Canadian chartered banks have maintained a cash reserve ratio which is only very slightly above the legal minimum, there is little scope for an increase in the money supply through purchases of foreign exchange. [2] The banks could not sell a significant amount of foreign exchange, consequently reducing the Canadian money supply, without reducing their earning assets abroad. This they would be reluctant to do unless they were going to increase their earning assets in Canada. If the banks did buy securities or make loans, there would be an increase in the Canadian money supply offsetting the reduction accompanying the sale of foreign exchange.

In addition, S.A.Shepherd states that:

> It is not the policy of the banks deliberately to sell more foreign exchange than they have bought or expect to buy, nor to buy more foreign exchange than they can sell or expect to sell. [3]

Thus, the activity of the chartered banks in the foreign exchange market, probably does not have any significant effect on the Canadian money supply.

Even if the central bank, the exchange fund account and the chartered banks do not take a position in the foreign exchange market, the money supply could still be altered as a

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2. The highest average cash ratio for any month in 1956 was 8.5 and the average for the year was 8.3. Canada, Bank of Canada, Statistical Summary Financial Supplement 1956, p.16.

3. Sidney A. Shepherd, Foreign Exchange in Canada: An Outline (Toronto, University of Toronto Press,1953), p.32.

result of a foreign exchange transaction. The money supply will be affected if a depositor of the Bank of Canada, a foreign central bank, the International Monetary Fund or the International Bank for Reconstruction and Development, buys or sells foreign exchange by decreasing or increasing their deposits with the Bank of Canada. If a foreign central bank should decrease its deposits with the Bank of Canada in order to buy foreign exchange, the Canadian money supply is increased. If the Canadian funds are deposited with a chartered bank, the banking system will have excess cash reserves upon which it could undertake a multiple expansion in deposits. If a foreign central bank or any other institution which is permitted to hold deposits with the Bank of Canada offered foreign exchange for Canadian dollars and deposited them with the central bank, the Canadian money supply would decrease. If the Bank of Canada took no offsetting action, a decrease in the cash reserves of the chartered banks might necessitate a contraction in their deposits. However, any increase (decrease) in the money supply stemming from a decrease (increase) in the level of the deposits with the Bank of Canada would only be a temporary aberation. That is unless the Bank of Canada approves of the initial change and the resulting alteration in deposits following from the change in the cash reserves of the chartered banks. If the Bank of Canada does not desire any change in the money supply, it will engage in open-market operations or will shift government deposits to counteract the change.

The Canadian dollar deposits of institutions other

than the government of Canada and chartered banks are not very large nor do they fluctuate greatly. The largest monthly change which has ever occurred in these depositis was a decrease of $56.7 million in October, 1951.[4] Therefore, the Bank of Canada probably has little difficulty in taking compensating action to prevent a change in the money supply originating from this source.

Mr. Coyne's statement that the Canadian money supply will not be affected by capital movements as long as the central bank or exchange fund account does not enter the foreign exchange market is an over simplification. However, since chartered bank holdings of foreign exchange and other deposits with the Bank of Canada do not fluctuate greatly it is a good approximation. Nevertheless, since changes in the exchange rate caused by capital movements may induce foreign depositors of the central bank and possibly chartered banks to alter their holdings of foreign exchange, a qualification to Mr. Coyne's statement probably is warranted. A capital movement or any foreign exchange transaction will not affect the Canadian money supply if the central bank, the exchange fund account and central bank depositors do not enter the market and if the chartered banks are passive agents in the market.

Capital movements subject to the preceding qualifications do not alter the Canadian money supply. However, the

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4. Canada, Bank of Canada, Statistical Summary, Financial Supplement, 1954, pp. 5-9.

velocity of circulation of money probably is affected and it is through this variable that capital movements transmit their impulses to Canadian incomes and prices. This is in marked contrast to the gold standard which focused attention on changes in the money supply as the factor which brought about a new equilibrium.

## 2. THE STABILITY OF THE FOREIGN EXCHANGE MARKET

The effect which a foreign exchange transaction has on the Canadian money supply has been studied. It is now necessary to consider what effect changes in the exchange rate have on the balance of payments. Essentially, the question, for which an answer is required, is whether the exchange market is stable. The condition for stability in any market is that a fall in price will reduce excess supply or a rise in price will reduce excess demand. The condition for stability in the foreign exchange market is the same. There is stability in a foreign exchange market if a depreciation of currency A reduces the excess demand of holders of currency A for foreign exchange or if an appreciation of currency A reduces the excess supply of foreign exchange which is seeking currency A.

The stability condition probably would be clearer if consideration were given to a particular market, for instance, the market for Canadian and United States dollars. The exchange rate like any other price is merely a ratio. However, there is a difference in that the exchange rate is a

ratio of two units of account. There is no doubt about the most convenient way of expressing a domestic price. However, it is mainly a matter of convention which way an exchange rate is stated. In the United Kingdom, the exchange rate is quoted as the amount of foreign currency required to purchase a British pound. Whereas, in Canada, the exchange rate is usually expressed as the amount of Canadian money required to purchase a unit of foreign currency. The exchange rate of 99 for the United States dollar means that a United States dollar can be purchased for $.99 Canadian. Thus, to show diagramatically the condition for stability in the exchange market for Canadian and United States dollars, the United States dollars will be plotted along the horizontal axis and the exchange rate, which is the price of United States dollar in Canadian currency along the vertical axis.

Figure 1 a) indicates a situation in which there is stability

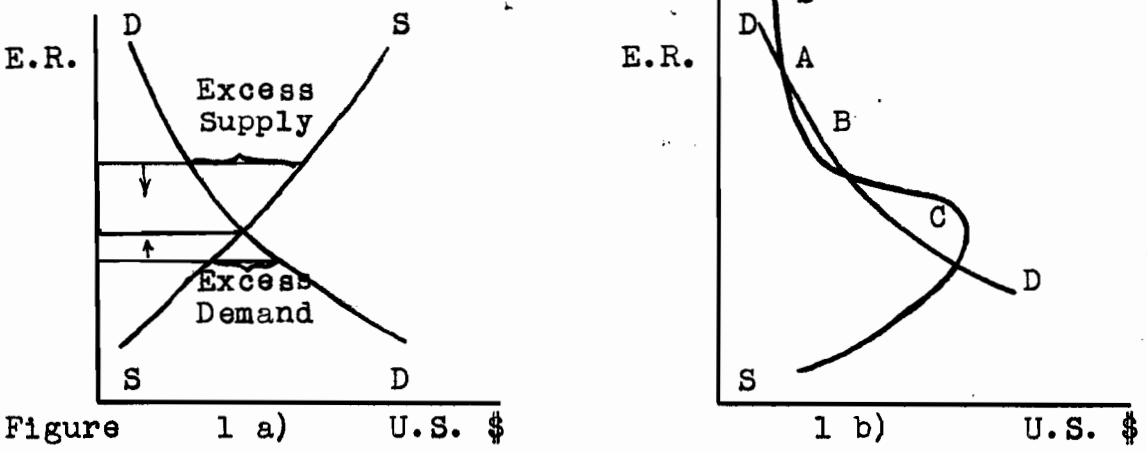


Figure 1 a) 1 b)

in the foreign exchange market. The depreciation of the Canadian dollar, which is represented by an upward movement in the diagram, reduces excess demand for United States dollars

or an appreciation of the Canadian dollar reduces the excess supply of United States dollars demanding Canadian dollars. In figure 1 b), exchange rates corresponding to A and C are stable but B is unstable.

Classical and neo-classical economists generally avoided considering that fluctuating exchange rates and indeed that price effects in general, might be inherently unstable. That is a depreciating currency, or falling domestic prices because of a gold outflow, might increase rather than reduce a current account deficit. During the interwar period, the possibility that flexible exchange rates might be unstable was widely discussed. [5] Interest in this topic was sparked by empirical studies which revealed that price elasticities of demand were much smaller than generally assumed and by the rather unsatisfactory results of depreciation experienced by certain countries. [6]

If supply elasticities are assumed to be infinite, the requirement for stability, considering only two countries is that the sum of the two price elasticities of demand for imports should exceed unity. [7] If the sum is less than unity,

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5. One of the first articles in which the conditions for stability was clearly developed was C.F.Bickerdike, "The Instability of Foreign Exchange," Economic Journal, Vol. xxx (March, 1920), pp. 118-122.

6. Lloyd A. Metzler, "The Theory of International Trade", Survey of Contemporary Economics, Vol. I, ed. Howard S. Ellis (Philadelphia: Blakiston, 1948), pp. 223-224.

7. This is strictly accurate only when the current account is initially balanced. If trade is unbalanced, this critical value becomes greater or less than unity according to whether the value of imports is greater or less than the value of exports.

the current account balance will become more passive in the country whose currency depreciates; while, if the sum is equal to unity, the current account will remain unchanged. These results are evident when a numerical example is considered. Let it be assumed that the Canadian price elasticity of demand for United States imports is greater than unity, while the United States price elasticity of demand for Canadian exports is zero. Depreciation of the Canadian dollar by ten per cent results in the same percentage rise in the price of imports from the United States. The total outlay for United States imports will decline as a result of the rise in price, since the elasticity of demand was assumed to be greater than unity. Therefore, current expenditures of United States dollars will decline by more than ten per cent. While if the United States demand elasticity for Canadian exports is zero, the current receipts of United States dollars will fall by ten per cent. Thus, the Canadian current account balance will become more active, if the sum of the two price elasticities of demand for imports is greater than unity.

A more general condition for exchange stability for two countries has been developed by Joan Robinson.[8] The change in the trade balance, assuming initially that the value of exports equals the value of imports has been calculated to equal,

$$k \left( \frac{e_f(1 + n_h)}{e_f + n_h} - \frac{n_f(1 - e_h)}{n_f + e_h} \right) x$$

8. Joan Robinson, Essays in Theory of Employment (Oxford: Blackwell, 1947), p. 142.

In this expression, k is the proportional depreciation of the home currency; and x, the total value of exports in the home currency, which is assumed equal to the value of imports. The price elasticity of demand for imports is represented by e and the elasticity of supply by n. [9] The subscripts h and f identify the elasticities of the home and foreign countries. The condition for stability in the foreign exchange market is that the expression within the large brackets must be positive; for exchange stability requires that depreciation should make the depreciating country's balance of payments more active. [10]

Since all the elasticities involved in the more general condition for exchange stability have not been measured, it will be necessary to consider the condition for stability, when the supply elasticities are assumed infinite. This condition is that the sum of the home and foreign demand elasticities exceed unity. Chang has estimated that the Canadian price elasticity of demand for imports from the rest of the world is -1.34 and that the foreign price elasticity of demand for exports of Canadian goods is -.35, making a sum of -1.69. Of the nineteen countries for which Chang made estimates Canada ranks second according to the sum of the two elasticities. [11] Malach instead of measuring

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9. The price elasticities of demand in the formula are taken to be equal to $-\frac{PdQ}{QdP}$

10. For a diagramatic approach see Donald Bailey Marsh, World Trade and Investment (New York: Harcourt Brace, 1951), pp. 204-206.

11. Tse Chun Chang, "A Statistical Note on World Demand for Exports", Review of Economics and Statistics, Vol. xxx (May, 1948), p. 107.

the price elasticity of demand for aggregate Canadian exports has recently calculated the elasticity for four important export commodities. The results were wheat -2.49 or -13.56, newsprint -.65 or -1.69, woodpulp -.76 or -2.50 and iron ore -120.59 or -162.37. The two values result because of different assumptions concerning the elasticity of supply.[12] Thus, it would appear that Chang's estimate of -.35 for the price elasticity of demand for Canadian exports might be rather low.

Since the sum of the two price elasticities of demand probably is, at least, -1.69, the exchange market should be stable. Fluctuations in the exchange rate in response to capital movements will be part of the mechanism of adjustment. An appreciation of the Canadian dollar stemming from a capital inflow should increase the import surplus or reduce an export surplus.

## 3. TYPES OF CAPITAL MOVEMENTS

As different types of capital movements are likely to have varying impacts on incomes and prices, it will be imperative to make some general division, so that each type can be studied separately. The general classification, which is often employed divides foreign investment into direct, portfolio, and miscellaneous. In differentiating between direct and portfolio investment the primary criterion is control. In order to be classified as direct

12. Vernon W. Malach, "Elasticity of Demand for Canadian Exports", Review of Economics and Statistics, Vol. xxxix (February, 1957), p. 27.

investment, control does not have to be actually exercised; it is upon potential as well as actual control that the classification rests. [13] All concerns, in which more than fifty per cent of the voting stock is held in one country outside Canada are included in this category. If a firm is known to be controlled outside Canada, even though less than fifty per cent of the stock is held in one country abroad, it is also included. [14] Unincorporated branches of foreign companies also belong in this category. In general, there is little doubt concerning the classification because the largest part of this group of investments is composed of wholly-owned subsidiaries of foreign concerns.[15] In enterprises which are controlled abroad or which could be controlled abroad, all security holdings and not just equity stock is classified as direct investment in statistics of Canadian international indebtedness. However, in the capital account of the Canadian balance of payments, only equity stock is considered as direct. In addition, direct investment in the balance of payments does not include earnings which have been retained in the business; although they are, of course, included in statistics of international indebtedness.[16]

The fundamental characteristic of portfolio investment is that it is considered to be undertaken only

13. Canada, Dominion Bureau of Statistics, Canada's International Investment Position 1926-1954, p.21.
14. Ibid., p.24.
15. Ibid., p.24.
16. Canada, Dominion Bureau of Statistics, The Canadian Balance of International Payments in the Post-War Years 1946-1952, p.85.

for the returns which it will yield and not for control as well. Portfolio investments are typically scattered minority holdings of securities which do not carry with them control of the enterprises in which the investment is made.[17] In 1954 and 1955, several income accumulating investment trusts were established as Canadian companies with funds predominantly owned in the United States. Since these companies are controlled in the United States, the investment could have been classified as direct. However, the Dominion Bureau of Statistics decided to treat the investment in these companies as portfolio because of the underlying nature of their assets, which are portfolio holdings in a large number of Canadian companies.[18]

Miscellaneous investment is closely akin to portfolio investment. It includes private investment companies, other investments held through Canadian nominees, mortgages, some estates and trusts, and non-corporate real estate holdings.[19]

It is intended to employ the classification of direct investment given above; but, instead of portfolio and miscellaneous investment, the finer and, in most instances, the self explanatory division of the capital account of the Canadian balance of payments will be utilized. Consideration will be given to the various types of foreign investment in the order in which they appear in the capital account.

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17. Canada, Dominion Bureau of Statistics, Canada's International Investment Position 1926-1954, p. 21.
18. Ibid., p.67.
19. Ibid., p.23.

# CHAPTER THREE

# PRICE AND INCOME EFFECTS OF DIRECT INVESTMENT

## 1. DIRECT INVESTMENT IN CANADA

It will only be the short-run effects of the various types of capital movements which this study will attempt to analyse. The short-run, Marshall has defined as the period during which, "people take the stock of appliances as practically fixed."[1] In considering direct investment, the short-run will be assumed to be the interval between the initiation and completion of the investment project. The short-run defined in this fashion may encompass a considerable period of time. By utilizing this definition, a serious difficulty is evaded in that consideration does not have to be given to the goods and services which the new investment will produce. Only the effects on the exchange rate, on imports and exports and domestic spending have to be taken into account.

It is recognized that the short-run may be of such limited duration that a consideration of it is not worth while. However, if the type of direct investment being undertaken by residents of the United States is contemplated, it is apparent that the gestation period of the investment is in many cases a rather lengthy interval. Table 8 indicates the industries in which there has been an inflow of

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1. Alfred Marshall, Principles of Economics, 5th ed. (London: Macmillan, 1907), pp. 373-374.

direct investment on the initiative of residents of the United States. This net inflow of United States direct investment

Table 8. United States Direct Investment in Canada
( in millions of dollars )

| | Petroleum Industry | Mining Industry | Pulp & Paper Industry | All Others | Total Gross Inflow | Return of Capital | Net Inflow |
|---|---|---|---|---|---|---|---|
| 1946 | 2 | - | 20 | 41 | 63 | 25 | 38 |
| 1947 | 12 | 2 | 11 | 41 | 66 | 8 | 58 |
| 1948 | 23 | 5 | 14 | 37 | 79 | 18 | 61 |
| 1949 | 59 | 10 | 3 | 42 | 114 | 30 | 84 |
| 1950 | 116 | 30 | 9 | 88 | 243 | 43 | 200 |
| 1951 | 140 | 37 | 31 | 101 | 309 | 39 | 270 |
| 1952 | 178 | 98 | 7 | 81 | 364 | 45 | 319 |
| 1953 | 172 | 104 | 1 | 106 | 383 | 37 | 346 |
| 1954 | 187 | 66 | 23 | 74 | 350 | 62 | 288 |
| 1955 | 195 | 60 | 35 | 133 | 423 | 117 | 306 |
| 1956 | 228 | 62 | 33 | 157 | 480 | 71 | 409 |
| | 1312 | 474 | 187 | 901 | 2874 | 495 | 2379 |

Source: Canada, Dominion Bureau of Statistics, The Canadian Balance of International Payments 1956, p.21.

of $2,379 million accounts for 88% of the total inflow of direct investment from 1946 to 1956 inclusive.[2] As can be seen from table 8, over 60% of United States gross direct investment from 1946 to 1956 was in the petroleum and mining industries. From 1951 to 1956, the percentage was 67. New investment in these fields probably will not result in any increase in production for a year or possibly longer. Some of the investment may never increase supply because a certain amount may be devoted to unsuccessful exploration. Thus, to confine the discussion to the short-run may not be a great limitation since it may, in many cases, be a

2. Canada, Dominion Bureau of Statistics, The Canadian Balance of International Payments 1956, pp. 38-39.

significant period of time.

The first item in the capital account is direct investment in Canada. This is an extremely important component of the capital account. From 1946 to 1949 inclusive, the average annual inflow amounted to $66.5 million. In 1950, there was a very significant increase and from 1950 to 1956 the average annual inflow has been $377 million. As indicated by table 9, direct investment by non-residents other than those of the United States, in recent years, has assumed greater importance. In 1956, 31% of the direct investment inflow was provided by residents of countries outside North America.

Table 9. Direct Investment in Canada
(in millions of dollars)

| | by residents of | | | |
|---|---|---|---|---|
| | United States | United Kingdom & Sterling Area | Other Countries | Total |
| 1946 | 38 | 2 | | 40 |
| 1947 | 58 | 3 | | 61 |
| 1948 | 61 | 10 | | 71 |
| 1949 | 84 | 13 | -3 | 94 |
| 1950 | 200 | 19 | 3 | 222 |
| 1951 | 270 | 30 | 9 | 309 |
| 1952 | 319 | 15 | 12 | 346 |
| 1953 | 346 | 45 | 35 | 426 |
| 1954 | 288 | 75 | 29 | 392 |
| 1955 | 306 | 68 | 43 | 417 |
| 1956 | 409 | 114 | 72 | 595 |
| | 2379 | 394 | 200 | 2973 |

Source: Canada, Dominion Bureau of Statistics, The Canadian Balance of International Payments 1956, pp. 38-41.

The chief ways in which direct investment is undertaken are:

1. By non-residents purchasing controlling interest or

the assets of a Canadian company, or more stock previously held by Canadians of a company which is already controlled abroad.

2. By non-residents establishing in Canada a new enterprise, or by extending the operations of an old investment.
   (a) by purchasing Canadian dollars and buying Canadian machinery, materials, and other factors of production.
   (b) by purchasing machinery and materials abroad and shipping them to Canada.
   (c) by a combination of method (a) and (b).

(i) Type One Direct Investment

As previously outlined, this type of direct investment takes the form of security purchases by non-residents who obtain, or extend, foreign control of a Canadian company. Instead of buying the stock of a Canadian company, part or all of its assets might be purchased. The effects on the Canadian economy are similar whether the stock or the assets are purchased. There will be an increase in the demand for Canadian dollars because of this capital movement. Consequently, the Canadian dollar will tend to appreciate. This will stimulate imports and discourage exports. Thus there will be a tendency for Canadian incomes and prices to decline. This tendency may be partially or fully offset by an increase in spending out of the proceeds received by Canadians from the sale of the securities or

assets to non-residents. Since this type of direct investment is essentially similar to the purchase of outstanding Canadian securities, a more detailed consideration of its effects will be deferred until later. What will be said subsequently about the purchase of outstanding Canadian securities will apply to this type of direct investment. The fundamental difference between type one and type two, with its three subdivisions, is that one does not initially result in any new real investment taking place in Canada, whereas two does.

(ii) Type Two (a) Direct Investment

If direct investment is undertaken in this way, the parent firm buys Canadian dollars which are used to establish or extend a plant in Canada by purchasing Canadian machinery, materials and other factors of production. There will be an increased demand for Canadian dollars equal to the amount of type two (a) direct investment which is undertaken. Since it is customary for the exchange rate in Canada to be quoted as the amount of Canadian currency required to buy a unit of foreign currency, the increased demand for Canadian dollars will be shown in a foreign exchange diagram as a shift in the supply schedule of foreign exchange. In the following diagram, the horizontal axis is shown in terms of United States dollars since United States direct investment is dominant. The schedule marked DD and SS in figure 2, are the demand and supply schedules for and of United States dollars.

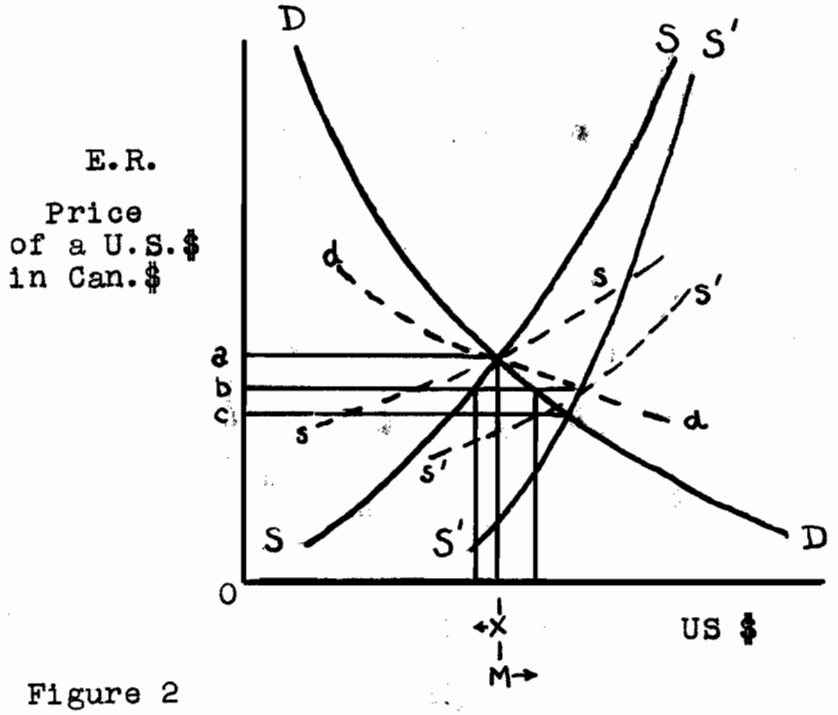



Figure 2

These schedules reflect only foreign exchange requirements for imports and exports of goods and services. It is assumed that the initial exchange rate is o a and that exports of good and services are equal to imports. Then there is an inflow of direct investment and as a result the supply schedule of United States dollars shifts to the right by the United States dollar equivalent of the Canadian dollars required. If there were no movement of short-term capital induced, the exchange rate would have to fall to o c. If the exchange rate did fall to o c, the real transfer would be accomplished by the exchange rate movement alone. However, short-term capital movements have been very important and have acted in an equilibrating fashion.[3] The coefficient of

3. R.A.Radford in an article entitled,"Canada's Capital Inflow 1946-53",International Monetary Fund Staff Papers,Vol.4,1954-55,p.219 states that: The rate of exchange has tended to move in response to the balance on current and long-term capital account; these movements of the rate have in turn evoked short-term capital movements in the opposite direction,which have worked, in the absence of official intervention in the market, to stabilize the rate within a relatively narrow range.

correlation between quarterly short-term capital movements and the average quarterly exchange rate from 1951 to 1956 inclusive was +.50.[4] Although this is not a good correlation, it is much higher than between the exchange rate and current account balance which was only -.32 and between the exchange rate and long-term capital movements of only -.19.

Since short-term capital movements have been so important, more elastic short-run schedules have been drawn in figure 2 in order to reflect their cushioning effect. Thus, the new exchange rate will be o b and it is determined by the intersection of the schedules marked dd and s' s' . As a result imports will increase and exports decrease, as shown in the figure. However, all of the real transfer is not consummated by the exchange rate movement. The remaining adjustment probably results largely from the income effect which will shift the demand schedule DD for United States dollars to import good and services to the right. In addition, there may be other price effects beside the change in exchange rate. The price of Canadian goods may rise in terms of Canadian currency as well as foreign currency and assist in bringing about the real transfer. The classical

4. The short-term capital movements have been considered to be trade in outstanding issues of Canadian and foreign securities, change in Canadian dollar holding of foreigners, change in official holdings of gold and foreign exchange and other capital movements. The equation of the line of regression between the exchange rate and short-term capital movements is E.R.=.0042 x + 98.2 where x is the short-term capital movement in millions of dollars. Thus, a fall in the exchange rate by one Canadian cent will tend on the average to produce an outflow of $238 million.

theory of the mechanism of adjustment stressed the rise in the borrowing countries prices in terms of its own currency. The price effect of the exchange rate movement under the gold standard was insignificant since the exchange rate could only fluctuate within the narrow gold points which were determined by the cost of transporting gold.

It is now necessary to indicate why there should be an increase in income and in domestic prices. The classical theory of the mechanism of adjustment stressed gold movements; and, because of adherence to the quantity theory, this meant increased prices in the country which received the capital inflow. It has already been indicated that with a flexible exchange rate there probably will be no change in the money supply. Thus any increase in domestic prices probably will stem from income effects.

There will be an increase in domestic spending equal to the inflow of type two (a) direct investment assuming that it does not displace domestic investment, However, as a result of the appreciation of the Canadian dollar, caused by the capital inflow, imports will be encouraged and exports discouraged. If there is no change in the marginal propensity to save, the increase in imports will be at the expense of an equal amount of domestic spending. It would appear that the net income generating force is equal to the amount of the direct investment minus the increase in imports and decrease in exports. However, this does not take into account any possible influence which the short-term capital

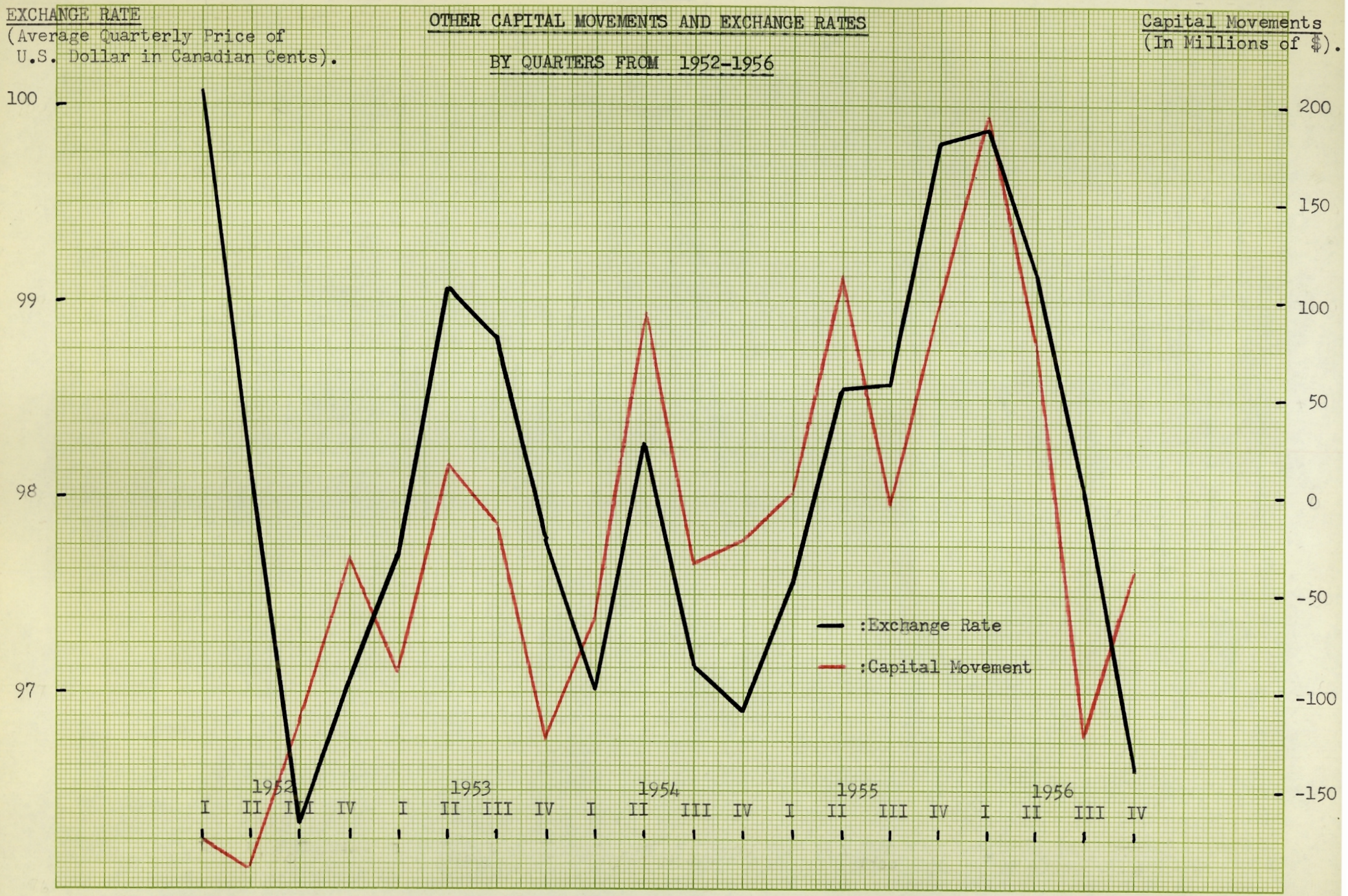
outflow has on domestic spending.

Therefore, it is necessary to consider who undertakes the short-term capital movements. The short-term capital movements which have been most responsive to movement in the exchange rate are other capital movements. This is indicated in graph 1. When the Canadian dollar appreciates there tends to be an outflow of capital. The increased demand for foreign exchange caused by the outflow of capital tends to prevent the Canadian dollar from appreciating further. Conversely when the Canadian dollar depreciates there tends to be an inflow of short-term capital. The two major components of other capital movements are changes in loans and accounts receivable and payable and bank balances and other short-term funds abroad. It would appear that the equilibriating movements of short-term capital are initiated mainly by corporations engaged in international trade. When the Canadian dollar appreciates, Canadian corporations which are large importers probably accelerate their payments to non-residents. Other Canadian corporations which sell in foreign markets probably will permit their holdings of foreign exchange to increase in the hope that they will be able to convert on more favourable terms in the future. Foreign corporations conducting business in Canada probably will respond in the opposite fashion. They will lag their payments to Canadians and draw down their Canadian dollar balances. Such activities tend to minimize the exchange rate fluctuations

GRAPH 1

# OTHER CAPITAL MOVEMENTS AND EXCHANGE RATES

## BY QUARTERS FROM 1952-1956



which occur in response to a change in demand.[5]

The question which must be answered is whether the Canadian companies which reduce their Canadian dollar holdings in response to the appreciation of the Canadian dollar will as a result decrease their domestic expenditures. It would appear that corporations that speculate on the exchange rate by reducing their liabilities to non-residents and by increasing foreign exchange holdings in response to the appreciation of the Canadian dollar probably have sufficient Canadian dollar balances so that such action does not impinge on their domestic spending. However, the speculation is not necessarily initiated by Canadian corporations. The short-term capital outflow may occur as a result of foreign corporations lagging their payments to Canadian corporations. The Canadian companies that find their accounts receivable due from non-residents increasing may not be in a strong cash position. They may have to restrict their domestic expenditures. Unless the Canadian businesses whose accounts receivable have increased at the expense of their cash position are operated on a "hand-to-mouth" basis, the reduction in spending induced by the short-term capital outflow is probably small compared with the amount of the outflow. There is good reason to presume that a Canadian corporation will speculate on the exchange rate only if it is in a strong cash position. Therefore, it appears that

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5. Sidney A. Shepherd, Foreign Exchange in Canada (Toronto: University of Toronto Press, 1953), pp. 31-32.

the reduction in domestic spending in response to the short-term capital outflow may vary inversely with the proportion of the outflow undertaken by Canadian companies. For the years 1950-1952 inclusive, the international accounts receivable and payable were published separately. The changes (millions of $) in accounts receivable were -21, -6 and -38 and in accounts payable +207, +103 and -231 for 1950 to 1952 respectively.[6] A minus sign indicates an outflow of capital which is a decrease in accounts payable or an increase in accounts receivable. In 1952, when the Canadian dollar was at a premium, Canadian corporations accelerated their payments to non-residents to a much greater extent than non-residents decelerated their payments to Canadians. Therefore, since Canadian companies provide a large part of the short-term capital movements the effect on Canadian spending is probably smaller than if this were not the case.

Only short-term capital movements undertaken by businesses have been considered. It is possible that an appreciation of the Canadian dollar may induce individual Canadians to increase their holdings of foreign assets and for non-residents to reduce their Canadian assets. There are also cogent reasons to expect that these short-term capital movements will not affect domestic spending significantly. However, since the short-term capital movements

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6. Canada, Dominion Bureau of Statistics, The Canadian Balance of International Payments in the Post-War Years 1946-1952, p. 49.

initiated by the non-business sectors of the economy are probably small vis à vis those initiated by the business sector, they will be dealt with only cursorily. It is quite conceivable that the increased holding of foreign assets does not affect domestic spending at all. The foreign assets may be purchased with a bank balance which otherwise might not be used. Similarly, the non-resident who reduces his holdings of Canadian assets may sell them to a Canadian who also may reduce a bank balance which might have remained inactive. It is also possible that an increase in Canadian holdings of foreign assets and a decrease in Canadian liabilities to non-residents may be at the expense of a purchase of a new Canadian security. This does not mean the Canadian expenditure will be reduced by the amount of the short-term capital outflow for another buyer for the new Canadian security can doubtlessly be found. However, the preference for foreign assets vis à vis domestic, caused by the appreciation of the Canadian dollar will tend to cause the price of Canadian securities to fall. This will raise the rate of interest and thus have a deflationary effect. This effect is not likely to be very significant. Therefore, it seems justifiable to conclude that as a result of a short-term equilibrating outflow of capital the reduction in domestic spending will be only a small proportion of that outflow.

Having considered some of the possible effects of the short-term capital outflow, which is induced by the inflow of type two (a) direct investment, it is now possible to

return to the consideration of the net income generating force engendered by the direct investment inflow. Let the direct investment inflow and the increase in imports and the decrease in exports caused by the resulting exchange rate movement be represented by dI, dM, and dX respectively and the short term capital outflow will equal dI - (dM+dX). Let the fractional reduction in domestic expenditure as a result of the short-term capital outflow be k. The net income generating force will be:

$$dI - (dM+dX) - k\left\{dI - (dM+dX)\right\} = (1-k)\,dI - \left\{(1-k)dX + (1-k)dM\right\}$$
$$= (1-k)\left\{dI - (dX + dM)\right\}$$

Obviously, if there is no short-term capital outflow stimulated or if the short-term capital outflow results in an equal decrease in domestic expenditures, there will be no net effect on income. Hence, there is probably no change in the general price level. The price of capital goods will probably rise but a compensating fall in other prices will occur. Since $(1-k)\left\{dI-(dX + dM)\right\}$ is probably greater than zero, national income will rise initially by that amount. In subsequent income periods, the level of spending will tend to be higher than it otherwise would be by a constantly diminishing amount as described by multiplier analysis. Part of the increase in income over time will drain away in the form of imports which will assist in completing the real transfer. Metzler states that, "While some differences of opinion still exsist concerning the role of induced investment, the conclusion of most economists seems

to be that, except under unusual conditions, the adjustment of a country's balance of payments by means of income movements is likely to be incomplete."[7] Under a system of fixed exchange rates the net increase in income may be equal to that part of the direct investment inflow which does not initially enter the country in the form of goods and services. The exchange fund account will provide the additional Canadian dollars if the exchange rate reaches the pegged buying rate for foreign exchange. With a freely fluctuating exchange rate, the initial income effect probably will be less than the amount of the real transfer not yet completed. The difference is the decrease in spending caused by the short-term capital outflow induced by the direct investment inflow. Exchange rate expectations may be disappointed if there is not a significant amount of induced investment to reinforce the income effect stimulated by the initial net increase in spending.

If the gestation period of the investment were known and if the income period had been determined as a certain value in calendar time, it would be possible to obtain some idea about the extent of the inflationary effect as a result of the multiplier process. The former is an objective fact, the latter is more difficult to quantify. Therefore, the various estimates of the income period will be considered. Munzer concluded that a change in national

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7. Lloyd A. Metzler, "The Theory of International Trade," A Survey of Contemporary Economics, Vol.I, ed. Howard S. Ellis (Homewood: Irwin, 1956), pp. 219-220.

income in year n of one dollar will bring about a change in national income in year n+1 of $3.82.[8] In a note which Chang wrote concerning Munzer's article he states that, "It is difficult to conceive of any "type" of country in which the multiplier will take such a long time to work out."[9] Following a statistical method first used by Kalecki, Chang decides that, "On the average it appears that the time lag is about one quarter."[10] There have been a number of estimates made for the income propagation period in the United States. The earliest was that by J.M. Clark who considered that the pertinent time period was two months.[11] Machlup estimated the interval as about three months.[12] Villard concluded that the income period was three and a half months in duration,[13] and Angell arrived at the conclusion that the relevant period was between 3.15 and 3.33 months.[14] Marsh states that, "It is

8. E.Munzer, "Exports and National Income in Canada", Canadian Journal of Economics and Political Science, Vol. xi (February 1945), p. 35.
9. Tse-Chun Chang, "A Note on Exports and National Income in Canada", Canadian Journal of Economics and Political Science, Vol. xiii (May,1947), p. 279.
10. Ibid., p. 279-280
11. John Maurice Clark, Economics of Planning Public Works (Washington:1935), p. 87.
12. Fritz Machlup, "Period Analysis and Multiplier Theory", Quarterly Journal of Economics, Vol.LIV (November,1939) p.10.
13. Henry H. Villard, Deficit Spending and the National Income (New York: Farrar,1941), p. 256.
14. James W. Angell, Investment and Business Cycles (New York: McGraw-Hill, 1941), p. 145.

hard to say just how long an income period is, but the most popular estimate is three months."[15]

Let it be assumed that an $8 million project requires a year to complete and that $2 million in Canadian funds are purchased quarterly in the foreign exchange market and immediately spent to purchase domestic factors. Also let it be assumed that as a result of the quarterly foreign exchange transaction, the increase in imports and decrease in exports and the outflow of short-term capital result in a decrease in domestic spending of $1 million quarterly. The net income-generating spending in each period will be $1 million. In order to illustrate the effect of this net increase in spending, the marginal propensity to consume domestic goods will be assumed to be one half.

Figure 3. Multiplier Effects of Type 2a Direct Investment

| Period | Income Recipient | | | | | | Increase in Demand | |
|---|---|---|---|---|---|---|---|---|
| | I | II | III | IV | V | VI | | |
| 1 | 1 | | | | | | 1 | ) |
| 2 | 1 | .5 | | | | | 1.5 | ) 6.125 |
| 3 | 1 | .5 | .25 | | | | 1.75 | ) |
| 4 | 1 | .5 | .25 | .125 | | | 1.875 | ) |
| 5. | | .5 | .25 | .125 | .0625 | | .9375 | |
| 6 | | | .25 | .125 | .0625 | .03125 | .46875 | |

Even if the real transfer were completed within a year with the assistance of income and domestic price effects, there would be only an additional increase in imports

15. Donald Bailey Marsh, World Trade and Investment (New York: Harcourt, Brace, 1951), pp. 240-241.

of $4 million while the increase in demand generated during the year would be $6.125 million, as shown in figure 3. After the first year, there would still be an eventual increase in demand of $1.875 million. However, the output of the new investment must be considered, and if it is successful the increased supply of goods and services will offset this increment in demand. In the short-run, the net increase in spending with its multiplier effects will be inflationary and will temporarily raise national income. The extent of the inflationary pressures given the multiplicand will be proportional to the marginal propensity to consume domestic goods and the gestation period of the investment.

The increase in income generated by the direct investment probably will result in an increase in accelerator investment. The extent of the increase will depend on the capital to output ratio of the businesses experiencing the increase in demand. It will also depend upon the businessmen's expectations. If the increase in demand is expected to be only temporary, there may be no increase in investment. Instead, the existing capital may just be used more intensively. However, in general, large captial movements occur when an economy is booming because this is the kind of economy which by offering favourable profit opportunities attracts foreign capital. The Canadian economy has been very buoyant and expectations so rosy that, in general, the problem facing the government and central bank has been how to check

investment expenditures. Therefore, the net increase in spending produced by the direct investment probably has stimulated a large increase in accelerator investment. Consequently, the increase in income over time probably has been far larger than indicated by multiplier analysis. Assuming that there was full employment initially, there will be an upward pressure on Canadian prices.

Multiplier and accelerator analysis undoubtedly portray the economy in a far too mechanistic fashion. Such analysis does not take into account qualitative differences in spending which may be as important if not more important than the quantitative differences. In effect, the multiplier and accelerator consider only business men who are managers of circular flow businesses. However, since much direct investment qualifies as an innovation under Schumpeter's fourth category, "The conquest of a new source of supply of raw materials or half manufactured goods", it will probably have repercussions of a considerable magnitude even in the limiting case where there is no initial net increase in spending.[16] There are numerous examples of this type of direct investment, for instance, the Quebec-Labrador iron ore development and the western oil industry.[17] Now the appearance of entrepreneurial activity on such a scale results in the swarm-

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16. Joseph A. Schumpeter, The Theory of Economic Development (Cambridge:Harvard University Press, 1951), p. 66.

17. R.A.Radford, in an article entitled "Canada's Capital Inflow 1946-53, International Monetary Fund Staff Papers, Vol.IV. (1954-55), p.230 states that: The contribution of foreign private capital to the Canadian economy has been augmented by its concentration in risk-bearing ventures. Such investments are typically associated with the introduction of new products and techniques.

like appearance of new enterprise. The reason for this is, "Exclusively because the appearance of one or a few entrepreneurs facilitates the appearance of more, in ever-increasing numbers."[18]

In addition, to stimulating more entreprenurial activity direct investment which is dynamic in nature will produce a secondary wave of investment. For example, direct investment which exploits an iron ore or uranium deposit probably will mean that a new town will spring up which will call forth a large investment in houses and municipal projects. If the development takes place in an isolated part of the country, it is necessary to construct roads and railways linking it with the outside world. Therefore, multiplier and accelerator analysis does not reveal the extent of the rise in money income and the inflationary pressures engendered. Such analysis is strictly appropriate only for an economy which is growing in the sense that present operations are being expanded. When the direct investment represents a significant shift in the activities of the economy, the inflationary pressure propagated will be much greater than indicated by mechanical relationships.

The limiting case in which no short-term capital outflow is induced as a result of the affect of the direct investment inflow on the exchange rate will be considered. Thus the increase in imports and decrease in exports caused by the appreciation of the Canadian dollar will equal the

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18. Schumpeter, op. cit., p.228.

direct investment inflow. If the increased spending on imports is entirely at the expense of domestic spending, there will be no multiplier effects on income. However, if a state of full employment exists, how does the new direct investment obtain the additional factors and the materials which it requires? As a result of the decrease in exports and increase in imports, some factors will be freed. There is, however, no reason to expect that the factors freed will be the exact ones desired. Even if by some amazing coincidence this happened to occur, the factors might not be situated in the appropriate geographical location. Therefore, there can be little doubt that the new direct investment will have to bid some factors away from their present employment and to provide some incentive to encourage liberated factors to move. The most important factor required is probably labour. By bidding up wage rates, the new direct investment will increase incomes and may set off a wage-price spiral.

Galbraith has introduced a concept called countervailing power. He claims that this power complements and in some parts of the economy replaces the restraints on power to set prices exercised by competition. Of these restraints he says:

> They were nurtured by the same process of concentration which impaired or destroyed competition. But they appeared not on the same side of the market but on the opposite side, not with competitors but with customers or suppliers.[19]

19. John Kenneth Galbraith, American Capitalism, the Concept of Countervailing Power (Boston: Houghton Mifflin, 1952), p. 118.

This power is considered to exercise effective restraint on prices in normal conditions but when inflationary forces are strong it may be inoperative. When management is able to pass on additional cost to their customers in the form of higher prices with little decrease in their volume of sales, there is little incentive to resist union demands. Profits may suffer but little, if management surrenders to union demands; while a strike means a complete loss during its duration.[20] The concept of countervailing power is mentioned because, if it is applicable to our economy, the wage-price spiral is probably a serious threat. Therefore, in a state of full employment, an inflow of type two (a) direct investment may be very inflationary; for it may stimulate a wage-price spiral.

A deflationary factor which has not been taken into account is that the appreciation of the Canadian dollar increases the real income of Canadians corresponding to any given level of money income. It is generally thought that the proportion of income saved tends to rise with a rise in real income. Therefore, as the Canadian dollar appreciates, the amount spent on goods and services out of a given money income will fall.[21] The Canadian price elasticity of demand

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20. Ibid., p. 138.

21. Svend Laursen and Lloyd A. Metzler, "Flexible Exchange Rates and the Theory of Employment", The Review of Economics and Statistics, Vol. xxxii (November, 1950), p. 286.

for imports Chang estimated to be -1.34.[22] Therefore, when the Canadian dollar appreciates, the prices of United States goods decline in terms of Canadian dollars and since the demand is slightly elastic more income will be spent on United States goods. If a larger proportion of any given level of money income is saved, the proportion spent on domestic goods must decline. It is difficult to assess the importance of this factor. However, since the movement of the exchange rate has not been great and the price elasticity of demand for imports is not large, the decrease in the proportion spent in Canada is probably insignificant.[23] This factor will not be mentioned subsequently but will be assumed to be a tacit qualification of the analysis.

If direct investment is considered from a total instead of a marginal outlook, the income generating and inflationary effects may appear to be greater. It has already been suggested that the direct investment inflow probably raises the marginal efficiency of capital schedule for firms engaged in complementary activities. However, it is possible that direct investment of a dynamic nature may pervade the

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22. Tse Chun Chang, "A Statistical Note on World Demand for Exports", Review of Economics and Statistics, Vol. xxx (May, 1948), p. 107.

23. Murray Kemp in a privately circulated paper entitled, "Is the Importation of Capital Inflationary?" states that: "The resulting temporary improvement in the terms of trade implies a temporary increase of real income and if current versions of the consumption function are accepted a decrease in consumption expenditure out of a given money income. Too much importance should not be attached to this consideration but, for what it is worth, it reinforces our conclusion that the temporary deflation will be greater than the ultimate deflation."

whole economy by stimulating a rise in expectations. The buoyancy of the Canadian economy from 1946 to 1949 certainly cannot be attributed to the inflow of direct investment for it was unimportant during this period. In other words, direct investment may have been an induced rather than an autonomous factor in the domestic expansion in the immediate post-war years. In 1950, there was a sharp increase in direct investment; moreover, the unusual forces promoting growth from 1946 to 1949, the deferred demand and the high liquidity bred by the war, may have been subsiding by 1950. The marked acceleration in the direct investment inflow might have provided an important stimulant for the economy. In addition to the increase in the inflow, there was a significant shift of direct investment into the extractive industries. From 1946 to 1949, 35% of the United States direct investment was in the extractive industries while from 1950 to 1956 the percentage was 66.[24] Much of this increased inflow was in response to the needs of the United States economy. Therefore, direct investment might have been a very important factor in stimulating Canadian growth, rather than being a camp follower of that growth.

(iii) Type Two (b) Direct Investment

Type two (b) direct investment comes about by non-residents establishing in Canada a new plant, or by extending the operations of an old investment through purchasing

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24. This is revealed in Table 8, p.46.

machinery and materials abroad and shipping them to Canada. Such a transaction will not have any initial influence on the exchange rate, on Canadian income or prices. In the current account of the balance of payments, the machinery and materials will be recorded as imports and this will be offset by an entry of the same amount in the capital account as direct investment in Canada. When it is said that this type of investment is initially neutral with respect to Canadian income and prices, the assumption that is made is that it has not displaced domestic investment. If domestic investment is displaced the inflow of real capital would be deflationary. It will be assumed that the direct investment does not interfere initially with domestic investment.

It is difficult to conceive how an investment can be established without employing some domestic factors, but brief consideration will be given to this extreme case. There is no initial increase in spending but this is not a sufficient reason for concluding that there will be no effect on incomes and prices. Although there is no quantitative impulse transmitted to the Canadian economy, there may be an impact through its qualitative characteristics. If the direct investment is of a path-breaking nature, it may stimulate more investment to which the multiplier and accelerator analysis can be applied. For this type of direct investment to have no influence on incomes and prices it must take place in a circular flow business.

Probably no investment project can be established

without utilizing some Canadian factors. Since it has been assumed that this type of direct investment consists entirely of an inflow of real capital, the additional financing required to purchase Canadian factors will be assumed to be obtained in Canada. Thus with the equity entirely provided by the shipment of machinery and materials to Canada and the additional capital borrowed in Canada there will be no foreign exchange transaction accompanying the investment. The additional financing may be obtained from Canadian banks, or through flotation of an issue of bonds in the Canadian market. The required funds might even be raised by selling up to 49% of the stock of the new corporation in Canada. The financing raised in Canada may come from new voluntary savings or through inflationary credit creation.

There will be an increase in the Canadian money supply if a chartered bank creates credit in favour of the company undertaking the direct investment without calling any outstanding loans or reducing other assets. In 1955, the chartered banks did permit their holdings of treasury bills to diminish.[25] As a result of an agreement with the Bank of Canada, the chartered banks will maintain their liquid assets (cash, treasury bills, day-to-day loans) at 15% of their total deposit liabilities. Therefore, the banks now have little scope for increasing their loans by reducing their liquid assets. During the latter half of

25. Canada, Bank of Canada, Statistical Summary Financial Supplement 1956, p. 24.

1955 and during 1956, the major way in which the demand for commercial loans were met was through the chartered bank sales of government securities. In 1956, for instance, the chartered bank holdings of government bonds decreased by $1,240 million while general loans increased by $1,235 million.[26] The sale of bonds to the public results in a liquidation of deposits and when the bank makes loans to its customers the deposits are recreated. The deposits destroyed are probably inactive deposits. The deposits created are very defintely active. Consequently, although the total deposits remain the same, the proportion in active circulation is increased. This means that the velocity of circulation of money has increased or the money supply has increased depending upon the definition of the money supply.

If the funds put at the disposal of the direct investor represent voluntary new saving, there will be no increase in income and no upward pressure on prices.[27] However, if the investment had not been made, there might have been a deflationary effect. If, on the other hand, the funds obtained by the direct investor are not offset by new voluntary savings, there will be an increase in incomes and a rise in prices. Out of this increase in income a part will be spent on imports. As this type of direct investment

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26. Canada, Bank of Canada, Annual Report of the Governor to Minister of Finance 1956, p. 55.

27. The same criticism can be made of this statement as the statement that if an import surplus is created by the exchange rate movement resulting from the inflow of type two (a) direct investment, there is no inflationary pressure. There is no assurance that the factors freed by voluntary saving will be the ones required by the new direct investment. Factors may still have to be bid away from their present employment; consequently it may be inflationary.

does not provide any foreign exchange, the domestic currency will tend to depreciate. If there is a fixed exchange rate, a transfer problem in reverse is created.[28]

The portion of the Canadian financing which is not offset by new voluntary saving will increase income over time in the multiplier fashion. Assuming that the capital to output ratios are the same in the industries experiencing the decrease in demand, as a result of the voluntary saving, as those experiencing the increase, it will only be the net increase in spending which will produce accelerator investment. If the capital to output ratios are different, there can be net accelerator investment induced even if there is no net increase in spending. As long as the capital to output ratio is higher in the industries where demand has increased as opposed to those in which it has fallen, there probably will be some investment induced. If the investment can be classified as a Schumpeterian innovation, other investment expenditures may be stimulated. Consequently, money incomes and prices may still be given an upward thrust even in the case where all the Canadian financing is offset by new voluntary saving.

There can be little doubt that most direct investment projects, even when a large amount of the investment represents an importation of capital equipment, are inflationary in the short-run. However, they are certainly not as inflationary as if the burden of financing the whole

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28. Charles P. Kindleberger, International Economics (Homewood: Irwin, 1953), p. 354.

undertaking had been borne by Canadians. In order to import the capital equipment from abroad, it would be necessary to bid up the price of foreign exchange. This would tend to increase exports and decrease imports and thus increase domestic income and add to inflationary pressures. The only way in which a Canadian controlled company could carry out the investment without it being any more inflationary than if undertaken by a non-resident as direct investment, would be for the Canadian company to float an issue of bonds in New York. These funds could then be used to import real capital. The inflationary effect on exports and imports of an increase in the demand for foreign exchange would be avoided.

This can be shown in a foreign exchange diagram which will ignore short-term capital movements. The Canadian

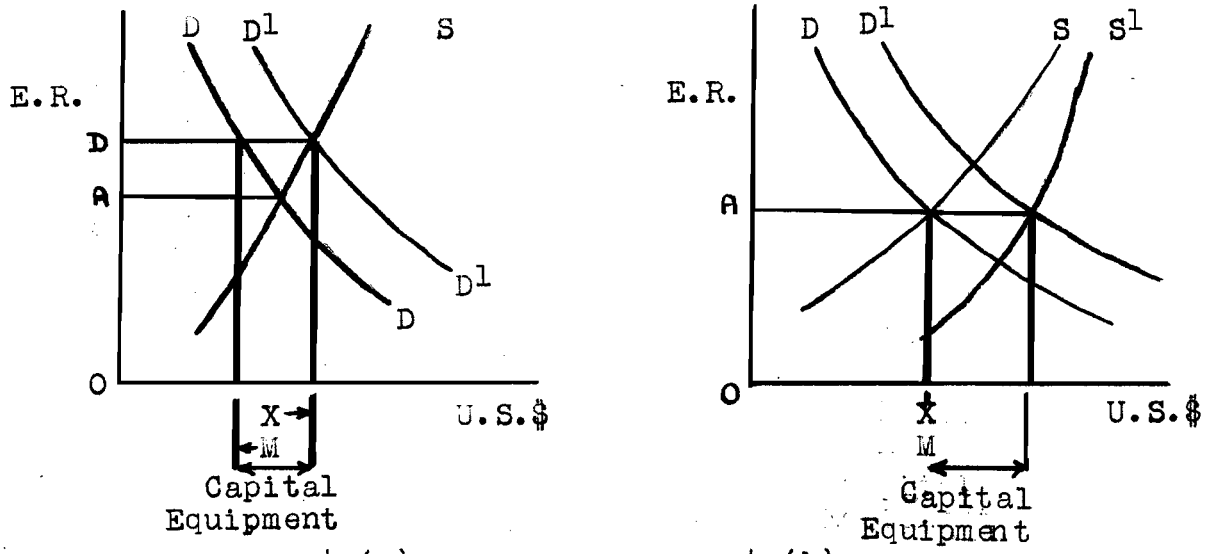


Figure 4 (a) 4 (b)

corporation which does not obtain foreign financing will cause the demand schedule to shift by the value of the capital equipment required. This is shown in figure 4 (a) where the

initial demand schedule shifts from DD to $D^1D^1$ and the exchange rate rises from OA to OD. The volume of normal imports from the United States will fall and exports will increase in response to the depreciation of the Canadian dollar, as shown in Figure 4a . The difference between exports and imports will be equal to the capital equipment. Although no foreign exchange transaction takes place if the Canadian corporation borrows the funds abroad to pay for the capital equipment, it can be thought of in terms of a foreign exchange diagram. It is as though the supply and demand schedules shift simultaneously by the value of the capital equipment, as shown in figure 4 (b). Consequently, there will be no change in the exchange rate or exports or imports other than capital equipment. This is merely a diagramatic illustration of how much more inflationary domestic financing is, as compared with foreign financing.

In summary, direct investment of type two (b) (machinery and materials shipped from abroad and additional financing obtained in Canada) may generate in the limiting case no increase in income and exert no pressure on domestic prices. For this to occur the investment must be made in a circular flow business and additional Canadian financing must be offset by new voluntary saving. If it is dynamic investment, incomes and prices may rise even though the direct investment itself does not have any multiplier and accelerator effects. The more dynamic the investment and the greater the amount of Canadian financing which is not counterbalanced by new voluntary saving the greater

the increase in incomes and prices in Canada.

(iv) Type Two (c) Direct Investment

Direct investment of type two (c) is a combination of types two (a) and (b) and is probably more nearly representative of actual non-resident direct investment in Canada. Some funds provided from abroad, some machinery and materials shipped to Canada from abroad, and some funds obtained in Canada are the components of this type of direct investment. The impact on the Canadian economy of each of the ways in which direct investment is undertaken has already been considered. Consequently, only a brief summary will be made at this time.

The smaller the proportion of the direct investment that enters Canada initially in the form of machinery and materials, the larger will be the rise in Canadian incomes and prices, other things being equal. The larger the amount of Canadian financial participation obtained by the direct investor, the greater will be the impact on the Canadian economy. The smaller the ratio of the import surplus to the increased demand for Canadian dollars the greater will be the inflationary pressures. The smaller the proportional reduction in spending caused by the short-term capital outflow, induced by the appreciation of the Canadian dollar, the greater the net increase in spending. Finally, the more dynamic the investment is, the greater the upward push on Canadian incomes and prices.

There can be little doubt that the income and

domestic price effects of most direct investment inflows are sufficient to complete the real transfer. Further appreciation of the Canadian dollar is probably not necessary to convert any part of the direct investment inflow which initially is balanced by an outflow of short-term capital into any inflow of real goods and services. The income effect of the direct investment will cause the demand schedule for foreign exchange to shift positively. This will tend to cause the short-term capital outflow to be drawn down. The higher Canadian prices also will produce an increase in the demand for foreign exchange because cheaper foreign goods will be substituted for more expensive domestic goods.

2. DIRECT INVESTMENT ABROAD

Canadian direct investment abroad is the next item in the capital account of the Canadian balance of payments. As indicated in table 10, from 1947 to 1950 inclusive, Canadians on balance were reducing their direct investment in the United States. Canadian direct investment in the Sterling area increased slightly during this period, but the decrease in Canadian direct investment in the United States more than counterbalanced the increase. The largest decrease in Canadian direct investment in the United States occurred in 1950. Of the total decrease of $41 million, $37 million occurred in the second and third quarters of that year.[29] This would appear to indicate that it was to

29. Canada, Dominion Bureau of Statistics, The Canadian Balance of International Payments in the Post-War Years 1946-1952, p. 104

Table 10. Canadian Direct Investment Abroad
(in millions of dollars, minus indicates an outflow)

| Year | United States | United Kingdom & Sterling Area | Other | Total |
|---|---|---|---|---|
| 1946 | -7 | -10 | 3 | -14 |
| 1947 | 6 | -3 | 3 | 6 |
| 1948 | 15 | -2 | 2 | 15 |
| 1949 | 16 | -3 | 0 | 13 |
| 1950 | 41 | -4 | -1 | 36 |
| 1951 | -4 | -6 | -10 | -20 |
| 1952 | -42 | -19 | -16 | -77 |
| 1953 | -33 | -22 | -8 | -63 |
| 1954 | -46 | -23 | -12 | -81 |
| 1955 | -56 | -9 | -9 | -74 |
| 1956 | -77 | -27 | -6 | -110 |
| | -187 | -128 | -54 | -369 |

Source: Canada, Dominion Bureau of Statistics, The Canadian Balance of Payments 1956, pp. 38-41.

a large extent a speculative withdrawal. From September 20, 1949 until September 30, 1950, the Canadian dollar was at a ten percent discount in terms of the United States dollar.[30] As it was thought that the Canadian dollar was under-valued, there was an incentive to exchange foreign currency for Canadian. From 1951 to 1956 inclusive, the capital outflow in this account amounted to $425 million.

Initially, it will be assumed that direct investment abroad is not made at the expense of domestic investment. If the investment is made by buying foreign exchange and purchasing foreign factors, the Canadian dollar will tend to depreciate. Since exports will be encouraged and imports

30. Canada, Bank of Canada, Statistical Summary Financial Supplement 1954, p. 59.

discouraged, domestic incomes and prices will tend to rise. As a result of the cushioning effect of private traders, the initial exchange rate movement probably will not be sufficient to stimulate the real transfer of goodsand services to the foreign country. The direct investment may raise incomes abroad which will assist in completing the real transfer. In addition, there may be a small increase in domestic spending as a result of any short-term capital inflow induced by the depreciation of the Canadian dollar. Canadian corporations probably will be inclined to lag their payment to non-residents and to reduce their holdings of foreign exchange, if the Canadian dollar is considered abnormally cheap. Foreign corporations may lead their payments to Canadians and allow their Canadian dollar holdings to increase. Since Canadian businesses will be more liquid, they may increase their expenditures. This effect is probably insignificant.

If instead the direct investment consists of the shipment of Canadian machinery and equipment abroad, the full impact on incomes and prices will be felt immediately. Whereas, in the case where the funds are spent abroad, the total effect will be experienced at once only if there is no equilibrating inflow of short-term capital. If there were a short-term inflow and domestic incomes tended to rise, the completion of the real transfer would be opposed. If incomes rose abroad as a result of the direct investment, the real transfer would be assisted. However, the rise in

incomes abroad which assists the real transfer might only neutralize the rise in domestic incomes which oppose the real transfer. In this situation the exchange rate expectations of private traders probably would be disappointed; for the Canadian dollar would have to depreciate further to bring about the real transfer. Therefore, dollar for dollar, direct investment made by shipping Canadian equipment abroad will be more inflationary at least in the short-run than if foreign exchange is purchased and the equipment bought abroad.

It was assumed that direct investment abroad was not made at the expense of domestic investment. However, there might be some additional repercussions on the Canadian economy. For instance, if the funds had not been used for direct investment, they might have been utilized to buy bonds. Consequently, the interest rate might be higher than it otherwise would be. In the absence of the direct investment outflow, there might be more domestic investment because of a lower rate of interest. If the Canadian dollar depreciated and if a short-term capital inflow was induced, this effect might be partially offset. The fall in the exchange value of the Canadian dollar, if it was considered temporary, would increase the attractiveness of Canadian securities vis à vis foreign securities. The price of Canadian securities would tend to be higher and the interest rate lower.

It has only been assumed that the direct investment abroad has not been made at the expense of domestic investment.

However, if the funds have been obtained through corporate saving it is necessary to consider the fact that if the corporation had not wished to undertake direct investment, the dividend declared might have been correspondingly higher. If this were the case, the resulting decrease in spending would be equal to the marginal propensity to consume multiplied by the reduction in the dividend payment. If the direct investment took the form of an export of Canadian machinery, domestic spending would be increased initially by that amount. If d D was equal to the amount of the direct investment and also the reduction in dividend payments, the increase in income over time would be equal to $\frac{dD}{1-MPC}$ as a result of the export of Canadian machinery and the decrease in income over time would be equal to $\frac{MPC\ dD}{1-MPC}$ as a result of the reduction in dividend payments. The net increase in income over time would equal $\left(\frac{dD}{1-MPC} - \frac{MPCdD}{1-MPC} = dD\right)$ the amount of the direct investment.

If the direct investment initially did not take the form of an export of real capital, there might be a net decrease in domestic income. This would be so if the marginal propensity to consume of those who would have received the dividend is greater than the proportion of direct investment which initially results in an increase in exports and decrease in imports.[31] Therefore, under these assumptions, it is possible that the real transfer may be assisted

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31. This assumes that the decrease in imports results in an equivalent increase in domestic spending.

by a decline in domestic incomes and prices. The larger the inflow of short-term capital in response to the depreciation of the Canadian dollar, the greater is the probability that this type of capital outflow will be deflationary. If incomes are increased abroad, part of the increase will seep back to the Canadian economy in the form of increased exports. This will tend to offset the possible deflationary effect.

Finally, it will be assumed that direct investment abroad is at the expense of an equal amount of domestic investment. If the direct investment abroad takes the form of an export of Canadian capital equipment, the decrease in domestic spending will be entirely counterbalanced by an increase in domestic spending. Therefore, direct investment will be neutral with respect to Canadian incomes and prices. If the direct investment is undertaken by obtaining foreign exchange and purchasing foreign equipment, there will be a deflationary effect on the Canadian economy. The larger the equilibrating inflow of short-term capital which occurs in response to the depreciation of the Canadian dollar, the greater will be the decline in Canadian incomes and prices. The deflationary effect may be offset to some extent by the increase in exports caused by higher incomes in the country in which the direct investment is made.

Direct investment abroad may be deflationary, neutral, or inflationary, depending on the assumptions made. The greater the export content of the investment, the greater the probability that it will be inflationary. The greater the proportion of the direct investment outflow which results in a short-term capital inflow, the greater the probability that it will be deflationary.

# CHAPTER FOUR
# PRICE AND INCOME EFFECTS OF TRADE IN CANADIAN AND FOREIGN SECURITIES

## 1. CANADIAN SECURITIES

### (i) Trade in Outstanding Issues

Following direct investment in the capital account of the Canadian balance of payments is portfolio investment and miscellaneous investment. These capital movements are classified into several categories; the first is trade in outstanding Canadian securities. Between 1946 and 1956 inclusive there has been a net capital inflow of $677 million. Almost half of the increase occurred in 1950 alone, and

Table 11. Trade in Outstanding Canadian Securities (in millions of dollars)

| Year | with residents of United States | United Kingdom and the Sterling Area | Other | Total |
|---|---|---|---|---|
| 1946 | 241 | -48 | 1 | 194 |
| 1947 | - 3 | -11 | 1 | - 13 |
| 1948 | 5 | - 4 | 2 | 3 |
| 1949 | 25 | -16 | -1 | 8 |
| 1950 | 362 | -35 | 2 | 329 |
| 1951 | 20 | -16 | 34 | 38 |
| 1952 | -104 | - 3 | 13 | - 94 |
| 1953 | - 80 | 27 | 22 | - 31 |
| 1954 | | 21 | 42 | 63 |
| 1955 | - 67 | 26 | 14 | - 27 |
| 1956 | 41 | 83 | 83 | 207 |
| | 440 | 24 | 213 | 677 |

Source: Canada, Dominion Bureau of Statistics, The Canadian Balance of International Payments 1956, pp. 38-41

undoubtedly it was primarily the result of speculation on the part of residents of the United States. Over 80% of the

capital inflow from the United States took place in the third quarter of 1950 when speculation concerning the appreciation of the Canadian dollar reached its height.[1]

From 1951 to 1956, there has been a net capital inflow of $156 million. Unlike most other capital movements, it has been non-residents other than Americans that have provided the inflow of capital. There has been a net purchase of Canadian securities by residents of the sterling area amounting to $138 million and by non-residents other than those of the United States and the sterling area of $208 million. In contrast, residents of the United States from 1951 to 1956 were net sellers of outstanding Canadian securities to the extent of $190 million. In 1952 alone, residents of the United States reduced their holdings of Canadian securities by $104 million. In the third quarter of that year, the average noon exchange rate was 96.33 (Canadian cents for a United States dollar) and the outflow of capital amounted to $51 million.[2] It would thus appear that this represented a speculative outflow which moderated the appreciation of the Canadian dollar in response to the long-term capital inflow and the current account surplus.

Capital movements of this nature are often classified as short-term because of their responsiveness to changes

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1. Canada, Dominion Bureau of Statistics, The Canadian Balance of International Payments in the Post-War Years, 1946-1952, p. 104.
2. Ibid.

in the exchange rate and interest rates in Canada and the United States.[3] The trading in Canadian bonds and debentures has moved, in general, in a slightly equilibrating fashion in response to exchange rate movements. The coefficient of correlation between the monthly average noon exchange rate (Canadian cents for a United States dollar) and the net monthly sales or purchases of outstanding Canadian bonds and debentures from 1951 to 1956 was + .19. Although the coefficient of correlation is very low, it is higher than that between the net monthly sales or purchases of outstanding Canadian bonds and debentures and the interest differential on long term Canadian and American government bonds of comparable maturity. The later coefficient of correlation is only + .14.

As has been indicated, trading in outstanding Canadian securities may be induced as a result of exchange rate movement; however, there is probably some that is autonomous in nature. It is an inflow of capital which has not been induced as a result of expectation concerning the exchange rate which will be considered here. The increased demand for outstanding Canadian securities by non-residents will mean that the price of the Canadian dollar will be bid up. The appreciation of the Canadian dollar will encourage imports and discourage exports. However, it is most improbable that the exchange rate will move sufficiently for

3. R.A.Radford, "Canada's Capital Inflow, 1946-53", International Monetary Fund, Staff Papers Vol.4, 1954-55, p.218.

the real transfer to be accomplished by this type of price effect. If there is no change in the marginal propensity to save, the increase in imports will be at the expense of spending on domestic goods. Thus the sum of the increase in imports and decrease in exports will represent the decrease in spending resulting from the transaction. This assumes that the short-term outflow of capital which partially offsets the increased demand for Canadian dollars does not cause a decrease in domestic spending. This assumption may be realistic in that it is probably the large corporations which cushion the exchange rate by leading their payments and increasing their United States dollar balances in response to an appreciation of the Canadian dollar. The reduction in their Canadian dollar balances probably consists of a reduction in their precautionary and speculative balances and may not alter their domestic spending to any significant extent.

The seller of the Canadian security has an equivalent amount of Canadian dollars. Thus, it is now necessary to know what he is likely to do with his increased holdings of Canadian dollars. If he buys a new security, all of the funds may be spent. If he buys an outstanding Canadian security, then it is necessary to determine what the seller of the second security will do with the proceeds. Bloomfield concluded that net foreign purchases of American securities from 1934 until 1939 did not lead to income disbursements

in United States to any significant extent.[4] However, the conditions prevailing in Canada since the war are very different from those in the United States during the 'thirties'. Therefore, it is quite conceivable that a sizable proportion of the proceeds may have entered the income stream through consumption expenditure or new investment.

If dM is the increase in imports and dX is the decrease in exports induced by the change in the exchange rate caused by the purchase of the Canadian security for dI Canadian dollars, then there will be a deflationary effect if $\frac{dM + dX}{dI}$ is greater than the proportion of the proceeds of the sale of the security which enters the income stream. This assumes that the marginal propensity to save remains unchanged and the equilibrating outflow of short-term capital does not result in a reduction in domestic spending. The short-term capital outflow is equal to dI - (dM+ dX). Therefore, if as a result of this outflow, spending on domestic goods is reduced by $k\ (dI - (dM + dX))$, there will be a decrease in income if $\frac{dM + dX + k\ (dI - (dM+dX))}{dI}$ is greater than the proportion of the proceeds from the sale of the security which enters the income stream.

There does not appear to be any compelling reason for concluding that the decrease in spending resulting from the purchase of an outstanding Canadian security by a non-

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4. Arthur Vining Bloomfield, Capital Imports and the American Balance of Payments 1934-39 (Chicago:University of Chicago Press, 1950), p. 272.

resident must be less than the increase in spending out of proceeds of the security sale. If this were not the case, then there would be an initial increase in income which in the multiplier fashion would create a multiple increase in income over time. It might also increase income by stimulating some accelerator investment. Part of the increase in income would drain away in the form of increased imports. The completion of the real transfer would also be assisted by the increase in domestic prices caused by the increase in income, assuming full employment. Therefore, without any further change in the exchange rate, it is possible for the outflow of short-term capital to be drawn down to pay for an inflow of real goods and services.

However, it is possible and perhaps probable that there will be a net decrease in spending. The multiplier will operate to reduce income over time and possibly cause a decrease in accelerator investment. The real transfer may be completed by internal expansive forces which more than outweigh the net deflationary effect of the purchase of outstanding Canadian securities by non-residents. The domestic economy probably is buoyant and generating a demand for imports since the foreign capital was attracted by high yields and good prospects for capital appreciation. Therefore, the purchase of outstanding Canadian securities by non-residents may have a deflationary effect in that the increased demand for imports stimulated internally may be satisfied by a much smaller depreciation in the Canadian

dollar. This is a result of the short-term capital outflow produced by the foreign demand for Canadian securities. When the Canadian dollar tended to depreciate, the short-term capital outflow probably would be reduced. By minimizing the depreciation of the Canadian dollar, imports would not be discouraged and exports encouraged to the same extent.

Considering only the most direct effects of the capital inflow, there is probably some justification for believing that it is deflationary. However, if a large part of the proceeds of the sale of the security enter the income stream through new real investment or consumption expenditures, the capital inflow might raise incomes and prices. There are probably some indirect effects which merit attention. The outstanding Canadian securities fall into two main classifications, bonds and stocks. As the indirect effects are slightly different in nature, bonds will be considered first.

An increase in the demand for fixed interest securities will tend to increase their price and depress the rate of interest. The effect of this on prices in general can be indicated by employing Keynes' second fundamental equation, $\pi = \frac{E}{O} + \frac{I - S}{O}$.[5] A lower rate of interest will encourage investment, and in addition, is likely to have some small effect on the volume of savings, using the terms as they are defined in A Treatise on Money. The classical

5. John Maynard Keynes, A Treatise on Money, Vol. I (New York: Harcourt, Brace, 1930), p. 137.

position, and the one which Keynes accepts in that book, is that saving will decline as the reward for saving has declined. Thus, the second term on the right hand side of the equation will increase and cause $\pi$ , the general price level of output, to rise if there has not been a decrease in the efficiency wage, $\frac{E}{O}$ . However, a lower rate of interest may have another effect on velocity which Keynes implicitly suggested when he stated that, "there is a continuous curve relating to changes in the demand for money to satisfy the speculative motive and changes in the prices of bonds and debts of various maturities."[6] If the liquidity function $L_2$, or the propensity to hoard is inversely related to the rate of interest, then a fall in the rate of interest will increase the amount of money hoarded, and, consequently, there will be a tendency for the velocity of circulation to decline. This unusual result, of a lower rate of interest reducing inflation, ignores its effect on investment, or assumes that the marginal efficiency of capital has zero elasticity. When the marginal efficiency of capital schedule has some elasticity, more investment spending will be stimulated by a lower rate of interest and will probably more than counteract the deflationary effect of an increase in hoarding.

If the purchase of outstanding Canadian securities

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6. John Maynard Keynes, The General Theory of Employment, Interest and Money (London:Macmillan,1942), p. 197.

is in the form of equity stock, there is no direct effect on the rate of interest. However, a more active stock market is likely to encourage corporations requiring funds to obtain them through the sale of common or preferred shares in preference to floating an issue of bonds. The result is that the supply schedule of bonds may not shift positively, as much as it would have otherwise. This results in a higher price and a lower rate of interest than if foreign purchases on the Canadian stock market had not taken place. The same conclusion can be reached in a slightly different way by considering the price-earnings ratio of common stocks. An increased demand for stocks will cause the price and the price-earnings ratio to rise. The increase in this ratio will make bonds relatively more attractive, increasing the demand for bonds and depressing the rate of interest. Thus the interest rate will tend to decline directly in the case of additional foreign purchases of Canadian bonds, and indirectly in the case of additional foreign purchases of Canadian stock.

Not only may foreign purchase of equity stock affect the distribution of planned financing as between stocks and bonds, and also the demand for bonds; but it may stimulate new issues. Machlup states that:

> There is a certain probability that the stock markets react favourably to the increased foreign purchases and that higher stock prices call forth new issues for new real investment and through the stimulus of capital gains also increased consumption.[7]

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7. Fritz Machlup, International Trade and the National Income Multiplier (Philadelphia:Blakiston, 1943), pp.152-153.

Keynes, when referring to people who take an active interest in the stock exchange, stressed the buoyant effect of capital appreciation stating:

> These people are, perhaps, even more influenced in their readiness to spend by rises and fall in the value of their investments than by the state of their income. With a "stock-minded" public, as in the United States today, a rising stock market may be an almost essential condition of a satisfactory propensity to consume; [8]

This factor may be even more important in Canada where capital gains are not taxed. In the high income brackets a dollar of capital gain is equivalent to far more than a dollar of usual income.

It is impossible to arrive at a definite conclusion about the effect of a net sale of outstanding Canadian securities to non-residents. It might tend to raise domestic incomes and prices or it might tend to lower them. Thus, the only verdict which seems possible is that a capital inflow of this nature probably will not be strongly inflationary or deflationary. This indefinite conclusion also applies to direct investment of type one, the purchase of outstanding Canadian securities by non-residents to obtain or to extend control of a Canadian corporation.

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8. John Maynard Keynes, The General Theory of Employment, Interest and Money (London:Macmillan, 1942), p. 319.

(ii) New Issues

The next type of capital movement is the sale of new issues of Canadian securities to non-residents. From 1946 to 1956, $3,018 million in new securities were sold to non-residents. As indicated by table 12, over 90% of this amount was sold to residents of the United States. Most of these new issues are payable solely or optionally in United States funds.

Table 12. Sale of New Issues of Canadian Securities to Non-Residents

(in millions of dollars)

| Year | United States | United Kingdom | Other | Total |
|---|---|---|---|---|
| 1946 | 218 | - | - | 218 |
| 1947 | 95 | - | - | 95 |
| 1948 | 150 | - | - | 150 |
| 1949 | 105 | - | - | 105 |
| 1950 | 210 | - | - | 210 |
| 1951 | 404 | 7 | - | 411 |
| 1952 | 315 | 1 | - | 316 |
| 1953 | 322 | 7 | 6 | 335 |
| 1954 | 299 | 20 | 12 | 331 |
| 1955 | 127 | 15 | 14 | 166 |
| 1956 | 616 | 29 | 36 | 681 |
| | 2861 | 79 | 68 | 3018 |

Source: Canada, Dominion Bureau of Statistics, The Canadian Balance of International Payments 1956, pp. 38-41.

It is the resident rather than the non-resident that takes the initiative in a capital movement of this nature. The securities are sold largely for United States dollars and it is then at the discretion of the borrower what proportion he converts into Canadian dollars. Obviously, the import content of the investment project will be the

major determinant of the proportion which is exchanged for Canadian dollars. During 1956, a total of $604 million in new bonds and debentures were sold to non-residents, and of this almost sixty per cent was in the form of provincial and municipal government bonds.[9]

The provincial governments borrow to finance such projects as; highways, bridges, public buildings and power plants. The extension of telephone services in the Prairie provinces, and the construction of some railroads in Ontario and British Columbia also require provincial borrowing. Municipal governments borrow to finance the construction of schools, hospitals, roads, water-works and sewage disposal plants. They borrow in the United States because it is cheaper and not because they are to any large extent importers of capital equipment from the United States. Since the import content of their investment projects is probably low, they would enter the foreign exchange market with almost all the United States dollars borrowed. As the borrowers wish to minimize the appreciation of the Canadian dollar and thus maximize the Canadian dollar equivalent of the funds borrowed, they will "dribble" the United States dollars onto the foreign exchange market. However, this is only a matter of technique and the Canadian dollar is bound to be quoted at a higher price in terms of foreign exchange than it otherwise would

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9. Canada, Dominion Bureau of Statistics, Sales and Purchases of Securities between Canada and Other Countries, December 1956 and Review of Security Trading during 1956, p. 2.

have been. Although all the funds may not be immediately required, they will,in all probability,be converted as quickly as possible; for the funds were borrowed abroad because of a lower rate of interest, and therefore, they probably will earn more interest in Canada for any period during which they may lie idle.

The appreciation of the Canadian dollar will encourage imports and discourage exports. Thus, spending on domestic goods will be reduced as a result of the exchange rate movement. However, there will be additional domestic spending equal to the amount borrowed less the capital equipment imported. When short-term capital movements respond to a change in the exchange rate in an equilibrating fashion, there is almost certain to be a net increase in spending. This is because the short-term capital outflow stimulated by the appreciation of the Canadian dollar prevents or reduces further appreciation which would complete the real transfer. Since there is little or no reason to believe that the corporations which speculate on the exchange rate movement (by leading or lagging payments and increasing or reducing their holdings of foreign exchange) will, as a result, alter their domestic expenditures, there will be a net increase in spending. This increase in spending will increase spending in future income periods by a smaller and smaller amount. A part of the increase in income generated will drain away in the form of imports and thus help to complete the real transfer.

The net increase in spending probably will result in some accelerator investment, in addition to stimulating additional spending in the multiplier fashion. Therefore, this type of capital inflow probably is inflationary in the short-run. In addition, the investment may induce further investment which is not linked in any mechanical way to the level of investment or income. For instance, a province may build a new road or railway into a previously inaccessible area. Such a programme might make exploitation of mineral and forest resources in the area profitable and thus stimulate a large amount of investment. Some investment undertaken by a government may be very dynamic spending and as a result may be very inflationary in nature.

In addition to bonds and debentures floated by the provincial and municipal governments, corporations in 1956 borrowed $246 million through sales of new issues to non-residents.[10] Consideration of the type of investment which the provinces and municipalities are undertaking leads to the conclusion that the import content will be low, and, consequently,most of the funds borrowed would be exchanged for Canadian dollars. In contrast, it is probable that a sizable proportion of corporate investment will be in machinery much of which may be imported from the United States. Therefore, initially the provinces and municipalities will exert the greater upward pressure on the exchange value of the Canadian dollar, per dollar of borrowing in the United States.

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10. Ibid.

This takes into account only the initial effect. Further consideration must be given to the repercussions that follow.

In order to determine the other effects, multiplier analysis similar to that used by Polak will be employed.[11] It will be assumed that the marginal propensity to consume, c, includes the marginal propensity to import, m. An increase in investment of which dI is spent domestically will increase national income in the first period by (dI - KdI). The amount KdI is the reduction in spending caused by the exchange transaction. For reasons previously discussed, K probably is considerably less than one. Thus, in the second income period, total spending will increase by c (dI - KdI) of which mc (dI - KdI) will be spent abroad and the difference c (1 - m) (dI - KdI) will be spent domestically. To obtain

Figure 5. Induced Spending on Imports and Domestic Goods

| Period | Total Spending | Spending Abroad | Domestic Spending |
|---|---|---|---|
| 1 | (dI - KdI) | | (dI - KdI) |
| 2 | c (dI - KdI) | mc (dI - KdI) | c(1-m)(dI - KdI) |
| 3 | $c^2$(1-m) (dI - KdI) | $mc^2$(1-m)(dI - KdI | $c^2$(1-m)$^2$(dI-KdI) |
| 4 | | | |
| | | $\frac{mc\ (dI - KdI)}{1-c\ (1-m)}$ | $\frac{dI-KdI}{1-c\ (1-m)}$ |

the total increase in imports resulting from the investment, the column entitled spending abroad in figure 5 can be summed. Since it is a geometric progression, the sum is equal to the first term divided by one minus the common ratio.

11. J.J.Polak, "Balance of Payment Problems of Countries Reconstructing with the Help of Foreign Loans", Quarterly Journal of Economics Vol. LVII(February,1943),pp.232-233.

The sum is $\frac{mc\,(dI - KdI)}{1 - c\,(1-m)}$. The limiting values of $\frac{mc}{1-c(1-m)}$ are zero and one providing that c is less than one. Thus, the increased demand for foreign exchange will be some fraction of the initial increase in spending.

Let it be assumed that a municipality and a corporation each sell an issue of bonds in New York for $10 million; that the municipality converts the entire amount into Canadian funds; and that the corporation uses $3 million to purchase machinery in the United States and exchanges the remainder. Municipal borrowing initially will cause the supply schedule of United States dollars to shift to a greater extent than will the same amount of corporate borrowing in New York. Since the municipality will spend more within Canada than the corporation does, dI will be larger as a result of municipal borrowing as compared with corporate borrowing. The increased demand for foreign exchange over time, $\frac{mc}{1-c(1-m)}(dI-KdI)$, will also be larger for the lower import content investment. In addition, the corporation's purchase of machinery will initially increase United States national income and so lead to an increase in the supply of foreign exchange seeking Canadian dollars. Hence, the borrower who undertakes low import content investment will cause a greater initial appreciation of the Canadian dollar, but as time goes on the low import content investment will exert more pressure tending to cause the Canadian dollar to depreciate than will the higher import content investment. Borrowers undertaking low import content investment

will naturally propagate more income and inflationary pressure per dollar of new bonds issued. This assumes that the investment spending is qualitatively equal. If the high import content investment is more dynamic, then dollar for dollar it may be more inflationary than low import content investment.

There can be little doubt that investment financed by the sale of new issues of Canadian securities abroad will result in some net domestic spending. It is certainly not as inflationary as if the investment were financed in Canada. However, it would be still less inflationary if the project could be cancelled or postponed entirely.

(iii) Retirements

The next item in the capital account is retirements of Canadian securities. From 1946 to 1956, as shown by table 13, there was an outflow of capital in this account of $2,394 million, about 90% representing an outflow to the United States.

Table 13. Retirements of Canadian Securities

(in millions of dollars)

| Year | United States | United Kingdom & Sterling Area | Other | Total |
|---|---|---|---|---|
| 1946 | 460 | 77 | 2 | 539 |
| 1947 | 313 | 42 | 9 | 364 |
| 1948 | 96 | 14 | 4 | 114 |
| 1949 | 136 | 10 | 1 | 147 |
| 1950 | 263 | 19 | 2 | 284 |
| 1951 | 159 | 24 | 1 | 184 |
| 1952 | 75 | 9 | 5 | 89 |
| 1953 | 132 | 11 | 3 | 146 |
| 1954 | 184 | 17 | 2 | 203 |
| 1955 | 169 | 11 | 4 | 184 |
| 1956 | 133 | 1 | 6 | 140 |
| | 2120 | 235 | 39 | 2394 |

Source: Canada, Dominion Bureau of Statistics, The Canadian Balance of International Payments 1956, pp. 38-41.

The smallest amount in the post-war period occurred in 1952, and this was one of the important factors contributing to the strength of the Canadian dollar in that year. Again in 1956, retirements of Canadian securities were low relative to other years. Therefore, there was less downward pressure than usual on the exchange value of the Canadian dollar as result of retirements.

At the end of 1955, the total non-resident holdings of long-term funded debt of Canadian governments, municipal-

ities and corporations were $3,638 million. Of this total, 58% was payable solely in foreign currency, 28% was payable solely in Canadian currency and 14% was payable at the holders option.[12] An average of 58% of the bonds maturing each year will have to be paid in foreign currency when the exchange value of the Canadian dollar is higher than at the date of issue of the security. If the exchange value of the Canadian dollar is lower, an average of 72% of the bonds maturing annually will be paid in foreign exchange. On the average from 58 to 72% of the retirements will necessitate a foreign exchange transaction or a drawing down of existing holdings of foreign exchange. Now the non-resident who is paid in Canadian dollars also will enter the foreign exchange market unless he wishes to continue to hold Canadian dollar assets. Retirements probably result in a large demand for foreign exchange which will tend to cause the Canadian dollar to depreciate. This will have the inflationary effect of encouraging exports and discouraging imports.

It is probable that exchange rate movement will be moderated by Canadian corporations lagging their payments to non-residents and reducing their United States dollar holdings. In contrast, United States corporations probably

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12. Canada, Dominion Bureau of Statistics, Sales and Purchases of Securities between Canada and other Countries December, 1956 and Review of Security Trading during 1956, p.8

will accelerate their payments to Canadians and increase their Canadian dollar holdings in response to the depreciation of the Canadian dollar. Such activities will minimize the exchange rate movement and also the initial change in exports and imports. Therefore the increase in domestic spending stemming from the change in the exchange rate will not be equal to the amount of the retirement. If there is a reduction in spending by a Canadian government, municipality, or corporation of an amount equal to the redemption, there will be a net decrease in spending. The amount of the net decrease will depend on the size of the short-term capital inflow and whether it tends to increase spending. The net decrease in spending will have a negative income effect in the multiplier fashion. There may also be some decrease in accelerator investment in response to the fall in income, causing a further decline. The real transfer might, to some extent, be accomplished by the decline in imports caused by the fall in domestic income. Any fall in domestic prices would also assist in making the transfer because the relatively cheaper domestic goods would be substituted for imports. If the retirement increased income abroad, the transfer might be assisted by an increase in exports. This would set up a positive multiplier effect on income in Canada and thus partially neutralize the negative income effect.

The retirement might have been made by increasing taxes, if it is a government or municipality which is retiring bonds. If it is a corporation, the dividend payment may be

lower by the amount of the retirement. Thus the decrease in spending as a result of the retirement is equal to the marginal propensity to consume multiplied by the amount of the retirement. There will be an increase in spending as a result of the foreign exchange transaction. The depreciation of the Canadian dollar will increase exports and decrease imports. If the proportion of the retirement which results in a short-term capital inflow is greater than the marginal propensity to import plus the marginal propensity to save, there will be a net decrease in domestic spending. This will tend to lower income and by reducing imports help to bring about the real transfer. If there is an increase in income abroad, there will be an increase in Canadian exports which will tend to offset the decrease in domestic income. It is possible that the increase in spending as a result of an exchange transaction is greater than the decrease in spending as a result of making the retirement. Canadian income would rise and consequently oppose the completion of the real transfer. A further depreciation of the Canadian dollar might then be required. The resulting increase in exports and decrease in imports would cause Canadian incomes and prices to rise further.

The retirement might be made by floating a new issue of bonds in Canada for the sole purpose of making the redemption. This might have little influence on Canadian spending for the bonds might be purchased by drawing down inactive bank deposits or through creating credit. This

might tend to discourage some investment by raising the rate of interest. However, it seems probable, under these conditions, that the increase in exports and decrease in imports in response to the exchange rate movement would increase domestic spending more than the sale of bonds would reduce it. If there were a short-term capital inflow stimulated by the increased demand for foreign exchange as a result of the retirement, the effect on domestic income might oppose the completion of the real transfer. However, there might be an increase in income abroad which would assist in the real transfer. It is probable that the Canadian dollar would have to depreciate further to produce a sufficiently large export surplus. If this became evident, the short-term capital inflow would be reversed. This would generate more domestic income and exert an upward pressure on prices.

Under certain conditions, it appears that a retirement might tend to raise incomes and prices. This seems to be contrary to general expectations for the time when foreign obligations mature has always been dreaded as a day of reckoning. To a certain extent this fear is a vestige of the automatic gold standard. Under the gold standard, gold would have to be shipped to the foreign country at the date of retirement, since the increased demand for foreign exchange would quickly push the exchange rate to the gold export point. This meant a primary decrease in the money supply; but, as gold was the basis on which the credit structure was built, a multiple contraction in the money

supply might be precipitated. This deflationary process naturally resulted in apprehension. The gold standard fell into disfavour because it decreed that the economy should fluctuate to maintain a fixed gold equivalence of the unit of account. With a free exchange rate, the adjustment takes place to some extent through a fluctuation in the exchange value of the unit of account.

The fundamental reason for the differing repercussions is price flexibility. In a free exchange market, the exchange rate is sensitive to demand, whereas, in the rest of the economy, many prices are rather rigid. If all prices were very flexible, there would be little difference between the adjustment under the gold standard and that which occurs with a fluctuating exchange rate. The decrease in the money supply, resulting when a retirement is made under the gold standard with very flexible prices, would have little influence on real relationships. Instead prices would fall. Unfortunately, because of price rigidities which prevail in the economy, real relationships are significantly affected. To a large extent unemployment of resources results instead of merely lower prices. The free exchange rate is a mode of circumventing the price rigidities and thus of minimizing the difficulties of repayment. This is not to say that retirements may not cause domestic incomes to decline because even the exchange rate is not perfectly flexible. Equilibrating short-term movements introduce some rigidity. There is probably little doubt that domestic income does not have to

fluctuate as greatly since the exchange rate is relatively more flexible than most domestic prices.

## 2. FOREIGN SECURITIES

### (i) Trade in Outstanding Issues

The item which appears next in the Canadian balance of international payments is trade in outstanding issues of foreign securities. There was a net capital ~~of~~ inflow of $219 million in this account from 1946 to 1956 inclusive, as a result of the decrease in Canadian holdings of outstanding foreign securities. In only one year, 1948, was there an outflow of capital, but this amounted to only $7 million.[13]

The largest inflow occured in 1950 when Canadian residents reduced their holdings of foreign securities by $70 million. The distribution of this inflow in millions of dollars during the four quarters of 1950 was 11, 12, 37 and 10.[14] Since the net sales of outstanding foreign securities to non-residents were to a large extent, concentrated in the third quarter of 1950, it indicates that exchange rate expectations probably were the principal determinant of this capital movement. For every United States dollar Canadians could obtain $1.10 Canadian. Since this rate of exchange was not expected to prevail in the future, many Canadians obviously sold their foreign securities and seized the oppor-

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13. Canada, Dominion Bureau of Statistics, The Canadian Balance of International Payments 1956, p. 38.

14. Canada, Dominion Bureau of Statistics, The Canadian Balance of International Payments in the Post-War Years 1946-1952, p. 104.

tunity of converting foreign exchange into Canadian dollars on these favourable terms. In subsequent periods, the exchange rate has not had as much influence on the trading of outstanding foreign securities. However, there does appear to be a tendency for the capital inflow in this account to decelerate in response to an appreciation of the Canadian dollar. Conversely when the Canadian dollar depreciates, it tends to accelerate the rate at which Canadian held foreign securities are being sold to non-residents.

The inflow of capital of $108 million from 1951 to 1956 inclusive, was probably, to a large extent, the natural result of Canada's rapid economic growth.[15] Canada's economic development has proceeded more quickly in general than that of the United States and most of the rest of the world. Consequently, in Canada, interest rates have been higher and the prospects for the appreciation of equity stock relatively brighter than abroad. Thus, Canadians probably have tended to reduce their holdings of foreign securities in order to take advantage of the relatively more attractive prospects in Canada.[16]

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15. Canada, Dominion Bureau of Statistics, The Canadian Balance of International Payments 1956, p. 38.

16. This, in effect, is an example of Malach's relative cyclical hypothesis. Since Canada's economic development was generally more rapid than that of the United States and most of the rest of the world, Canada possessed more favourable opportunity for investment vis à vis the rest of the world. In addition, since Canada was growing more rapidly, imports tended to expand more quickly than exports. Vernon W.Malach in International Cycles and Canada's Balance of Payments 1921-33 (Toronto:University of Toronto Press,1954), p. 63, states: "that the negative correlation of the movements of the current and long-term capital accounts, in response p rimarily to the relative speeds of business expansion at home and abroad, was the most important mechanism tending to keep the balance of payments in adjustment."

When Canadians are on balance decreasing their holdings of foreign securities, the supply schedule of foreign exchange probably will shift further to the right than if there was no capital inflow of this kind.[17] This tends to cause the Canadian dollar to appreciate. The increase in imports and decrease in exports will tend to lower Canadian income and to depress prices. To determine all the effects of a particular type of capital flow, it is usually essential to determine what the motive is that prompts the movement. If Canadians are reducing their holdings of foreign securities in order to amass the funds required to undertake real investment in Canada, it will have an inflationary effect in the short-run that is likely to outweigh the deflationary effect of the more passive current balance resulting from the appreciation of the Canadian dollar.[18] On the other hand, if they

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17. If the proceeds from the sale of foreign securities are spent abroad to increase Canadian direct investment, the demand for foreign exchange will not shift to the right, other things being equal, since the capital inflow will offset the capital outflow. Thus the exchange rate will tend to be lower than if the capital inflow had not occurred to match the outflow. It is also possible that the holdings of foreign securities have been reduced to increase imports directly. In this case the inflow of capital is almost simultaneously matched by an increase in imports which has a deflationary influence in Canada.

18. In considering the American experience from 1934 until 1939, Arthur Irving Bloomfield in Capital Imports and the American Balance of Payments 1934-39 (Chicago:University of Chicago Press,1950), p. 273, states: "So far as foreign net purchases of foreign securities were concerned it is similarly impossible to determine the disposition of the funds that come into the hands of Americans in this way. To some extent these funds may have been directed by the recipients to the purchase of American goods and services and thereby have had an income-generating effect. There is reason to believe,however,that the bulk remained in the so-called "financial circulation." "

merely decided to hold Canadian securities in preference to foreign, the indirect effects will be similar to the purchase of outstanding Canadian securities by non-residents. The increased demand for Canadian securities will tend to depress the rate of interest and cause capital appreciation. The tendency for the interest rate to be lower may stimulate more investment. The upward pressure on stock and bond prices may stimulate more consumption expenditures and may encourage the floation of new issues for new real investment. The indirect effects may or may not outweigh the deflationary effect of the exchange transaction on international trade. The only conclusion that can be reached is the one previously stated for foreign purchases of outstanding Canadian securities and that is that this type of capital inflow is unlikely to be strongly inflationary or strongly deflationary.

(ii) New Issues

New Issues of foreign securities in Canada have resulted in an outflow of $158 million from 1946 to 1956 inclusive.[19] However, the new issues have been concentrated in the period from 1952 to 1956 inclusive. The most obvious reason for this fact is that it was not until December, 1951 that foreign exchange controls were abolished completely. Of the $139 million in new issues of foreign securties that were sold in Canada from 1952 to 1956 inclusive,

19. Canada, Dominion Bureau of Statistics, The Canadian Balance of International Payments 1956, p. 38.

40% have been bonds of the International Bank for Reconstruction and Development. The World Bank's first issue in Canada consisted of $15 million 4% Ten Year Bonds. The second issue in 1954 consisted of $25 million 3½% Fifteen Year Bonds, and the third in 1955, $15 million 3¼% Ten Year Bonds. As at December 31, 1956, the outstanding Canadian dollar issues of the World Bank amounted to $40 million, since the 1952 issue was redeemed in 1955 in advance of maturity.[20] Some of the purchases of new issues resulted from Canadian shareholders of foreign companies taking up subscription privileges offered to them. In 1955, the Commonwealth of Australia floated an issue of bonds in Canada.[21] Other new issues reflect the financing of foreign corporations, some having investment in Canada and some not.

If the funds raised in Canada are converted into foreign exchange, the exchange value of the Canadian dollar will not be as high as it would be in the absence of this transaction. Thus, other things being equal, exports will be encouraged and imports discouraged to a greater extent than if the capital outflow had not occurred. If the proceeds of the new issues are spent in Canada, this probably will be even more inflationary. However, the fact that the

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20. International Bank for Reconstruction and Development, The World Bank, Policies and Operations (Washington: International Bank for Reconstruction and Development, 1957), p. 101.

21. Canada, Dominion Bureau of Statistics, The Canadian Balance of International Payments 1955, p. 24.

interest rate will tend to be higher as a result of the flotation of bonds in Canada by non-residents may have a slight deflationary influence. Hence, it would appear that new issues of foreign securities will increase Canadian income and exert an upward pressure on prices.

(iii) Retirements

Retirements of foreign securities is generally the most insignificant item in the capital account and for that reason will be dealt with very peremptorily. From 1946 to 1956 inclusive, there has been an inflow of capital in this account amounting to $55 million.[22] The largest amount of retirements, totalling $17 million, occurred in 1955. The International Bank for Reconstruction and Development is mainly responsible for the exceptionally large entry in this account; for it was in 1955 that they called in $15 million in bonds.[23] In 1950, retirements were also in excess of the average over the period. This might have been the result of historical accident or exchange rate expectations might have influenced non-residents to retire bonds before maturity if this were possible.

The Canadian funds required to redeem the bonds may be obtained in a number of ways. The most important probably being by entering the exchange market and supplying

22. Canada, Dominion Bureau of Statistics, The Canadian Balance of International Payments 1956, p. 38.

23. Canada, Dominion Bureau of Statistics, The Canadian Balance of International Payments 1955, p. 24.

additional foreign exchange. If a foreign corporation that exports to Canada is retiring bonds, it may obtain Canadian dollars merely by accepting payment in Canadian dollars for exports to Canada and by not entering the exchange market with them. In either case, the exchange value of the Canadian dollar is higher than if the retirements had not occurred. Thus, the current account balance will tend to become more passive as a result of retirements. This is obviously a deflationary effect. However, as in the case of a reduction in the Canadian holdings of foreign securities, it is impossible to determine for what purpose the funds will be used. There would appear to be even less reason to believe that funds received from retirements will be used for new real investment or even to increase consumption as compared to funds received from net sales of foreign securities to non-residents. The reason for this is that retirements occur as the result of historical accident or at the initiative of a non-resident, while the resident takes the initiative if the holdings of foreign securities are reduced. An individual planning to engage in new real investment is likely to take the initiative unless the redemption date of the securities coincides with the beginning of the investment project. Therefore, probably even a larger proportion of retirements as compared to a reduction in the holdings of foreign securities will result in a transfer of savings from one form into another and will not give rise to significantly large income disbursements. Thus, it would appear that retirements are

likely to be more deflationary or less inflationary than net sales of foreign securities to non-residents.

CHAPTER FIVE

# PRICE AND INCOME EFFECTS OF ALL OTHER CAPITAL MOVEMENTS

## 1. LOANS BY THE GOVERNMENT OF CANADA

### (1) Drawings

The next account in the capital account of the Canadian balance of international payments is drawings on loans by the Government of Canada. There was an outflow of capital of $1,627 million in this account from 1946 to 1950 inclusive. However, since 1951, there has been no further capital outflow.[1] Loans were extended in the early post-war years in order to assist in the rehabilitation of the overseas nations and to stimulate Canada's export trade. There can be little doubt that such a capital outflow would be inflationary. In fact, the amount of credit extended to European countries might have been influenced by the widely held opinion that there might be a business recession following the war. Thus, in addition to altruistic motives, the policy of granting large loans might have been pursued to stimulate the Canadian economy.

The extent of the rise in incomes and prices, engendered by such an outflow, depends largely on the way in which the funds are provided. The most potentially inflationary source for the funds would be the central bank.

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1. Canada, Dominion Bureau of Statistics, The Canadian Balance of International Payments 1956, p. 38.

If the central bank provided the government with cash in return for government securities, the money supply would be increased initially by that amount. If the cash reserve ratio was 8%, the chartered banks would have their excess reserves increased by 92% of the initial increase in the money supply, provided it was all deposited in a bank. Then if there was no cash drain and if the central bank did not engage in open market sales of securities, the chartered banks could increase their deposits by 12½ times the excess reserves. A much less inflationary means of financing the loan would be to sell an issue of bonds to the general public. This would not increase the cash reserves of the chartered banks. However, there would be, in all probability, an increase in the velocity of circulation. The bonds might be bought by drawing down inactive deposits. The government to whom the loan was made would not be apt to desire all the Canadian dollars merely to increase its official reserves but instead would probably increase its imports from Canada.

If the government has a surplus on deposit with the chartered banks, this can be placed at the disposal of the foreign government. However, an account which might have remained dormant as a result of a budget surplus is activated. If there is no budget surplus, taxes may be raised in order to increase government revenue sufficiently to provide the required funds. This is also inflationary if the foreign government spends a fraction of the loan in

excess of the average marginal propensity to consume of the individuals on whom the taxes were levied. Assuming that the marginal propensity to consume diminishes with increasing income, the more regressive the tax, the smaller will be the inflationary pressures engendered, other things being equal.

It is likely that the proceeds of this type of loan will be spent in Canada. If the proceeds are not spent in Canada, and there is a free exchange rate, the increased demand for foreign exchange will cause the Canadian dollar to have a lower exchange value than it otherwise would. This will discourage imports and encourage exports and the loan will still have an inflationary effect. Now, it appears that unless current government expenditures were cut in order to make the loan, this kind of capital outflow will probably have an inflationary effect. Even if current government expenditures were reduced by the amount of the loan extended there probably will not be any deflationary effect since, if all the proceeds of the loan were spent, there may be no effect on total spending, other things being equal. Therefore, a capital outflow in this account probably stimulates a rise in domestic incomes and prices.

(ii) Repayments

The next two accounts are repayment of post-war loans, and repayment of war loans. When a loan is repaid, it is of no consequence whether a state of war or peace existed at the time the loan was made. As a result, these

two accounts will be considered together. From 1946 to 1956 inclusive, there was an inflow of capital amounting to $798 million as a result of repayment of war and post-war loans. From 1951 to 1956 inclusive, the inflow in these accounts amounted to $421 million.[2]

When a foreign government repays a loan to the government of Canada, there is an increase in the demand for Canadian dollars. Consequently, the exchange value of the Canadian dollar will be higher than in the absence of the repayment of a loan. Therefore, the repayment will have a deflationary influence since imports will be stimulated and exports discouraged.

If the government of Canada, because it anticipates this receipt, increases its expenditures by the same amount, this will have an inflationary influence. There may be some net increase in spending since the real transfer probably will not be accomplished as a result of the initial exchange rate movement. If the government does not alter expenditures but reduces taxes by the amount of the repayment, the inflationary force engendered may still exceed the deflationary influence of an increase in imports and a decrease in exports, if the appreciation of the Canadian dollar stimulates an outflow of short-term capital. However, it will not be as net inflationary as increasing expenditures

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2. Canada, Dominion Bureau of Statistics, The Canadian Balance of International Payments 1956, p. 38.

by the amount of the repayment, since all the reduction in taxes will not be spent. In contrast, if the governmental taxation and expenditure programmes are totally uninfluenced by the repayment of a loan, then there will be only the deflationary effect through international trade. Between these extremes, there will be some point at which the net effect on domestic incomes and prices will be zero.

The response which the government makes to the repayment of a loan probably will depend on the economic conditions prevailing at the time of the repayment. If inflationary forces are strong, the government may not alter taxation and expenditure plans; but, utilize the funds received from the repayment to retire government securities held by the central bank. If the economy is not very buoyant, they may either increase expenditures or reduce taxes. Therefore, it is impossible to reach a conclusion of deflation or inflation with respect to a repayment of a loan.

## 2. CHANGES IN CANADIAN DOLLAR HOLDINGS OF FOREIGNERS

The next item appearing in the capital account is the change in Canadian dollar holdings of foreigners. This item reflects the variation in Canadian dollar bank deposits and short-term investments of non-residents other than the International Monetary Fund and the International Bank for Reconstruction and Development.

It was in the year 1950 that the largest inflow

of capital occurred in this account. United States residents increased their Canadian dollar holdings by $89 million

Table 14. Change in Canadian Dollar Holdings of Foreigners (a)

| Year | Change in Short-term Canadian dollar investments | Change in Canadian Dollar Bank Deposits Foreign Banks | Other Non-Residents | Total |
|---|---|---|---|---|
| | ( in millions of dollars ) | | | |
| | ( a minus represents an outflow of capital ) | | | |
| 1946 | 22 | 18 | 30 | 70 |
| 1947 | -20 | 3 | - 9 | -26 |
| 1948 | 8 | - 1 | -28 | -21 |
| 1949 | 54 | -10 | - 4 | 40 |
| 1950 | 126 | 62 | 45 | 233 |
| 1951 | -144 | -37 | -11 | -192 |
| 1952 | -15 | -20 | -31 | - 66 |
| 1953 | -32 | - 6 | 20 | - 18 |
| 1954 | 3 | 31 | -- | 34 |
| 1955 | 29 | 35 | 25 | 89 |
| 1956 | -- | -29 | 3 | - 26 |

Source: Canada, Bank of Canada, Statistical Summary Financial Supplement 1956, p. 17, p. 35.

Canada, Dominion Bureau of Statistics, The Canadian Balance of International Payments 1956, p. 38.

Canada, Department of Finance, Statement of the Assets and Liabilities of the Chartered Banks of Canada, Supplement to the Canada Gazette.

during the year. Since $71 million of this increase took place in the third quarter of 1950, it is evident that this was largely another manifestation of the speculation for which the third quarter of 1950 is so noted.[3]

3. Canada, Dominion Bureau of Statistics, The Canadian Balance of International Payments in the Post-War Years 1946-1956, p.104

(a) The change in Canadian dollar holdings of foreigners, obtained from the capital account of the balance payments, has been separated into changes in short-term Canadian dollar investments and into changes in Canadian dollar bank deposits on the basis of the Bank of Canada's estimate of "Non-resident holdings of Chartered Bank deposits". The changes in the Canadian dollar deposits of foreign banks from 1946 to 1954 were obtained from the Canadian dollar deposits of "other banks" as shown

Surprisingly enough it was the increase in the Canadian dollar holdings of residents of the United Kingdom and other sterling area countries which accounted for $116 million of the total increase of $233 million.[4] This growth in Canadian dollar holdings cannot be attributed to speculation since this was prevented by exchange control. In addition, the distribution of the increase was unlike that of the increase in the Canadian dollar holdings of United States residents. The change in the Canadian dollar holdings of residents of the sterling area in millions of dollars during the four quarters of 1950 was +57, +53, +40, -34 as compared with +3, +3, +71, +12 for residents of the United States.[5] The increase in the sterling areas' holdings of Canadian dollars might have resulted from an increase in the Canadian dollars held by the British Exchange Equalization Account.[6] This seems possible since the current

by the Bank of Canada's monthly series of chartered bank liabilities. However, this item includes a very small amount of deposits of Canadian banks with other Canadian banks. Since the revision of the Bank Act in 1954 it has been possible to eliminate this amount by subtracting assets column five from liability column three of the Statement of the Assets and Liabilities of the Chartered Banks in Canada.

4. Canada, Dominion Bureau of Statistics, The Canadian Balance of International Payments in the Post-War Years 1946-1952, p. 105.
5. Ibid., pp. 104-105.
6. The British Balance of International Payments does not differentiate between Canadian and United States dollars in changes in the holdings of the Exchange Equilization Account. However, the Dominion Bureau of Statistics states in The Canadian Balance of International Payments in the Post-War Years 1946-1952, p.49, that: United States holdings were practically all in private hands...On the other hand holdings in countries where exchange control was in force represented for the most part official reserves and authorized working balances.

account deficit of the United Kingdom with Canada was reduced from $446 million in 1949 to $24 million in 1950. In addition, during 1950 the United Kingdom drew $50 million on a loan made by the government of Canada.[7]

The British commercial banks are allowed considerable liberty to hold dollar balances for forward commitments in dollars in order to accommodate legitimate trade.[8] If the Canadian dollar was expected to appreciate, British traders who had to meet Canadian dollar obligations in the future would try to buy Canadian dollars forward. The British banks would sell Canadian dollars forward and engage in an opposite spot transaction to guard against exchange risk. Since the pressure was probably all in one direction,there might have been little chance for swaps. Consequently, there might have been an increase in short-term Canadian dollar investments of the British banks.

In 1951, there was an outflow of $192 million as a result of reductions in the Canadian dollar holdings of non-residents. Residents of the United States reduced their Canadian dollar balances by $53 million.[9] This, in part, probably represented the realization of a speculative profit. The Canadian dollar balances of the sterling area were reduced by $128 million. The entire reduction

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7. Ibid., pp. 92-93.
8. M.N. Trued, "Interest Arbitrage,Exchange Rates, and Dollar Reserves", The Journal of the Political Economy, Vol. LXV (October, 1957), p. 405.
9. Canada, Dominion Bureau of Statistics, The Canadian Balance of International Payments in the Post-War Years 1946-1952, p.91.

occurred in the last half of the year.[10] This coincided with the period during which the United Kingdom's current account balance with Canada became more passive. The United Kingdom had a current account deficit of only $12 million during the first half of 1951 but in the second half it amounted to $211 million.[11] Thus, it would appear probable that the decrease of $128 million in Canadian dollar holdings of the sterling area during the latter half of 1951 might have resulted largely from a decrease in the Canadian dollars held by the United Kingdom's Exchange Equalization account.

In 1954 and 1955, there was an increase in the Canadian dollar holdings of foreigners. Since the flow of direct investment was greatly augmented in both 1955 and 1956, the motive prompting the increase in Canadian dollar holdings of non-residents might have been the Keynesian "finance" motive. Keynes stated that, "ex-ante investment is an important, genuine phenomenon, inasmuch as decisions have to be taken and credit or "finance" provided well in advance of the actual process of investment."[12] Keynes explained that, when the flow of ex-ante investment was equal to the flow of ex-post investment, the desire to hold money to satisfy the "finance" motive called forth by the

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10. Ibid., p. 105.
11. Ibid., p. 103.
12. John Maynard Keynes, "The"Ex-Ante" Theory of the Rate of Interest", Economic Journal, Vol. xlvii (December,1937) p. 663.

ex-ante investment would be satisfied by the money released by current ex-post investment. As direct investment increased from 1954 to 1955 and again from 1955 to 1956 the "finance" motive might be one of the reasons explaining the increase in Canadian dollar holdings of non-residents in 1954 and 1955. Another factor accounting for the increased balances might have been the "transactions" motive. From 1946 to 1956 inclusive, there was a net increase in Canadian dollar holdings of non-residents of $117 million.[13] During this period, Canadian exports increased by over 100% and thus the increase in Canadian dollar holdings might have been required to finance the increased trade.

Exchange rate expectations do not appear to have played an important role in determining change in Canadian dollar holdings of non-residents. This can be seen by referring to graph 2. Particularly in 1954, 1955 and 1956, Canadian dollars have been purchased when the Canadian dollar appreciates and have been sold when the Canadian dollar depreciates. Thus, if there has been any speculation, it does not appear to have had an equilibrating effect on the exchange rate, nor does it appear to have produced a profit. In graph 3, change in Canadian dollar holdings of foreigners has been divided into three components, change in short-term Canadian dollar investments by foreigners, change in

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13. Canada, Dominion Bureau of Statistics, The Canadian Balance of International Payments 1956, p. 38.

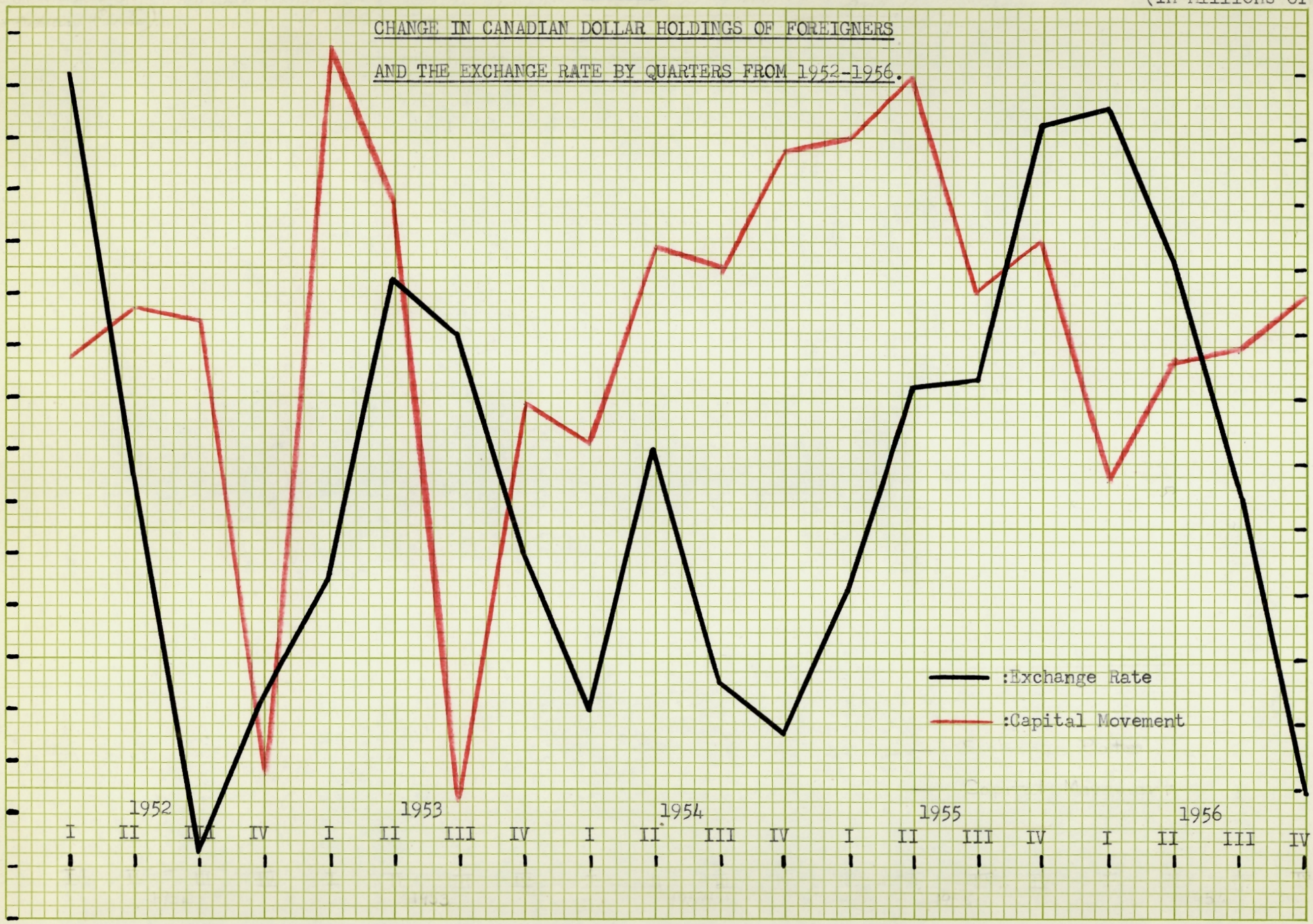
EXCHANGE RATE

GRAPH 2

CAPITAL MOVEMENTS
(In Millions of $)

CHANGE IN CANADIAN DOLLAR HOLDINGS OF FOREIGNERS

AND THE EXCHANGE RATE BY QUARTERS FROM 1952-1956.

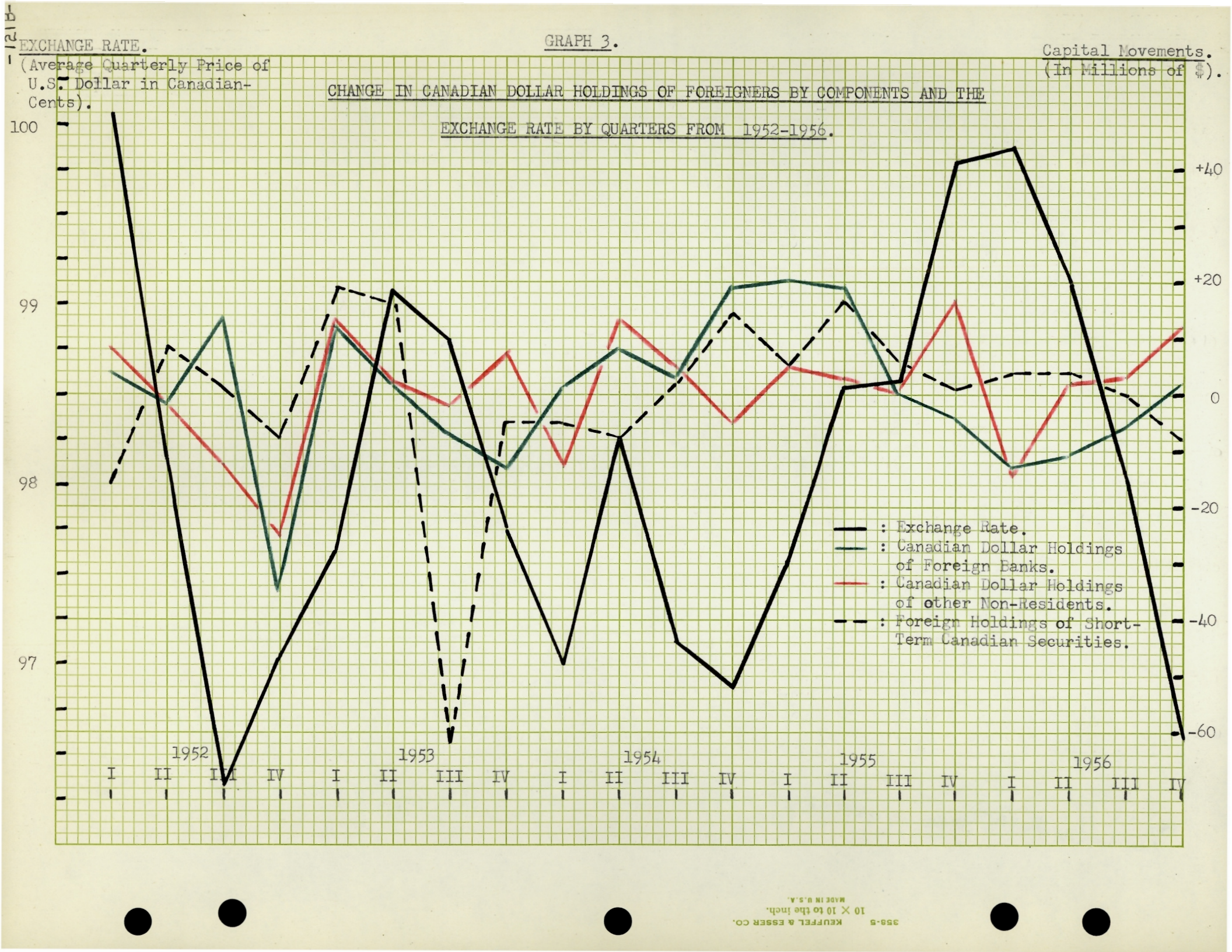


GRAPH 3.

EXCHANGE RATE.
(Average Quarterly Price of U.S. Dollar in Canadian-Cents).

Capital Movements.
(In Millions of $).

CHANGE IN CANADIAN DOLLAR HOLDINGS OF FOREIGNERS BY COMPONENTS AND THE EXCHANGE RATE BY QUARTERS FROM 1952-1956.



Canadian dollar deposits of foreign banks and change in Canadian dollar deposits of other non-residents. Change in the Canadian dollar deposits of non-residents other than foreign banks appears to behave in a more equilibrating fashion toward the exchange rate than the other two components.

Non-residents may increase their Canadian dollar balances in two main ways - by entering the foreign exchange market and demanding more Canadian dollars by supplying a greater amount of foreign exchange, or by refraining from entering the exchange market with some of the Canadian dollars earned in trade. In the first case, the supply schedule of foreign exchange is further to right, and, in the second, the demand schedule for foreign exchange is further to left than if non-residents were not accumulating Canadian dollars. The exchange value of the Canadian dollar is higher than it otherwise would be; consequently, in Canada the resulting effect through international trade is for incomes and prices to fall. An increased demand for Canadian dollars will tend to cause the interest rate in Canada to be higher than it would be in the absence of this kind of capital inflow. Thus, an increase in Canadian dollars held by non-residents may have an additional deflationary aspect through its effect on the interest rate. If the increase in Canadian dollar balances is in anticipation of increased investment in Canada, this capital inflow may only be a deflationary link in an inflationary chain.

## 3. CHANGE IN OFFICIAL HOLDINGS OF GOLD AND FOREIGN EXCHANGE

The change in the official holdings of gold and foreign exchange appears next in the capital account. Table 15 indicates the changing role which this account has performed in the post-war years. It will be noticed that from 1946 to 1950 the annual fluctuations in this account were exceedingly large while since then, the annual change has been much smaller.[14] Ignoring sign,

Table 15. Change in Official Holdings of Gold and Foreign Exchange
(millions of dollars)
(An increase in official reserves is denoted by a minus sign)

| | |
|---|---|
| 1946 | 267 |
| 1947 | 742 |
| 1948 | -492 |
| 1949 | -128 |
| 1950 | -722 |
| 1951 | - 56 |
| 1952 | - 37 |
| 1953 | 38 |
| 1954 | +124 |
| 1955 | 44 |
| 1956 | - 33 |

Source: Canada, Dominion Bureau of Statistics, The Canadian Balance of International Payments 1956, p. 38.

the average annual change during the first five post-war years was $470 million while during the succeeding six

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14. In order to avoid possible confusion it should probably be emphasized that a minus entry in the balance of payments in this particular account means an increase in official holdings. In the balance of payments a capital outflow is represented by a minus entry. An increase in official holdings is a type of capital outflow for it represents an increase in Canadian foreign investment in the form of foreign exchange or gold and is thus entered as a negative quantity.

years it was only $55 million.

Until 1951, this account bore much of the brunt of effecting a balance in the Canadian balance of payments. Although Canada had an overall current account surplus in 1946 and 1947 of $363 million and $49 million respectively, balance of payments difficulties developed with the United States.[15] This situation arose because exports to Europe to a considerable extent were being sold on credit extended by the Canadian government. Drawings on loans to European countries made by the government amounted to $750 million and $565 million in 1946 and 1947.[16] Thus, a significant proportion of exports produced no foreign exchange with which to meet the perennial current account deficit with the United States. In addition, during 1946 and 1947 capital movement between Canada and the United States aggravated the problem. Excluding changes in official reserves, there was a net outflow of United States capital of $158 million in the first two post-war years.[17] Since Canada had a fixed exchange rate the excess demand for United States dollars had to be met by drawing down the official holdings of gold and United States dollars. This loss of reserves of more than one billion during 1946 and 1947 reduced official holdings to a low point of just under $461 million in December 1947; and precipitated emergency exchange conservation measures.[18] Certain imports

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15. Canada, Dominion Bureau of Statistics, The Canadian Balance of Payments in the Post-War Years 1946-1952, p.9.
16. Ibid., p. 90
17. Ibid.
18. Ibid., p. 10.

were prohibited and many others were placed under a quota. Official holdings of gold and foreign exchange were replenished to the extent of $620 million during 1948 and 1949. In September 1949, following the thirty per cent sterling devaluation, the Canadian dollar was also devalued. The spot rates established for the United States dollar were buying $1.10 and selling $1.10½.[19] During the last quarter of 1949 and the first two quarters of 1950, there was little or no speculation; thus, indicating that the exchange rate had been accepted for the moment as appropriate. However, in the third quarter of 1950 a deluge of speculation was unleashed which toppled the fixed exchange rate. Once an important group of speculators becomes convinced that an exchange rate is inappropriately pegged, their speculation encourages less venturesome individuals to enter the market. As a result an initial ripple becomes a tidal wave sweeping everything before it. For instance, net sale of outstanding Canadian securities to non-residents increased from $11 million in the second quarter of 1950 to $295 million in the third quarter of that year and other capital movements increased from $19 million to $153 million during the same periods.[20]

With a fixed exchange rate, it was necessary for the central bank to purchase the excess supply of United States dollars in the foreign exchange market. In the

19. Canada, Foreign Exchange Control Board, Annual Report to the Minister of Finance 1949, p. 20.

20. Canada, Dominion Bureau of Statistics, The Canadian Balance of International Payments in the Post-War Years, 1946-1952, p. 104

third quarter of 1950, the inflow of capital resulted in a 43 per cent increase in official reserves from $1,255.4 million (U.S.) to $1,798.6 million (U.S.).[21] The Canadian dollars were provided initially by drawing down government deposits with the chartered banks; thus, there was no change in the banks' cash reserves. However, when official holdings of foreign exchange are increased to the extent that they were increased in the third quarter of 1950, government deposits are soon depleted. In order to increase government deposits with the chartered banks, the Bank of Canada sold $200 million in Treasury Deposit Certificates to the chartered banks. This operation increased the deposits of the chartered banks but reduced their cash reserve ratio. In addition, $293 million had to be provided directly by the central bank.[22] If no offsetting action were taken, the Canadian money supply would be increased not merely by this amount, but because chartered bank cash reserves and deposits would rise correspondingly, excess cash reserves would develop, and thus enable the chartered banks to undertake a multiple expansion of deposits. However, the Bank of Canada engaged in open-market sales and were able to restrict the quarterly rise in chartered bank reserves to $36 million.[23] This situation

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21. Peter H. Cornell, "Exchange Flexibility in Canada: Some Underlying Factors", (Unpublished paper).
22. Ibid.
23. Ibid.

was untenable; for as Mr. Graham Towers, the Governor of the Bank of Canada, said, "the problem of that tremendous influx of capital had to be tackled because that really put us out of control of the money market."[24]

There were three alternatives: maintain the exchange rate and impose direct controls on capital movements; set an appropriate new exchange rate; or free the Canadian dollar. The first possibility was probably not seriously considered, for it would be generally regarded with distaste. The major stumbling block to the adoption of a new exchange rate was the difficulty in determining the appropriate rate. In addition, appreciating the Canadian dollar would have entailed the government handing a profit to the speculators. On October 1, 1950, the Canadian dollar was freed and thus the Canadian government incurred the displeasure of the International Monetary Fund by breaking one of its rules.

Since the abolition of the fixed exchange rate, the account change in official holdings of gold and foreign exchange has occupied a much smaller role in the balance of payments. Variations in this account have occurred in order to attempt to damp temporary fluctuations in the exchange rate and not in order to establish a rate at variance with the market trend. This line of action was affirmed by the Honorable Walter Harris, former Minister

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24. Canada, Parliament, Committee on Banking and Commerce, Proceedings 1954, Vol. II, p. 749.

of Finance when he stated that:

> There has been no change in the policy of the government to allow the rate of exchange to be determined by the sum total of the forces operating in the exchange market, including of course the influence of fiscal and monetary conditions. The resources of the exchange fund are not used to reverse persistent trends but only to contribute to orderly conditions by limiting excessive short-run movements in either direction which might otherwise occur.[25]

Graph 4 substantiates the view that the exchange fund account does not attempt to reverse trends because the monthly changes in the official holdings have not been large. Whether or not the exchange fund account has contributed to more orderly conditions in the market is another matter. In this connection, it is not just the net change in official holdings which is significant but the gross transactions engaged in by the exchange fund account. It has been advocated that profit arising from the day-to-day operations of the exchange fund account is a measure of its success.[26] If there is zero trend in the exchange rate, the fund will show a profit if it purchases foreign exchange when the Canadian dollar temporarily appreciates above the normal rate and sells foreign exchange

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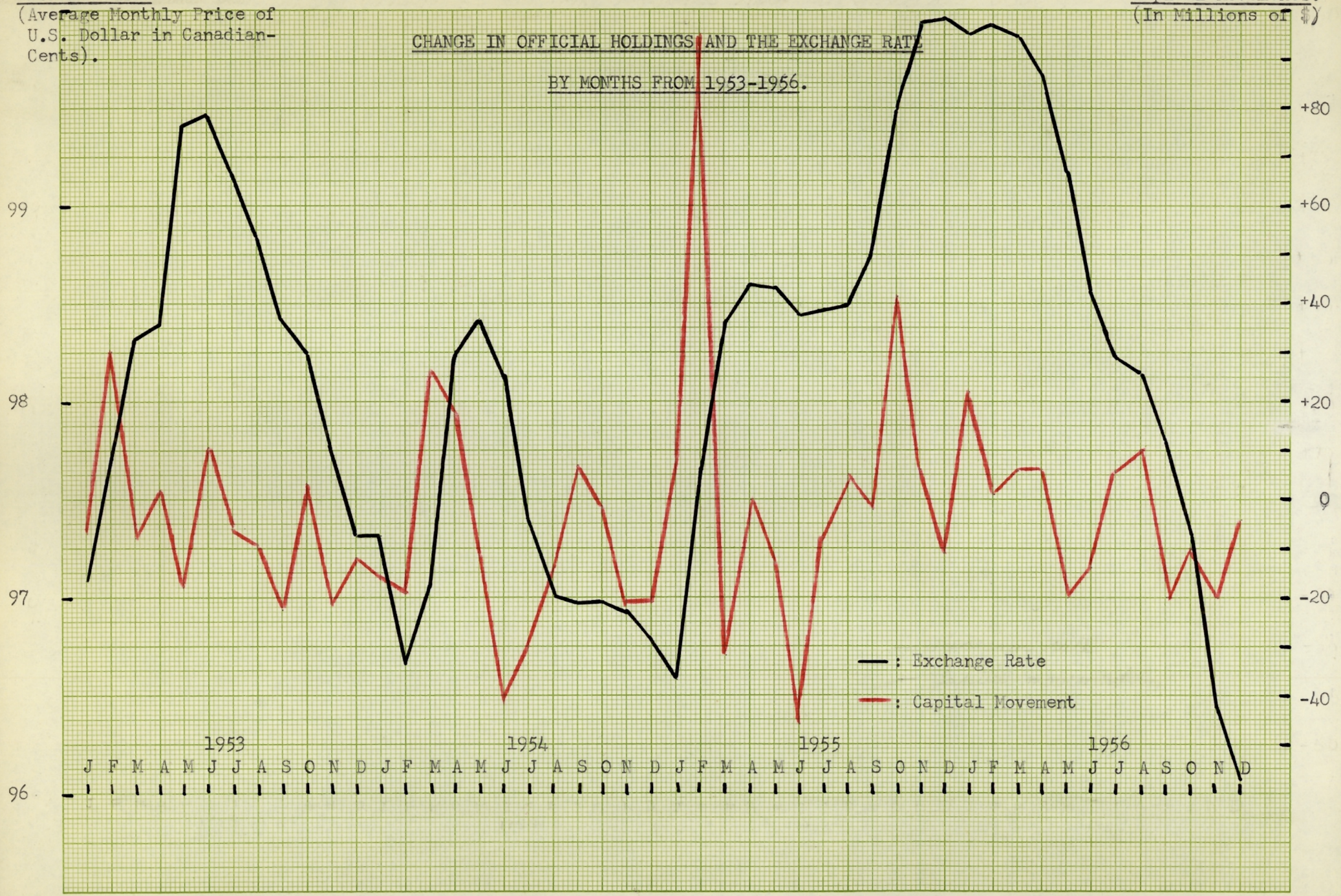
25. Canada, Parliament, House of Commons, Debate, Tuesday, April 5, 1955, p. 2729.

26. Harry C. Eastman and Stefan Stykolt, "Exchange Stabilization in Canada, 1950-4", The Canadian Journal of Economics and Political Science, Vol. xxii (May, 1956), pp. 221-231.

GRAPH 4

EXCHANGE RATE
(Average Monthly Price of U.S. Dollar in Canadian-Cents).

Capital Movements.
(In Millions of $)



when the Canadian dollar temporarily depreciates. However, it has been indicated that if there were no trend in the rate maximum stabilization would imply zero profits; therefore, its success must be measured by the stability of the rate around the trend and not by its profits.[27]

Because of the increase in the official reserves in the last three quarters of 1956, the demand schedule for United States dollars was displaced further to the right, resulting in a lower average exchange value for the Canadian dollar over that period. Thus, exports were stimulated and imports were discouraged to a greater extent than would have been the case in the absence of any intervention in the exchange market.

An increase in official holdings of foreign exchange (denoted by a minus entry in the balance of payments) will tend to increase domestic incomes and prices by encouraging exports and discouraging imports. As the United States funds must be paid for there may also be an inflationary effect through an increase in the money supply. If the increase in official holdings of United States dollars is financed by drawing down government deposits with the chartered banks, there is increase in the money supply but no increase in the cash reserves of the chartered banks.

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27. C. P. Kindleberger, "Exchange Stabilization Further Considered: A Comment", The Canadian Journal of Economics and Political Science, Vol. xxiii (August, 1957), p. 408.

If the central bank directly finances the increase in official holdings, without counteracting operations being undertaken, it is potentially very inflationary; for the chartered banks could engage in a multiple expansion in their deposits on the basis of the excess cash reserves created. If the central bank did absorb all the excess cash reserves through open market sales, the inflationary effect of the primary increase in the money supply might be counterbalanced by the deflationary effect of the higher rate of interest because of the positive displacement of the supply schedule of bonds. Although there may be considerable, little, or no inflationary effects through an increase in the money supply, the exchange value of the Canadian dollar will be lower as a result of the increase. This will tend to increase Canadian incomes and prices through its effect on foreign trade. Therefore, it can be concluded that an increase in official reserves, which in the capital account of the balance of payments is represented by a negative entry, is definitely inflationary and depending on the source of Canadian dollars, is potentially an extremely inflationary factor. Conversely, a decrease in official reserves, which will be represented by a plus sign in the capital account, will have a deflationary effect in Canada through international trade as a result of the tendency for the Canadian dollar to appreciate. There will be also the potentially deflationary effect of a decrease in the money supply.

## 4. OTHER CAPITAL MOVEMENTS

The final item in the capital account of the Canadian balance of international payments is other capital movements, as indicated by graph 1 on page 53a, this account is very responsive to exchange rate movements. The two most important elements in this account are changes in loans accounts receivable and payable and changes in bank balances

Table 16. Other Capital Movements

(in millions of dollars)

| Year | Changes in Loans account receivable and payable (including balancing item) | Changes in Bank Balances & Other short term funds abroad | Miscellaneous | Total |
|---|---|---|---|---|
| 1950 | 209 | 11 | -10 | 210 |
| 1951 | 118 | -14 | 24 | 128 |
| 1952 | -375 | -168 | 32 | -511 |
| 1953 | -117 | -79 | 11 | -185 |
| 1954 | 20 | -75 | 27 | -28 |
| 1955 | 10 | 131 | 63 | 204 |
| 1956 | 247 | -216 | 86 | 117 |

Source: Canada, Dominion Bureau of Statistics, The Canadian Balance of International Payments 1956, p. 26.

and other short-term funds abroad. In table 16, the column headed miscellaneous includes the net change in short-term holdings of Canadian funds by the International Bank for Reconstruction and Development and the International Monetary Fund, borrowings by Canadian finance companies and other long-term capital transactions.[28] Consideration will only

28. Canada, Dominion Bureau of Statistics, The Canadian Balance of International Payments, 1956, p. 26.

be given to changes in loans, accounts receivable and payable and changes in bank balances and other short-term funds abroad.

(i) Changes in Loans, Accounts Receivable and Payable

This account, as has been previously mentioned, is probably very responsive to changes in the exchange rate. During 1951,there was an inflow of capital of $118 million through changes in loans, accounts receivable and payable. Therefore, accounts payable must have increased relative to accounts receivable. If this situation were stimulated by exchange rate expectations, the expectations must have been that the Canadian dollar would appreciate further as the Canadian dollar appreciated fairly steadily throughout the latter half of 1951. If such were the expectations, Canadian corporations would lag their payments to foreign corporations and foreign corporations would lead their payments to Canadian corporations. This would produce an inflow of short-term capital. In general, the appreciation of the Canadian dollar has aroused expectations that it would depreciate rather than appreciate further. However, there may be some ratio of exchange between the Canadian and United States dollars which is in some sense generally regarded as a normal price. Appreciation of the Canadian dollar until this ratio is achieved may stimulate expectations of further appreciation. Appreciation of the Canadian dollar above this ratio may foster expectations that the Canadian dollar will depreciate.

In 1952, an outflow of $375 million occurred as a result of changes in loans, accounts receivable and payable. Exchange rate expectations probably played a significant role in stimulating this outflow. The average spot exchange rate for the United States dollar in December, 1952 was 97.06 (Canadian cents for a United States dollar).[29] Thus, it is probable that Canadian corporations were encouraged to reduce their accounts payable to foreign corporations. While foreign corporations might have been encouraged to let their debt to Canadian corporations increase. This would have occurred if the Canadian dollar was considered abnormally expensive and likely to depreciate in the future. Again in 1953, there was an outflow of short-term capital; and during the last quarter of 1953, the Canadian dollar was at a premium. In 1954, there was an inflow of capital as a result of changes in loans, accounts receivable and payable in spite of the appreciation of the Canadian dollar. In 1955, when the Canadian dollar depreciated fairly steadily throughout the year, an inflow of capital in this account was stimulated but it amounted to only $10 million. In 1956, although the Canadian dollar appreciated fairly steadily throughout the year, there was a net inflow of short-term capital rather than an equilibrating outflow. However, if figures

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29. Canada, Bank of Canada, Statistical Summary, Financial Supplement 1954, p. 59.

were available for this item on a quarterly basis, they might indicate that there was an outflow of capital during the last quarter of 1956, but that it was not nearly sufficient to counterbalance the inflow during the early part of the year when the United States and Canadian dollars approached par.

In addition to being responsive to exchange rate movements, changes in loans, accounts receivable and payable will be greatly influenced by the changes in the balance of merchandise trade or the current account balance. When the balance of merchandise trade becomes more passive, accounts payable will be expected to increase relative to accounts receivable. An increase in Canadian accounts payable or a reduction in accounts receivable is an increase in short-term credit extended to Canada. Thus, in the capital account it is represented by a positive entry.

It is difficult to determine whether accounts receivable and payable are more responsive to changes in the current account balance or the merchandise trade balance. The payments lag is also an important factor. Will changes in the level of accounts receivable and payable from year to year reflect only changes in the current account balance or merchandise trade balance occurring in the last month, last two months, last quarter, last half or during the whole year as compared with the corresponding period of the preceding year? It is evident from table 17 that changes in the merchandise trade balance during the

last month from one year to the next is insufficient by itself to cause such large changes in loans, accounts receivable and payable.

Table 17. Some Factors Affecting Changes in Accounts Receivable and Payable

(in millions of dollars)

| Year | Change in Loans, Accounts Receivable & Payable & other transactions | Change in Merchandise Trade Balance from the Similar period in preceding year | | | | Change in Current Account Balance from Similar period in preceding year | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | last Month | last 2 Months | last ¼ | last ½ | year | last ¼ | last ½ | year |
| 1950 | 209 | -48 | -137 | -176 | -248 | -283 | -292 | -412 | -511 |
| 1951 | 118 | 82 | 171 | 279 | 241 | -157 | 310 | 255 | -183 |
| 1952 | -375 | -62 | - 92 | -145 | 5 | 636 | -119 | 21 | 681 |
| 1953 | -117 | -26 | - 50 | -68 | -156 | -547 | - 65 | -155 | -607 |
| 1954 | 20 | 30 | 23 | 28 | 65 | 71 | - 32 | 3 | 11 |
| 1955 | 10 | -58 | -109 | -197 | -294 | -224 | -185 | -290 | -266 |
| 1956 | 247 | 11 | - 37 | - 42 | -110 | -523 | -105 | -224 | -674 |

Source: Canada, Dominion Bureau of Statistics, The Canadian Balance of International Payments, 1946-1952, 1953, 1954, 1955, 1956.

Canada, Dominion Bureau of Statistics, Trade of Canada, Imports, November and December, 1950 to 1956.

Canada, Dominion Bureau of Statistics, Trade of Canada, Exports, November and December, 1950 to 1956.

In addition, the sign of the change in the merchandise trade and current account balance from year to year would be expected to be opposite to that of accounts receivable and payable. When accounts payable are increasing relative to accounts receivable, there is a positive entry in the second column of table 17. At the same time, it is to be expected that the merchandise trade and current account balance would become more passive, which would be indicated by a negative entry in-

the columns marked change in merchandise trade and current account balance. However, the change in the merchandise trade balance in the last month from one year to the next is opposite in sign to change in loans, accounts receivable and payable and other transactions in only two out of the seven years. Surprisingly enough in the matter of sign the longer the period selected the more appropriate the signs appear to be. However, even when the change in the merchandise trade and current account balance are taken from one year to the next, the signs are only opposite to column two of table 17 in five of the seven years.

Exchange rate expectations are a good explanation of changes in loans, accounts receivable and payable in 1951, 1952, 1953 and possibly 1955. Changes in the current account balance during the last quarter explain the inflow of capital in this account in 1954 and 1955. The current account balance became so much more passive in the last quarter of 1955 vis à vis 1954 that a larger inflow of capital as a result of changes in loans, accounts receivable and payable might have been expected. In 1956, the current account during the last quarter was more passive than in the same period in 1955 but probably not sufficiently to account for the inflow of $247 million.

It is possible that restrictive bank lending policies may exert some influence on the level of international accounts receivable and payable. The Dominion Bureau of Statistics considers this to be one of the most

important causes of the inflow in 1951.[30] Similarly, in 1956, this factor might have contributed to the size of the capital inflow through changes in loans, accounts receivable and payable. However, since the balancing item between estimates of the current account and capital account balance are included with loans, accounts receivable and payable, it is not surprising that it does not always behave as might be expected. The balancing item is often large; for instance, in 1950, 1951 and 1952, it amounted to + $119 million, + $56 million and -$226 million.[31] The reason the balancing item is including under the heading of changes in loans, accounts receivable and payable, is that, "A study of the behaviour of this residual over a number of years suggests that it represents principally changes in receivables and payables not directly recorded."[32]

In the last quarter of 1956, since both merchandise exports and merchandise imports increased relative to the same period in the preceding year, both accounts receivable and payable probably would increase. Since imports increased to a greater extent than exports, accounts payable probably increased relative to accounts receivable. Therefore, there would be a short-term capital inflow. The effect of accounts payable and receivable increasing on the

30. Canada, Dominion Bureau of Statistics, The Canadian Balance of International Payments in the Post-War Years 1946-1952, p. 50.
31. Ibid.
32. Ibid.

foreign exchange market is that the demand and supply schedules for and of United States dollars would not shift as far to the right as would be the case in the absence of any change in payables and receivables. To indicate this in a diagram, the curves marked DD and SS in figure6 are the demand and supply schedules which would have prevailed in the market if there had not been any change in payables and receivables. As a result of

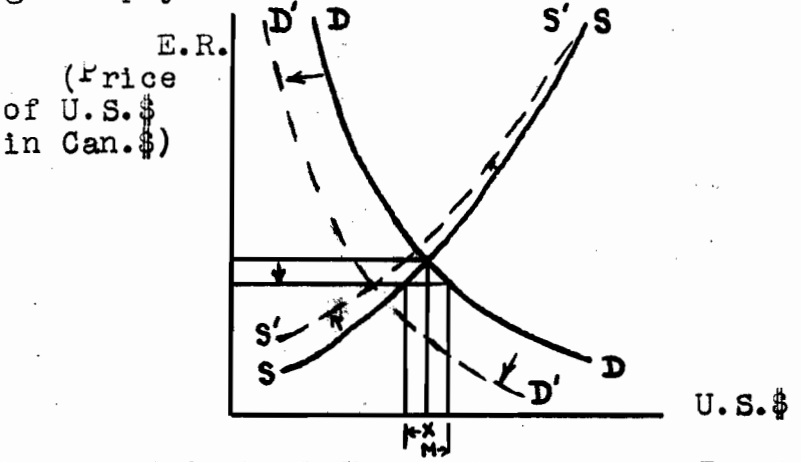


Figure 6. The Effect of Change in Accounts Receivable and Payable on the Exchange Rate.

Canadians allowing the amount of outstanding accounts payable to non-residents to increase, there is the new demand schedule, $D^1D^1$, and as a result of non-residents increasing their debt to Canadians there is a new supply schedule, $S^1S^1$. Since accounts payable increased relative to accounts receivable, the shift in the demand schedule has been shown, in the diagram, to be greater than the shift in the supply schedule. Thus, the Canadian dollar will have a higher exchange value as a result of this short-term capital inflow than it would have in its absence. This type of capital inflow has a deflationary effect on the Canadian

economy since imports tend to increase and exports to decline, as indicated in the diagram. However, the Canadian corporations that are able to increase their accounts payable do not need to reduce their cash balance. Thus, a short-term capital inflow of this nature might have a minor inflationary aspect; for by avoiding a reduction in their cash the Canadian corporations might be able to undertake increased expenditures in Canada. Since credit of this type is usually expensive, it would be used to finance only very short-term operations.[33] Thus, there is probably little doubt that an inflow of capital as a result of changes in loans, accounts receivable and payable and other transactions tends to decrease Canadian incomes and prices.

(ii) Changes in Bank Balances and Other Short-Term Funds Abroad

Changes in bank balances and other short-term funds abroad is the other very important component of "Other Capital Investments." This type of capital movement may result from a change in bank balances and other short-term funds abroad of the chartered banks and of all other Canadians. Table 18 gives a rough division of the change in holdings of bank balances and other short-term funds abroad of Canadian banks and of other Canadians. Consideration will be given initially to change in the holdings of

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33. The Dominion Bureau of Statistics states in the Canadian Balance of International Payments in the Post-War Years 1946-1952, p.50 that: "Other corporate requirements may be met through an increase in accounts payable...For limited periods financing of this character has contributed to expansion and development projects."

Canadians other than the banks.

Table 18. Change in Bank Balances and Other Short-Term Funds Abroad (a)

(in Millions of dollars)
(A minus sign indicates an outflow of capital which is an increase in bank balances abroad)

| Year | Chartered Banks | Other Canadians | Total |
|---|---|---|---|
| 1950 | 33 | - 22 | 11 |
| 1951 | -19 | 5 | - 14 |
| 1952 | -84 | - 84 | -168 |
| 1953 | -26 | - 53 | - 79 |
| 1954 | -11 | - 64 | - 75 |
| 1955 | 41 | 90 | 131 |
| 1956 | -11 | -205 | -216 |

Source: Canada, Dominion Bureau of Statistics, The Canadian Balance of International Payments 1956, p. 38.
Canada, Bank of Canada, Statistical Summary Financial Supplement 1956, pp. 17-19.

(a) The change in bank balances and other short-term funds abroad as shown by the balance of payments has been divided into two components, change caused by the chartered banks and change caused by other Canadians. The capital movements caused by the chartered banks has been obtained by comparing their net foreign asset position (excluding fixed assets) from one year to the next. The net foreign asset position is determined by subtracting foreign currency deposits from foreign cash items, foreign securities and loans outside Canada. This is not an exact measure but a good approximation to capital movements caused by the chartered banks. One exception is that if a Canadian bank built a new foreign branch by reducing its foreign cash items, the net foreign asset position (excluding fixed assets) of the bank would be less even though there was no capital inflow.

### (a) Change in Short-Term Funds Abroad of Canadians Other than the Chartered Banks

Bank balances and other short-term funds abroad of Canadians other than the chartered banks may change for four main reasons: first, as a result of exchange rate expectations; second, as a result of a change in the volume of securities floated abroad; third, as a result of a

change in the volume of bonds retired abroad; fourth, as a result of a change in the short-term interest rate differential.

The changes in short-term funds held abroad appear to be very responsive to exchange rate movements. In 1952, 1953, 1954 and 1956, when the Canadian dollar was at a substantial premium, there was an increase in short-term funds abroad. Canadian corporations with an income of foreign exchange might delay the transfer of funds to Canada in the hope of being able to convert on more favourable terms in the future. Canadian corporations which required foreign exchange in the future might tend to purchase it early. In 1955, when the premium on the Canadian dollar was almost eliminated, the Canadian corporations might have been induced to reduce their holdings of foreign exchange.

Since there is a lag between the sale of new securities abroad and the transfer of the proceeds to Canada, a change in the volume of securities floated abroad will affect the level of funds waiting to be transferred. Similarly, when there is a change in the volume of bonds coming due for redemption, there is likely to be a change in bank balances and other short-term funds abroad. This is because the government or corporation having to make the retirement will gradually build up its short-term funds abroad in order to discharge the obligation.

In 1952, there was a large capital outflow as a

result of Canadians increasing their short-term funds abroad. This may be partially explained by the fact that retirements during the first two quarters of 1952 and 1953 amounted to $53 million and $118 million.[34] Consequently, the level of bank balances might have been higher at the end of 1952 as compared with 1951, in anticipation of the larger amount of retirements that had to be made. However, since new issues of Canadian securities floated abroad during the last half of the year declined from $230 million in 1951 to $69 million in 1952, one would have expected that there would be less funds waiting to be transferred at the end of 1952.[35] On the other hand, exchange rate expectations probably tended to decelerate the rate at which funds obtained abroad were converted into Canadian dollars.

In 1955, there was a large inflow of short-term capital as a result of decreases in bank balances and other short-term funds abroad. It appears as though this could be partially explained by a reduction in new securities floated abroad during the latter half of the year compared with the preceding year. Since the average spot exchange rate for the United States dollar was 99.95 in December, 1955, this probably accelerated the rate at which foreign funds were exchanged for Canadian dollars.[36] In addition,

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34. Canada, Dominion Bureau of Statistics, The Canadian Balance of Payments 1954, p.32.

35. Canada, Dominion Bureau of Statistics, The Canadian Balance of International Payments 1953, p. 28.

36. Canada, Bank of Canada, Statistical Summary, Financial Supplement 1956, p. 65.

a reduction in the amount of retirements made during the first half of 1956 as compared with the same period in 1955 provides another reason for the decline in bank balances abroad between 1954 and 1955.

In 1956, there was an outflow of capital in excess of $200 million as a result of an increase in bank balances and other short-term funds abroad. This was, in part, the result of the enormous increase in the flotation of new issues abroad in the later half of 1956 as compared with the same period in 1955. New issues increased from $30 million in the last half of 1955 to $389 million in 1956.[37] Thus, there was likely to be an increase in the funds waiting to be exchanged for Canadian dollars. The high exchange value of the Canadian dollar in December, 1956 probably tended to delay the transfer of funds and thus increase the outflow of short-term capital.

Changes in the short-term interest rate differential between Canada and other countries and between the forward and spot exchange rate may alter the amount of short-term funds abroad. During the latter part of 1954, yields on Canadian treasury bills declined while those of the United Kingdom increased. At the same time there was a premium on forward sterling with respect to spot sterling. Thus, in December of 1954, Canadians could buy sterling spot and sell it forward at a premium and during the interval

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37. Canada, Dominion Bureau of Statistics, The Canadian Balance of International Payments 1956, p. 42.

obtain a higher yield on the funds in London. These factors combined to yield a return of better than 2½% per annum as compared with slightly over 1% on Canadian treasury bills. This was one of the factors which contributed to the outflow of short-term capital in 1954. In 1955, as forward sterling fell to a discount with respect to spot sterling the cost of exchange protection increased. The yield on Canadian treasury bills also rose sharply toward the end of 1955. Consequently, the London market became less attractive and Canadian holdings of British treasury bills were reduced.[38]

When there is an inflow of capital resulting from a decrease in bank balances and other short-term funds abroad, the Canadian dollar will tend to appreciate. The exchange transaction will tend to decrease Canadian incomes and prices by increasing imports and decreasing exports. The reduction in short-term funds abroad may not represent a net capital inflow but merely a change in the composition of Canadian external assets. If this is the case, there may be no effect on domestic incomes and prices, except as resulting changes in foreign incomes influence Canadian exports of goods and services. There may be a net capital inflow, without a foreign exchange transaction, if

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38. Canada, Dominion Bureau of Statistics, Sales and Purchases of Securities between Canada and other Countries, December 1955 and Review of Security Trading during 1955, pp.6-7.

the short-term funds were reduced in order to increase imports. The increase in imports will tend to lower prices. However, if the short-term funds are reduced only temporarily, the exchange transaction which restores the former level will tend to offset the deflationary effect.

In the cases where there is a foreign exchange transaction, it is necessary to consider what is likely to be done with the Canadian funds obtained. If the short-term funds had been held for the purpose of interest arbitrage, there may be little increase in spending. Similarly a Canadian corporation which has delayed exchanging its earnings of foreign exchange so that it can convert on more favourable terms may not increase its domestic spending significantly. If the short-term funds that were drawn down were obtained through a flotation of new securities, domestic spending will probably increase by the amount of the Canadian dollars purchased. However, this type of capital inflow was discussed when new issues of Canadian securities were considered but at that time the transfer lag was not stressed. The actual drawing down of short-term funds abroad is deflationary if it involves a foreign exchange transaction. However, it may be only a deflationary component of an inflationary process.

(b) Change in Short-Term Funds Abroad of the Chartered Banks.

Changes in the net foreign asset position of the chartered banks is at times a significant item in other capital movements. Annual figures tend to under-

estimate the importance of this component. For instance, in 1956, there was a net outflow of $11 million but in November of that year there was an inflow of $74 million.[39] Graph 5 indicates that changes in the net foreign asset position of the chartered banks has exercised at times a stabilizing influence on the exchange rate. When the Canadian dollar depreciates there appears to be, in general, an inflow of capital, while when the Canadian dollar appreciates there is an outflow.

It seems doubtful that the chartered banks attempt to stabilize the exchange rate on their own initiative. When the Canadian dollar appreciates and is not expected to remain at such a high value, Canadian companies which require foreign exchange in the future may be encouraged to obtain it early. A Canadian company may go to a chartered bank and purchase foreign exchange at the spot rate or enter into a forward contract. If spot foreign exchange is purchased, there probably will be no significant change in chartered bank holdings of foreign exchange. This is because the banks attempt to match sales and purchases. If it is not possible to match sales and purchases in the spot market at a particular exchange rate, the exchange rate will change until equality is established. If a Canadian company purchases foreign exchange forward and the bank is not able to match the sale

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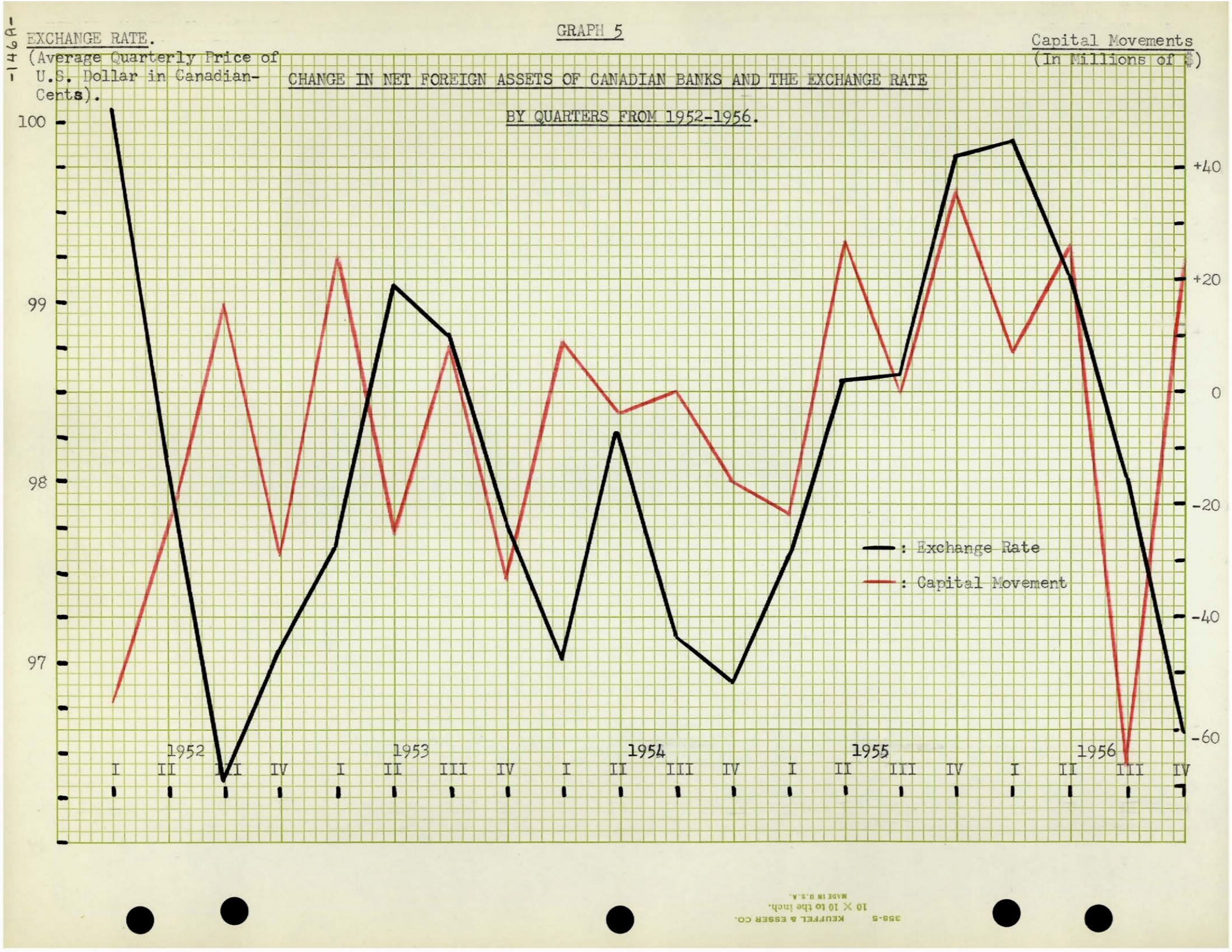
39. Canada, Bank of Canada, Statistical Summary Financial Supplement 1956, pp. 17-19.

GRAPH 5

EXCHANGE RATE.
(Average Quarterly Price of U.S. Dollar in Canadian-Cents).

Capital Movements
(In Millions of $)

## CHANGE IN NET FOREIGN ASSETS OF CANADIAN BANKS AND THE EXCHANGE RATE BY QUARTERS FROM 1952-1956.



with a corresponding purchase, the net foreign asset position of the bank will change. When the premium on the Canadian dollar is high and is not expected to persist, the demand for forward foreign exchange probably will be greater than supply. This does not mean that the forward rate will change to bring about equilibrium as in the case of the spot rate. Theoretically, the forward rate is derived from spot rate and the difference between the two is accounted for by the short-term interest differential.[40] For instance, the ninety day forward exchange rate for the United States dollar will be less than the spot rate if the short-term interest rate is higher in the United States than in Canada. In 1955 from March to September, forward United States dollars were at a discount relative to spot United States dollars because during that period the yield on United States treasury bills was considerably higher than on Canadian.[41]

The response of the chartered banks to an excess demand for forward foreign exchange will be considered. The banks will sell forward the foreign exchange demanded. Wishing to avoid the exchange risk, the banks will buy spot foreign exchange of an amount equal to the excess of

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40. Donald Bailey Marsh, World Trade and Investment (New York: Harcourt Brace,1951); p. 181 and Sidney A. Shepherd, Foreign Exchange in Canada: An Outline (Toronto:University of Toronto Press,1953), pp. 34-38.

41. Canada, Bank of Canada, Statistical Summary Financial Supplement 1956, p. 48, and p. 65.

sales over purchases of forward foreign exchange. The foreign exchange will be invested in short-term securities abroad. The significant factor is that if Canadian corporations consider the exchange value of the Canadian dollar as abnormally high and as a result are prompted to secure their future requirements of foreign exchange, there is an outflow of short-term capital whether they buy spot foreign exchange or purchase it forward from a bank.

Similarly, if the Canadian dollar is below the normal rate and is expected to appreciate, Canadian companies will be inclined to draw down their foreign exchange holdings. If they are to receive a large amount of foreign exchange in the future, they will be inclined to enter into a forward contract. If the exchange rate expectation is shared by a large number of businesses, the banks will undertake more forward purchases of foreign exchange than sales. In order to hedge against the exchange risk, the banks probably will sell foreign exchange spot to the extent of the excess of forward purchases to sales. Therefore, any stabilizing effect stemming from changes in the net foreign asset position of the chartered banks may be explained by exchange rate expectations of businesses. If exchange rate expectations of businesses have a stabilizing effect on the exchange rate, the changes in the net foreign asset position of the chartered bank also should be and will be stabilizing if the banks do not assume any exchange risk themselves.

It will be assumed that the inflow of capital

resulting from a decrease in the net foreign asset position of the chartered banks is caused by a Canadian business selling foreign exchange forward. The bank, making the forward purchase, will reduce its holdings of short-term funds abroad. The increased supply of foreign exchange in the spot market will cause the Canadian dollar to appreciate. This will tend to increase imports and decrease exports. As a result, Canadian incomes and prices will tend to fall.

Since in this case, the chartered banks are not passive agents in the market, the money supply will be affected. At the instant when the foreign exchange is purchased, the Canadian money supply is reduced by the Canadian dollar equivalent of the foreign exchange sold by the bank. If each chartered bank initially had no excess reserves, bank A, the bank that reduced its net foreign assets, will have excess cash reserves of the cash reserve ratio times the Canadian dollar equivalent of the foreign exchange sold, if it is purchased by one of their own depositors. If the foreign exchange is purchased by customers of bank B, bank A will have excess reserves equal to the Canadian dollars received for the foreign exchange. Bank B will have a deficiency of cash reserves equal to one minus the cash reserve ratio times the decrease in its deposits used to purchase the foreign exchange. If there is no change in the propensity of the public to hold currency and the chartered banks do not wish to hold excess cash, the money supply will return to its initial level.

However, a single chartered bank can only increase its earning assets by the amount of its excess reserves. Consequently, there may be a lag between the initial decrease and the compensating increase in the money supply. This additional deflationary aspect of such a capital inflow is probably insignificant.

Since the bank purchasing the foreign exchange forward will require Canadian dollars at the date when they are to receive the foreign exchange, the Canadian dollars probably will be used to buy short-term securities. The short-term interest rate will tend to be lower as a result of the capital movement but this probably will not have a significant inflationary effect. Therefore, it appears that a capital inflow resulting from a forward purchase of foreign exchange by a bank will tend to decrease Canadian incomes and prices.

## CHAPTER SIX

## SUMMARY OF PRICE AND INCOME EFFECTS OF CAPITAL MOVEMENTS

The analysis of the various types of capital movements has now been completed and it is proposed at this point to set out a brief summary of what is considered to be the most probable effects of these capital movements upon domestic incomes and prices. It is very difficult to draw any conclusion without making numerous qualifications. However, since the qualifications have been made previously, they will be omitted in the interest of simplicity.

In general, table 19 indicates the effect of various types of capital inflows. However, since it is im-

Table 19. Summary of Price and Income Effects

| Name of Capital Account | Sign in balance of Payments | Effect | Average flows in millions of dollars from 1951-56 |
|---|---|---|---|
| Direct Investment | | | |
| Direct Investment in Canada | + | Inflationary | + 414 |
| Direct Investment abroad | - | ? | - 71 |
| Canadian Securities | | | |
| Trade in outstanding issues | + | Slightly Deflationary or Inflationary | + 26 |
| New Issues | + | Inflationary | + 373 |
| Retirements | - | ? | - 158 |

| Name of Capital Account | Sign in Balance of Payment | Effect | Average Flows in millions of dollars from 1951 - 1956 |
|---|---|---|---|
| Foreign Securities | | | |
| Trade in outstanding issues | + | Slightly Deflationary or Inflationary | + 18 |
| New Issues | - | Inflationary | - 24 |
| Retirements | + | Slightly Deflationary or Inflationary | + 4 |
| Loans by Government of Canada | | | |
| Drawings | - | Inflationary | 0 |
| Repayments | + | ? | + 70 |
| Changes in Canadian dollar holdings of foreigness | + | Deflationary | - 30 |
| Change in official holdings of gold and Foreign exchange (decrease +) | + | Deflationary | - 28 |
| Other Capital Movements | + | Deflationary | - 46 |

possible to have a capital inflow in some accounts (retirement of Canadian securities, new issues of foreign securities and drawings on loans made by the government of Canada) and it is unlikely that an inflow of capital will occur in the account direct investment abroad, the effect of an outflow in these accounts has been considered.

By referring to column four of table 19, it can be seen that direct investment in Canada and new issues of Canadian securities were the most dominant types of capital movements from 1951 to 1956 inclusive. Since it has been concluded that under most circumstances direct investment

in Canada and the sale of new issues of Canadian securities are inflationary in the short-run,the capital inflow appears to have raised incomes and prices. This is reinforced by the fact that on balance capital outflows have developed in accounts in which capital inflows were considered to be deflationary.

Therefore, it appears that even with a fluctuating exchange rate the price effects which the classical economists stressed may play a significant role in the mechanism of adjustment. A change in the exchange rate is obviously a price effect but it is not the kind of price effect with which the classical economists were primarily concerned since the gold points were so close together. The classical price effects were changes in the price of domestic goods in terms of the domestic currency and not just in terms of a foreign currency. The price effects described by the classicists resulted from a change in the quantity of money with velocity remaining relatively stable. In contrast, with a freely fluctuating exchange rate the domestic price effects result from a change in velocity with a relatively stable money supply. Undoubtedly, most classical economists did place undue emphasis upon the role of domestic price effects in converting a monetary transfer into a real transfer. However, even with a freely fluctuating exchange rate this type of price effect probably still assists the income effects and changes in the exchange rate to consummate the real transfer.

The real transfer might be accomplished by a fluctuating exchange rate without any assistance from income and domestic price effects. But when there are short-term equilibrating capital movements, there undoubtedly will be income and domestic price effects which play an important role in the mechanism of adjustment. If there are short-term capital movements which moderate changes in the exchange rate, the difference between a pegged and a fluctuating exchange rate is a matter of degree rather than kind.

With a pegged exchange, the government stands ready to buy or sell foreign exchange if the domestic currency tends to appreciate or depreciate beyond certain limits. When there is a fluctuating exchange rate private traders may place a flexible ceiling and floor to the foreign exchange value of the domestic currency. If the upward or downward pressure is not too great, speculation of private traders may maintain the exchange rate within narrow limits. If there is considerable pressure on the exchange rate, private traders probably will revise their opinion about the appropriate exchange rate. It has been stated that:

> It may plausibly be inferred that during most of 1951 market sentiment as to the appropriate exchange rate centred around U.S. $0.95, but it was revised upward during 1952 after the sharp rise in the balance or current and long-term capital accounts which took place at the end of 1951. During 1953 this confidence was apparently maintained, as speculative transactions were relatively light while the rate moved narrowly between about U.S. $1.005 and U.S. $1.028.[1]

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1. R.A. Radford, "Canada's Capital Inflow 1946-53", International Monetary Fund Staff Papers, Vol. IV (1954-55), pp. 254-55.

When the government buys foreign exchange to keep the Canadian dollar from appreciating, there will be a primary increase in money supply. If the foreign exchange is purchased by drawing down a deposit with a chartered bank, there will be no secondary effects on the money supply. But, if the funds are provided by the central bank, excess cash reserves will be created which could support a multiple expansion in bank deposits, if no offsetting action were taken. In contrast, with a flucuating exchange rate, if companies, engaging in international trade, purchase foreign exchange because they believe that the foreign exchange value of the Canadian dollar is abnormally high, there is no increase in the money supply.

The company probably purchases the foreign exchange by drawing down a current account balance; so that it appears as though there may be no change in the velocity of circulation. However, a portion of most current accounts is probably as inactive as the most inactive savings account. Almost all corporations maintain a certain minimum bank balance which they rarely if ever reduce. To include all demand deposits as part of the active money supply is misleading for only the amount in excess of the habitual minimum is really active. Therefore, a corporation that decides to hold a larger part of this minimum balance in foreign exchange as opposed to domestic currency may have the same effect as if the government reduced its deposit with a chartered bank to buy foreign

exchange. Technically, there is no increase in the money supply when a private trader buys foreign exchange. Since the foreign exchange may be purchased as a result of a decision to hold a larger part of the habitual precautionary or speculative balance in foreign exchange rather than domestic currency, the portion of the bank balance used to pay for the foreign exchange may have a velocity of circulation of zero. It is only as a result of an arbitrary definition of the money supply that permits one to say that when the exchange fund account stabilizes the exchange rate by purchasing foreign exchange there is an increase in the money supply but when the speculation of a private trader stabilizes the exchange rate the money supply is not affected. Setting aside the arbitrary definition of the money supply, there may be in reality little difference between the stabilization provided by the exchange fund account and that provided by the speculation of private traders.

Having stressed the possible similarities between the effects of private versus governmental maintainance of the exchange rate stability, it is necessary to indicate the very real differences that can arise. If the government pegs the exchange rate and if the opinion that the domestic currency is undervalued becomes prevalent, the money supply may be greatly increased. Government deposits with the chartered banks may be reduced and additional funds may have to be provided by the central bank to buy the excess foreign

exchange which is offered at the fixed rate. The increase in cash reserves of the chartered banks may be so large that open market security sales may not be capable of coping with the situation. In contrast, the equilibrating operations undertaken by private traders will only oppose the appreciation of the Canadian dollar if it is considered to be an aberration. If it is a fundamental rather a transient change, private traders will revise their opinion quickly about the appropriate exchange rate and will only take a speculative position if the rate deviates from this new level.

The speculation of private traders moderates exchange rate movement about a rate that is considered appropriate, but the appropriate rate may change over time. If the exchange rate which the market regards as suitable remains the same over time, there may not be a great deal of difference between a pegged and fluctuating exchange rate. But even when the exchange rate regarded as appropriate does not change, the similarity between the fluctuating and fixed exchange rate depends on the strength of exchange rate expectations. With a pegged exchange rate, the demand and supply schedules for and of foreign exchange become infinitely elastic at the pegs. With a fluctuating exchange rate, the elasticity of the demand and supply schedules for and of foreign exchange on the part of speculators depends on the confidence with which they view their ability to estimate the appropriate exchange rate. The schedules would only be

infinitely elastic if the traders are absolutely certain that a certain exchange rate is appropriate. Therefore, even when short-term capital movements are equilibrating the exchange rate movement probably will be, in general, greater than if the rate were pegged within one per cent of the official parity as required by the International Monetary Fund. Table 20 indicates that the percentage flucuation has not been great. In 1954, the percentage fluctuation was

Table 20. Exchange Rate of the United States Dollar in Canada (in Canadian cents)

| | High | Low | Spread | Mid-Point | Percentage Fluctuation |
|---|---|---|---|---|---|
| 1951 | 107-5/16 | 101-3/16 | 6-1/8 | 105.28 | 5.8 |
| 1952 | 101-1/8 | 95-7/8 | 5-1/4 | 97.89 | 5.4 |
| 1953 | 99-25/32 | 96-3/4 | 3-1/32 | 98.34 | 3.1 |
| 1954 | 98-3/4 | 96-11/32 | 2-13/32 | 97.32 | 2.5 |
| 1955 | 100-1/16 | 96-15/32 | 3-19/32 | 98.63 | 3.6 |
| 1956 | 99-31/32 | 95-21/32 | 4-10/32 | 98.41 | 4.4 |

Source: Canada, Bank of Canada, Statistical Summary Financial Supplement 1956, p. 65.

only slightly greater than the amount permitted by the International Monetary Fund.

When there are no exceptional changes taking place in the long-term capital account or in the current account, the speculation of traders may be in effect similar to the operation of the exchange fund account. To the extent that the traders utilize the portion of their bank balances whose velocity of circulation is zero, it is as if there were an increase or decrease in the money supply as would result from the exchange fund account reducing or increasing its deposits with the chartered banks to buy or sell foreign exchange.

The primary purpose of indicating some of the similarities that may exist between equilibrating short-term capital movements under a fluctuating exchange rate and the operations of the exchange fund account under a fixed exchange rate is not to detract from the importance of the exchange rate as a part of the mechanism of adjustment. Instead the purpose is to counter the opinion that the income and domestic price effects have no part to play with a fluctuating exchange rate. It is stated that:

> A capital inflow serves to permit a higher rate of over-all investment than would otherwise have been possible without intensifying inflation or payments difficulties...This result is most clearly visible in the case of imports of capital goods associated with a specific investment project undertaken by a foreign concern; the same effect obtains, however, if the capital receipts are spent locally and the foreign exchange equivalent is used to finance increased imports of goods and services of all kinds resulting from a generalized expansion of domestic activity.[2]

It has been indicated previously that just because a foreign investment does not increase domestic spending initially does not mean that it cannot intensify inflationary pressure. The establishment of an enterprise, even if it consists entirely of the import of capital equipment, may raise the marginal efficiency of capital schedule of complementary industries. But this is not the point of primary concern, it is rather the statement that the same effect pertains whether the foreign investment takes the

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2. Ibid., p. 250.

form of an import of capital equipment or the form of domestic spending offset by an equal import of goods and services. This implies that since a capital inflow is balanced by a current account deficit there will be no effect on domestic incomes and prices.[3] The foreign investment spent domestically will tend to increase income but the import surplus will have just the opposite effect. This assumes that the increased spending abroad has been at the expense of an equal amount of domestic spending and rules out the possibility that part of the increase in imports may represent just a draining away of some of the increased income generated.

An analogy might be that since savings and investment are always equal there can be no increase in income. If planned saving and investment are unequal, the necessary ex-post equality will exist at a different level of income. Similarly the equality of a net capital inflow and a current account deficit is an ex-post equality. The ex-ante current account deficit and net capital import may be different and the equality which must prevail may occur at a different level as a result of an increase in income and a rise in domestic prices.

If the Canadian dollar appreciates sufficiently so that it alone induces an increase in imports and a decrease in exports the sum of which is equal to the amount of the

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3. For another example of this position see S.C. Tsiang, "Balance of Payments and Domestic Flow of Income and Expenditures", International Monetary Fund Staff Papers, Vol I (1950-51), pp. 277-78.

foreign investment which results in domestic expenditures, there may be no intensification of inflationary pressure. However, it is insufficient to say that because a foreign investment is offset by a current account deficit the multiplier effects on income will cancel each other. The process by which the equality is established must be considered. If the exchange rate does not move sufficiently to consummate the real transfer alone, there probably will be a net increase in domestic spending. When there are short-term capital flows which moderate exchange rate movements, income and domestic price effects supplement the fluctuating exchange rate in transforming a monetary flow into a flow of real goods and services.

# CHAPTER SEVEN

## SOME IMPLICATIONS FOR MONETARY POLICY

### 1. THE INCREASED EFFECTIVENESS OF CANADIAN MONETARY POLICY

It is now proposed to indicate some of the implications which a capital inflow has for monetary policy. There seems to be a feeling that, since the freeing of the Canadian dollar on September 30th, 1950, the scope for an effective, independent Canadian monetary policy has been greatly extended. The exchange market now provides a certain amount of insulation, which does not exist under the conventional gold standard, or under any system where the spread between official buying and selling rates is narrow. It was the lack of such insulation that prompted the Canadian Bankers' Association in their brief to the Royal Commission on Banking and Currency to conclude that a central bank would be impotent. The brief states:

> With both the United States and Canada on a gold standard the situation would remain the same as it was under similar conditions in the past. The Canadian market would be over-shadowed by that of the United States, and a central bank's powers in the direction of contraction or expansion would be of the most limited character unless the action taken in this country paralleled similar development in the United States.[1]

The Commission, deciding that it was a distinct advantage for the new central bank that Canada was not on

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1. Canada, Royal Commission on Banking and Currency in Canada, 1933, evidence presented by the Canadian Bankers' Association.

the gold standard, probably had considered the insulating effect of a free exchange market. The Commission stated that:

> So far from the time being inopportune we are of the opinion that there are cogent reasons for its early establishment. The fact that the Canadian dollar is, for the time being, an inconvertible currency may, from one point of view, be regarded rather as an advantage than a disadvantage for the early operation of the bank.[2]

However, the fact that a currency is inconvertible does not prevent impulses being conducted to the Canadian money supply through capital movements. It is the fact that a currency is freely fluctuating, or that the spread between the pegs or the gold points is sufficiently great so that the exchange rate does not reach those limits, which is the insulating medium. The Commission, in referring to an inconvertible currency, probably considered that this was tantamount to a freely fluctuating one, because exchange equalization accounts had not assumed the prominence which they have subsequently achieved.

In order to indicate the way in which a fluctuating exchange rate contributes to a more independent monetary policy, a fluctuating rate will be contrasted with one which is pegged within a narrow range. From 1939 until 1950, the spread between official buying and selling rates for the United States dollar was small. From September 16th, 1939, until October 15th, 1945, it was one cent and from then until September 30th, 1950, it was only one half cent.[3] The effect of imposing a

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2. Canada, Royal Commission on Banking and Currency in Canada, Report, 1933, p. 68.
3. Canada, Bank of Canada, Statistical Summary Financial Supplement 1954, p. 59.

tighter monetary policy than that being pursued in the United States will be contemplated in a situation where the spread between the pegs is as narrow as that noted above.

The initial effect of such a policy would be that the interest differential between Canada and the United States would increase. This would cause an increase in the demand for Canadian dollars because of the stimulation which the increased interest differential would give to the flotation of new bond issues in the United States. There would also be a shift in the demand for Canadian dollars because non-residents would be encouraged to buy relatively cheaper Canadian bonds. In addition, Canadian residents might reduce their holdings of outstanding foreign securities for the same reason. This would tend to cause the Canadian dollar to appreciate; but, the Foreign Exchange Board, which was charged with the operation of the Exchange Fund Account, would not permit appreciation of the Canadian dollar above the pegged buying rate for United States dollars. As a result, the demand schedule for United States dollars becomes infinitely elastic at that rate.

As illustrated in Figure 6, there will be a change

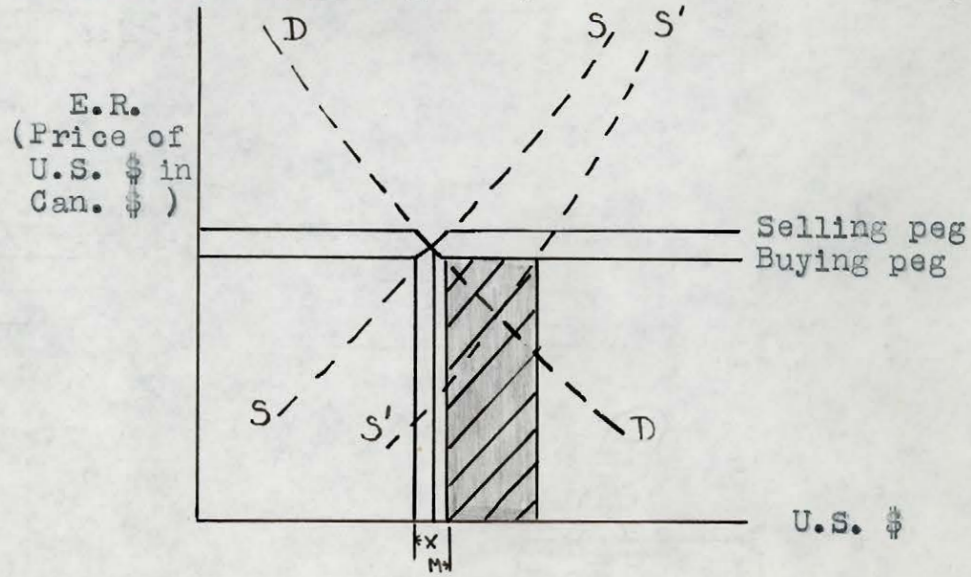


Figure 6

in exports and imports as long as the initial rate of exchange is not at the buying peg. The increase in imports and decrease in exports will be insignificant if the spread between the pegs is only one or one half of one per cent unless the demand and supply schedules for and of foreign exchange are extremely elastic. There will also be an initial increase in the money supply, indicated in Figure 6 as the shaded area which is equal to the amount of United States dollars purchased by the Exchange Fund Account multiplied by the rate set as the buying price. If the government's deposits with the chartered banks are in excess of the amount required for its current operations, it will probably draw down these deposits in order to purchase the foreign exchange. Since there will be no increase in the cash reserves of the chartered banks, no expansion in their deposits is possible. If the more stringent monetary policy is adhered to, the government's deposits will be depleted eventually and the funds will have to be provided by the central bank. Funds provided in this fashion are potentially more inflationary for they create excess cash reserves upon which the chartered banks can undertake a multiple expansion in their deposits, unless the central bank takes offsetting action.

During the period in which Canada had fixed exchange rates, the main weapon used by the Bank of Canada to counteract an increase in the reserves of the chartered banks was the sale of securities in the open market. The increased supply of securities would depress the security prices and raise the rate of interest. But, in our assumed case, the increase in cash

reserves is caused initially by the flow of capital in response to the interest differential, and as a result open market operations will be unable to cope with the situation. Moreover, increasing the interest differential may encourage a larger capital inflow which can only compound the difficulties involved in controlling the money supply.

In the revision of the Bank of Canada Act in 1954, another weapon was added to the central bank's armoury. The Bank of Canada can now alter the reserve ratio between eight and twelve per cent, in steps of not more than one per cent after a notice of at least one month. This newest Canadian monetary weapon probably would permit the central bank to restrain an increase in the money supply resulting from an inflow of capital without the complications involved in the case of open-market operations.

Even if the money supply can be effectively controlled, the fixed exchange rate still falls short of the protection afforded by the fluctuating rate. This is because, with a freely fluctuating rate the additional Canadian dollars can only be obtained by offering United States dollars on such favourable terms that private citizens and enterprises are encouraged to buy United States dollars. The United States dollars are purchased in order to import goods and services, to undertake foreign investment or to retire securities held by non-residents. Imports are by far the most important reason for desiring United States dollars; consequently, an increased demand for Canadian dollars will encourage imports through the exchange rate movement. Some importers of Canadian

goods will withdraw from the market as a result of the appreciation of the Canadian dollar. The capital inflow will be balanced by an increase in imports, a decrease in exports and any capital outflow that may be induced. In contrast, when the United States dollars are purchased by the Exchange Fund Account, they will not return for imports nor will there be a tendency for exports to diminish. Instead, the capital inflow, once the exchange rate reaches the buying peg for foreign exchange, will be matched exclusively by a capital outflow: the increase in official reserves.

The insulation provided by the fluctuating exchange rate has been considered and there can be little doubt that the freeing of the Canadian dollar has extended the power of the central bank to pursue an independent monetary policy. The insulation stems not only from the more effective control over the money supply but also from the influence on imports and exports of changes in the exchange rate.

The question to be examined this time is: "How effectively can the central bank cope with the inflationary pressures which are more intense in Canada relative to the United States, under the new conditions?" It might also be asked how far the central bank's power to combat a relatively more severe depression has been extended. However, monetary policy is often compared to a string. If inflationary forces are pulling on one end of the string, monetary policy, by exerting pressure in the opposite direction on the other end of the string, can hope to control inflation. In contrast,

if there is little activity on one end, monetary policy, by pushing on the other end, may not stimulate expansion because of the lack of tension in the string. Therefore, in the following discussion only the effectiveness of a more deflationary Canadian monetary policy relative to that of the United States will be considered.

## 2. THE LIMITATIONS IMPOSED ON CANADIAN MONETARY POLICY BY CAPITAL MOVEMENTS

In the previous chapter, it was indicated that, though there was no change in the money supply, some types of capital inflow might increase the velocity of circulation and, in spite of the increase in the quantity of goods in Canada, might exert a net inflationary effect. Since velocity can be affected by capital movements, the effectiveness of Canadian monetary policy may be limited by them. The extent of the limitation is the question which will be examined in this section.

A more stringent monetary policy relative to that being adopted in the United States will have its greatest impact on new issues of Canadian securities, through the resulting increase in the interest differential between Canada and the United States. It will also stimulate net purchases of outstanding Canadian securities by non-residents and net sales of outstanding foreign securities by residents. The tighter monetary policy will discourage the flotation of new issues of foreign securities in Canada. Other capital movements may be affected by changes in international accounts

payable and receivable. Canadian companies may try to obtain a larger amount of cash by increasing their accounts payable and reducing their accounts receivable. Since the appreciation of the Canadian dollar will stimulate imports and discourage exports, this will also tend to increase accounts payable relative to accounts receivable. The appreciation of the Canadian dollar is likely to alter exchange rate expectations. Canadian holdings of bank balances and other short term funds abroad may increase as a result of expectations that the Canadian dollar will depreciate in the future. Conversely, foreign holdings of Canadian dollars may decrease for the same reason. If there is any discretion permitted concerning the date of redemption, even retirements may be affected by the more stringent monetary policy. It is apparent that a tighter Canadian monetary policy relative to that of the United States will affect almost every item in the capital account.

In general, the more stringent monetary policy, will tend to stimulate the inflow of capital. But, if the resulting appreciation of the Canadian dollar leads to expectations that the Canadian dollar will depreciate in the future, an equilibrating outflow of short term capital will develop. The various types of capital movements induced by the change in monetary policy will have diverse influences upon the Canadian price level. The most important capital movement is probably the sale of new issues of Canadian securities to non-residents. This type of capital inflow was branded previously as inflationary. Thus the effectiveness of Canadian monetary policy in dealing with inflation

is reduced by the fact that resort can be had to the United States capital market.

It is now appropriate to inquire whether there is any automatic device which will stem the flow of new issues offered in the United States and so minimize the limitations on an effective, independent monetary policy imposed by an increase in the velocity of circulation. The first possibility of this nature which comes to mind is that interest rates may be raised abroad as a result of the increased demand for loanable funds, and the interest differential which made such flotation attractive will be eliminated. The United States capital market is so large that a great many Canadian bonds would have to be offered before the interest rate in the United States was raised appreciably. In contrast, if it were the United States that introduced the relatively tighter monetary policy and as a result new issues of United States bonds were being offered in Canada, it would not be long before Canadian interest rates would be raised. The impact of a given demand for funds will be much greater in Canada than in the United States because of the relatively small Canadian capital market. Consequently, the Bank of Canada, unlike the Federal Reserve System, can expect no assistance from any effective automatic device, operating through change in the interest rate, to discourage foreign borrowing.

The exchange rate is another possible mechanism through which the additional flotation of new issues might be halted. When new issues of Canadian securities are sold in the United States there is a positive displacement of the

supply schedule of United States dollars, and the Canadian dollar tends to appreciate. The smaller the import content of the investment project which is being financed in this way, the greater will be the appreciation of the Canadian dollar per dollar of bonds floated. For each additional dollar raised in the United States, other things being equal, the Canadian dollar equivalent will decline. This may reduce the incentive to borrow in the United States, but as long as any particular exchange rate is expected to prevail for the life of a bond issue, the cost of borrowing abroad is not increased by the appreciation of Canadian dollars. As the Canadian dollar appreciates, a foreign exchange rate will be reached at which the foreign exchange value of the Canadian dollar is considered to be too high to be maintained in the future. If the Canadian dollar appreciates beyond this rate, the cost of borrowing abroad will increase and the incentive to borrow outside Canada will be reduced and possibly eliminated. Just what exchange rate will stop borrowing in the United States depends on the Canadian and United States interest rates and exchange rate expectations.

In order to illustrate the strength of this mechanism for stemming the flotation of Canadian bonds in the United States an arbitrary assumption will be made about the exchange rate expectations of the borrowers. This assumption is that, in spite of the initial exchange rate, there is one exchange rate which is expected to exist before the first interest payment is made and to prevail for the life of the bond. Let the interest rates in Canada and the United States be denoted by

$i_c$ and $i_a$ respectively, the exchange rate at the date of issue by $R_1$ and the expected exchange rate by $R_2$ and the amount of the loan required in Canadian dollars by L. The exchange rate considered will always be the amount of Canadian currency required to buy one unit of foreign currency.

The simplest example is the sale of a perpetuity such as a British consol. If the bonds were floated in the United States $\frac{L}{R_1}$ United States dollars would have to be borrowed to obtain L Canadian dollars. The interest cost each year on the fund borrowed in Canada would be $Li_c$ and those borrowed in the United States would be $\frac{L}{R_1} i_a$ in United States dollars which is expected to require $\frac{LR_2}{R_1} i_a$ Canadian dollars. There will be an incentive to sell perpetual bonds in the United States provided that:

$$Li_c > L\frac{R_2}{R_1} i_a$$

$$R_1 i_c > R_2 i_a$$

$$R_1 > \frac{i_a}{i_c} R_2$$

Thus if the expected exchange rate $R_2$ were 100.00 (number of Canadian cents per United States dollar) and the interest rate in Canada were 4% and in the United States 3½%, it would still be profitable to sell a perpetual bond in the United States until the present exchange rate $R_1$ fell to 87.50. Therefore, a large volume of borrowing might be carried out in the United States before the incentive to borrow in the form

of perpetual bonds would be destroyed through a consequent appreciation of the Canadian dollar.

Most bonds do have a maturity date and so repayment of the principal must be considered. When the bond is redeemed, if it was originally floated in the United States, $\frac{L}{R}$ United States dollars will be required, which will be expected to necessitate an outlay of $R_2\frac{L}{R_1}$ Canadian dollars. Repayment of the principal will require $R_2\frac{L}{R_1} - L$ more Canadian dollars if the bonds were sold in the United States instead of in Canada.[4] In order to be able to compare the cost of borrowing in the United States versus borrowing in Canada, the additional funds required to redeem the bonds floated in the United States must be distributed over the life of the bonds and added to the annual interest payment. The problem is, "What annual payment, P, invested at the Canadian interest rate will accumulate to $R_2\frac{L}{R_1} - L$ dollars at the date of redemption n years hence?" The first annual payment, P, made at the end of the first year will earn interest for n-1 years while the payment at the end of n years will earn no interest.

Therefore $R_2\frac{L}{R_1} - L = P(1+i_c)^{n-1} + P(1+i_c)^{n-2} \ldots P(1+i_c)+P.$

The right hand side of the equation is a geometric series of n terms, in reverse order, in which P is the first term and $(1+i_c)$ is the common ratio.

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4. This assumes that the expected exchange rate is higher than the present exchange rate.

$$\therefore \; R_2\frac{L}{R_1} - L = P\left\{\frac{1-(1+i_c)^n}{1-(1+i_c)}\right\} = P\left\{\frac{1-(1+i_c)^n}{-i_c}\right\}$$

$$= P\left\{\frac{(1+i_c)^n-1}{i_c}\right\} = P\, s_{\overline{n}|i_c} \qquad 5.$$

$$\text{or } P = \left(R_2\frac{L}{R_1} - L\right)\frac{1}{s_{\overline{n}|i_c}}$$

Therefore, there will be an incentive to borrow in the United States provided that:

$$L\,i_c > R_2\frac{L}{R_1}\,i_a + P$$

$$L\,i_c > R_2\frac{L}{R_1}\,i_a + \left(R_2\frac{L}{R_1} - L\right)\frac{1}{s_{\overline{n}|i_c}}$$

$$i_c > \frac{R_2}{R_1}\,i_a + \frac{R_2}{R_1}\,\frac{1}{s_{\overline{n}|i_c}} - \frac{1}{s_{\overline{n}|i_c}}$$

$$i_c + \frac{1}{s_{\overline{n}|i_c}} > \frac{R_2}{R_1}\left(i_a + \frac{1}{s_{\overline{n}|i_c}}\right)$$

$$R_1 > \frac{i_a + \dfrac{1}{s_{\overline{n}|i_c}}}{i_c + \dfrac{1}{s_{\overline{n}|i_c}}}\,R_2$$

If the interest rate in Canada were 4% and in the United States 3½%, it would still be profitable to sell a twenty year bond, interest payable annually, until the present exchange rate fell to .932 of the expected exchange rate.[6] If instead a perpetual bond had been sold under the same conditions, the present rate would have had to fall to .875 of the expected rate until the incentive would be eliminated.

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5. $\frac{(1+i)-1}{i}$ is the amount of an annuity of one per period and is denoted by $s_{\overline{n}|i}$. It can be determined by referring to detailed interest tables. See J.M. Simpson, Z.M. Pirenian and B.H. Crenshaw, Mathematics of Finance (New York: Prentice Hall, 1955), Table 5, pp. 60-79.
6. Calculated from Simpson, Pirenian and Crenshaw, op. cit., Table 7, p. 114.

The preceding analysis was based on the assumption that borrowers have a single expectation about the exchange rate and that they consider this exchange rate will become the market rate before the first interest payment. If it is thought that the expected exchange rate will not become the market rate for several years, the present exchange rate can fall to a lower fraction of the expected exchange rate than that indicated by $\frac{i_a + \frac{1}{s_{\overline{n}|}i_c}}{i_c + \frac{1}{s_{\overline{n}|}i_c}}$ before the incentive to borrow in the United States is eliminated.

The preceding analysis has been based on a very limited assumption about the exchange rate expectations. Nevertheless, it suggests that the present exchange rate must deviate from the expected exchange rate by a considerable amount before the incentive to float long-term bonds in the United States is eliminated, even when the interest differential is only one half of one per cent. The appreciation of the Canadian dollar in response to a tighter monetary policy will only be an effective automatic mechanism for halting the flotation of Canadian bonds in the United States if the Canadian dollar is expected to depreciate markedly in the future. During the last quarter of 1956, the average noon exchange rate for the United States dollar was 96.62. However, the sales of new issues of Canadian bonds and debentures to non-residents reached a near record quarterly high of $180 million.[7] It

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7. Canada, Dominion Bureau of Statistics, Sales and Purchase between Canada and Other Countries December, 1956, and Review of Security Trading during 1956, p. 2.

would seem that expectations about the exchange rate are not such that an appreciation of the Canadian dollar will operate quickly to eliminate the incentive to borrow in the United States.[8]

In reviewing this period of Canadian borrowing, Mr. Coyne, the Governor of the Bank of Canada, states:

> Those who borrow U.S. dollars now, at the present rate of exchange, put themselves at the hazard of future movements of the rate in the other direction. Foreign currency converted now into Canadian dollars at a discount may have to be paid back, and annual interest for many years may have to be paid, when there is a premium on foreign currency. This is a risk which borrowers should weigh against the apparent saving in interest rates through borrowing abroad.[9]

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8. The average yield during the last quarter of 1956 (average of Wednesdays during the period) on long-term Canadian and United States bonds of comparable maturity (3¼%, Oct. 1/79 and 3¼%, June 15/78-83) was 3.85 and 3.31 per cent respectively. The average noon exchange rate for the quarter was 96.62. Therefore, if a Twenty Year bond interest payable annually had been offered there would have been an incentive to sell it in the United States if the expected exchange rate was not higher than 104.38. For there to be an incentive to sell a Fifteen and a Ten Year bond in the United States, the expected exchange rate could not be more than 102.86 and 101.08 respectively. This assumes that the expected exchange rate will prevail throughout the life of the bonds. The calculations have been made from Simpson, Pirenian and Crenshaw, op. cit., Table 7, p. 114.

9. Canada, Bank of Canada, Annual Report of the Governor to the Minister of Finance, 1956. p. 20.

The use of the words "should weigh" might be interpreted to mean that in the opinion of the Governor not enough consideration was being given to the possibility of future depreciation of the Canadian dollar. In any case, it seems probable that the Bank of Canada was disappointed that the appreciation of the Canadian dollar in 1956 appeared to move only slowly, if at all, to stem the flotation of Canadian bonds in the United States.

The scope for independent Canadian monetary policy has been greatly extended by the freeing of the Canadian dollar. However, the velocity of circulation can be affected by capital movements. As indicated above, a large quantity of Canadian bonds would have to be offered in New York before the interest rate would be appreciably affected. In addition, the appreciation of the Canadian dollar, in response to the interest differential, may act only slowly to terminate the sale of new Canadian bonds in the United States. The effectiveness of an independent monetary policy is limited then by capital inflows; and there seems to be no effective automatic device for halting them.

Investment financed abroad is less inflationary than that internally financed, since additional goods and services are provided, nevertheless, foreign-financed investment may still be inflationary. The analysis of several of the most important types of capital inflows in previous chapters indicated that a large proportion of foreign investment is probably inflationary.

For a relatively tighter monetary policy to be effective, it is not merely sufficient that the total money supply be not affected by capital movements because the success of the policy can still be undermined by changes in the velocity of circulation. Therefore, if inflationary pressures are stronger in Canada than in the United States, a tighter monetary policy relative to that of the United States may not be able to cope with the situation alone in spite of the increased effectiveness of Canadian monetary policy stemming from the introduction of the fluctuating exchange rate. It is not suggested that monetary policy will not help to control inflation but merely that a small open economy whose bonds enjoy the confidence of non-resident investors may not be able to rely solely upon monetary policy to combat inflation.

## 3. THE DIFFICULTIES OF IMPOSING A CANADIAN MONETARY POLICY THAT IS MORE STRINGENT THAN THAT OF THE UNITED STATES

Imposing a Canadian monetary policy that is more stringent than that of the United States is subject to three main difficulties: first, the increased interest differential will stimulate the flotation of new issues of bonds, thus increasing Canada's fixed liabilities to non-residents; second, the resulting appreciation of Canadian dollars makes it more difficult for Canadian exports to compete in world markets; and, third, the credit rating necessary to float loans abroad restricts the operation to large Canadian corporations, thereby tending to increase the concentration of industry in Canada.

Since the Canadian economy is largely dependent on a few staple exports, the volume and price of Canadian exports are subject to marked fluctuations in response to an international business cycle. For this reason heavy fixed interest obligations to non-residents generally have been regarded with considerable anxiety in Canada. For instance, it is stated that, "Heavy fixed charges payable abroad thus create acute problems of banking policy and monetary control whenever a slump strikes the export industries."[10]

A tighter monetary policy relative to that of the United States encourages an increase in Canada's fixed liabilities to non-residents, and therefore might be regarded as a weakness of Canadian monetary policy. The reason is that such a policy introduces an inflexible element into Canada's balance of international payments which might create difficulties should there be a large fall in exports. If monetary policy primarily stimulated direct investment or portfolio investment in equity form, there probably would be far less concern, at least from a balance-of-payments point of view. This is because lower profits realized by Canadian corporations will induce a reduction in dividend payments when world depression reduces Canadian exports. It is possible that the benefit accruing from the flexibility of dividend payments has been exaggerated.

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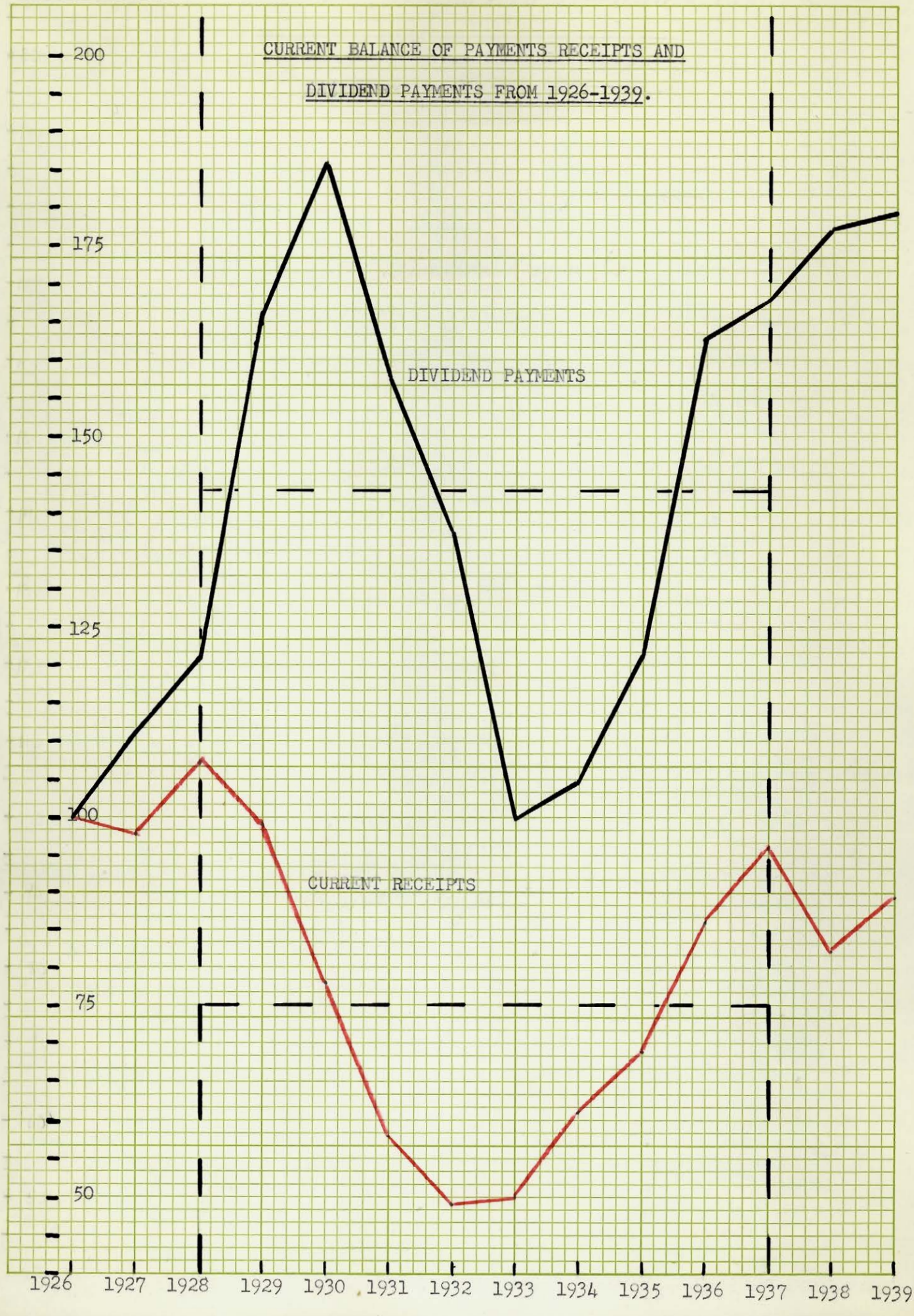
10. Herbert Marshall, Frank A. Southard, Jr., Kenneth H. Taylor, Canadian-American Industry (New Haven: Yale University Press, 1936), p. 279.

Initially, it will be assumed that the average rate of dividend payment to non-residents over the cycle is equal to the rate of interest on foreign debt capital. Under this assumption the burden of servicing an equal amount of equity or debt capital is the same over the cycle. However, because of the different distribution of dividend and interest payments over the cycle, the strain on the balance of payments will vary. If current gross international receipts and dividend payments moved simultaneously in a sine wave fashion, dividend payments would impose a lesser strain than fixed interest payments when current receipts are below their cyclical average. If dividend payments lagged current receipts by one quarter cycle, they would impose more strain on the balance of payments than fixed interest payments when current receipts were below their cyclical average and were falling to a minimum and less after current receipts began to rise. Thus any advantage of dividend over interest payments when current balance-of-payments receipts are below their cyclical average derives not from a responsiveness of dividends to movements in current receipts but from a responsiveness without a significant lag.

In order to investigate whether there is any significant lag, the Canadian experience will be considered. The only period during which there was a major contraction in world trade and for which there is adequate data is from 1928 to 1937. Graph 6 indicates the behaviour of dividend payments to non-residents and current gross international receipts from

GRAPH 6

PERCENTAGE.



1926 to 1939. In order to facilitate the plotting of the two series on the same graph, the 1926 figures of each are given a value of 100 and the figures for subsequent years are expressed in percentage terms. From graph 6, it can be seen that current receipts reached a maximum in 1928. However, the maximum for dividend payments was not reached until two years later. In 1932, current receipts reached their depression minimum of $808 million, about 49% of the 1926 value, while dividend payments did not fall to their minimum until the following year.[11]

If it is assumed that the interest rate on debt capital is equal to the average rate of dividend payment over the cycle, it is possible to obtain a rough measure of the relative balance-of-payments strain of interest and dividend payments in the various years. As Canadian current receipts reached a maximum in 1928 and a pre-World War Two maximum in 1937, this ten year period will be considered to be the duration of the cycle. Total dividends paid to non-residents amounted to $1,355 million.[12] Thus the average is 143% of the 1926 dividend payment of $95 million. Total current receipts over the ten year period amounted to $12,528 million for an average of slightly more than 75% of the 1926 level.[13] It can be seen from graph 6 that from 1931 to 1935 current receipts

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11. Canada, Dominion Bureau of Statistics, The Canadian Balance of International Payments, 1926-1948, p. 153.
12. Ibid., p. 177.
13. Ibid., p. 153.

were below the cyclical average. In 1930, current receipts were so close to the cyclical average that inclusion of this year with the preceding period seems justified. Again, by referring to the graph, it is possible to determine in what years from 1930 to 1935 dividend payments imposed a greater strain on the balance of payments than interest payments. When dividend payments are in excess of the average dividend payments over the cycle, as they were in 1930 and 1931, there is more strain imposed. In 1932, 1933, 1934, and 1935, when dividend payments were below the 143% level, dividend payments imposed less strain on the balance of payments than an interest payment equal to the average of dividends paid over the cycle.

The preceding conclusion is based on the assumption that the average rate of dividend payment to non-residents over the cycle is equal to the interest rate paid on non-resident debt capital. If the average dividend rate was less (more) than the interest rate, the strain of dividend payment has been exaggerated (minimized). It is very difficult to determine whether the assumption is a close approximation to reality. The amount of foreign capital is available only for selected year ends. As a result, the average amount of debt and equity capital outstanding from 1928 to 1937 cannot be established with any accuracy. The selected year ends for which figures are available for the period are 1930 and 1933. Since 1933 is closer to the middle of the period, the amount of capital outstanding at this time will be considered representative of the whole period.[14] The total bonds and debentures

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14. This is not a particularly good approximation since direct investment increased toward the end of the period while portfolio investment declined.

held by non-residents was $3,983 million. Capital stocks of Canadian companies and other corporate assets held abroad at book value amounted to $3,113 million.[15] The total interest payments from 1928 to 1937 inclusive, amounted to $1,637 million while dividend payments amounted to $1,355 million.[16] The average rate of interest on bonds and debentures was 4.10% and the rate of dividend payment on equity capital was 4.35% over the ten year period.

Therefore, the assumption that the rate of interest equals the average dividend rate over the cycle appears to be a good approximation. It is possible to confirm the previous conclusion that dividend payments, when current receipts initially fell below their cyclical average, did tend, to aggravate balance of payments problems to a greater extent than fixed charges. In 1932, when current receipts had fallen to their lowest level, dividend payments were still 37% higher than in 1926 and only slightly below the average dividend payment over the cycle. Dividend payments imposed, even in 1932, almost as great a strain on the balance of payments as a contractual interest payment. It was only in 1933, 1934 and 1935 that the flexibility of dividend payments provided much relief. Dividend payments, on balance, probably did impose a lesser strain on the balance of payments than interest payments, when current receipts were below their cyclical average.

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15. Canada, Dominion Bureau of Statistics, Canada's International Investment Position 1926-1954, p. 74.
16. Canada, Dominion Bureau of Statistics, Canadian Balance of International Payments 1926 to 1948, p. 177.

However, recognition of the substantial lag in the movement of dividend payments with respect to current receipts certainly calls into question eulogies of direct investment. For instance, in a standard text of international economics, it is stated that:

> The major advantage of direct investment over borrowing in the form of debt is that the country in which the investment is made incurs no fixed charges. In a world depression no profits will be made on direct investment. Hence, there is no pressure on the balance of payments.[17]

It has been accepted uncritically that flexibility of dividend payments is a good thing and the only criticism which has been made is that the lag in the responsiveness of dividend payments reduces the benefit accruing from the flexibility. But does dividend flexibility, even if it is instantaneous, mean that there will be less strain on the balance of payments at the time when it is most desired? It has been tacitly assumed that it is when current receipts are below their cyclical average that the strain on the balance of payments is greatest because only then is instantaneous flexibility of dividend payments necessarily an advantage, if the average rate of dividend payment to non-residents over the cycle equals the rate of interest on foreign debt capital.

When there is a serious downturn in a major trading nation, it is usually transmitted to the rest of the trading nations with little delay. It is evident that not all nations

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17. C.P. Kindleberger, International Economics (Homewood: Irwin, 1953), p. 353.

can have balance of payment difficulties at the same time. Consequently it is necessary to establish why Canada should be a nation which encounters balance of payments difficulties when current receipts are below their cyclical average.

If the decline in Canadian exports were greater than the decline in imports, the strain on the balance of payments would be great in the depths of the depression. However, the presumption would appear to be just the opposite. Since Canada is more dependent on foreign trade than most other trading nations, it would be natural to expect that Canadian income would fall relative to world income, if the contraction in world trade were large. Imports might be expected to decline more than exports and produce sufficient foreign exchange so that interest and dividend payments could be met without difficulty. Since a large part of Canadian imports during a prosperous period are investment goods, this is another reason to expect that imports will decline greatly in a depression.[18]

Table 21 shows that, although the decline in imports was relatively greater, it lagged the decline in exports. This is a logical sequence if the depression originates abroad since it will take some time for the decline in income of the export sector to have its full impact on the economy. The period of greatest balance of payments difficulties would appear to be the early years of the depression and not

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18. In 1956, the breakdown of Canadian imports by end use was, investment goods 33%, consumer goods 28%, industrial materials 27%, fuels and lubricants 10% and special items 2%. Canada, Bank of Canada, Statistical Summary Financial Supplement 1956, pp. 100-101.

Table 21. Canada's Exports, Imports and Current Account Balance 1928 - 1937

| | Canadian Exports | Canadian Imports | Current Account Balance |
|---|---|---|---|
| | (Expressed as percentages of 1928 values) | | (millions of dollars) |
| 1928 | 100 | 100 | -32 |
| 1929 | 88 | 105 | -311 |
| 1930 | 66 | 81 | -337 |
| 1931 | 45 | 48 | -174 |
| 1932 | 37 | 33 | -96 |
| 1933 | 40 | 30 | -2 |
| 1934 | 48 | 40 | +68 |
| 1935 | 55 | 44 | +125 |
| 1936 | 71 | 51 | +244 |
| 1937 | 78 | 64 | +180 |

Source: Canada, Dominion Bureau of Statistics, The Canadian Balance of International Payments 1926-1948, pp. 153-58.

necessarily the period when exports were below their cyclical average, as previously considered.

The greater decline in imports and the more active current account balance, as shown in the table 21, should not be accepted as a definite indication of no balance of payments difficulties. The current account surplus might have been induced by a withdrawal of capital. The resulting depreciation of the Canadian dollar might discourage imports, and encourage exports so that the capital could be withdrawn. The Canadian dollar did fall to a substantial discount with respect to the United States dollar, when the United Kingdom went off the gold standard on September 21st, 1931. In December of that year, the Canadian dollar broke to a discount of more than 20%.[19]

19. A.B. Jamieson, Chartered Banking in Canada (Toronto: Ryerson, 1957), p. 76.

The Canadian dollar continued at a discount during most of 1932 and 1933. However, during most of 1934, the Canadian dollar was at a premium indicating that the current account surplus was not primarily induced by a withdrawal of capital. Instead the export of capital must have been mainly equilibering in nature rather than disturbing.[20] This may also have been the case for the rest of the thirties.

It appears that the strain on the balance of payments may be greater during the early phase of a world depression. But, since the dividend payments lag current receipts substantially, it is possible that these payments may still be rising or may not have fallen significantly during the period in which there is the greatest strain on the balance of payments. Hence, flexibility of dividend payments, rather than being an asset, may be a liability.

Since it seems possible that an interest payment may impose less strain that a dividend payment on the same amount of capital, when pressure on the balance of payments is greatest, an increase in fixed liabilities to non-residents may not be too high a price to pay to help to control inflation in Canada. Table 22 shows that in spite of the tremendous inflow of capital since World War Two, the deficit on interest and dividend account as a percentage of current receipts excluding receipts of interest and dividends was only 6.2% in 1956 compared with 17.8% in 1939.

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20. Vernon W. Malach, International Cycle and Canada's Balance of Payments 1921-33 (Toronto: University of Toronto Press, 1954). P. 63 concludes: "that Canada's position as a primary producing country was fortunate in that a sharp diminution of merchandise exports led through the resulting cyclical downswing and sharply decreased imports to a foreign exchange position of relative ease".

Table 22. The Servicing of Foreign Capital in Selected Year 1926-1956.

| Year | Deficit on interest and dividend account | Current receipts excluding interest and dividends(a) | Deficit on interest and dividend account as a % of current receipts excluding interest and dividends. |
|---|---|---|---|
| | (in millions of dollars) | | |
| 1926 | 208 | 1633 | 12.7 |
| 1930 | 289 | 1238 | 23.3 |
| 1932 | 265 | 771 | 34.4 |
| 1939 | 249 | 1400 | 17.8 |
| 1945 | 177 | 3516 | 5.0 |
| 1950 | 384 | 4149 | 9.3 |
| 1953 | 239 | 5326 | 4.5 |
| 1956 | 390 | 6297 | 6.2 |

Source: Canada, Dominion Bureau of Statistics, The Canadian Balance of International Payments 1926-1948, pp. 154-58. Canada, Dominion Bureau of Statistics, The Canadian Balance of International Payments 1956, p. 38.

(a) When aid is extended the resulting exports are included in current receipts and to balance these exports mutual aid is included in current payments. Since no foreign exchange is earned from such exports they have been excluded from current receipts.

A tighter monetary policy in Canada relative to that of the United States will induce an inflow of capital. If this increase were in the form of bonds yielding 5% interest, over $2,500 million in bonds could be sold before the deficit on interest and dividend account rose from 6.2 to 8.2% of the 1956 level of current receipts excluding receipts of interest and dividends. Such an enormous inflow of capital would probably not represent an insupportable burden, for even at 8.2% it would be less than half the 1939 figure. As the effectiveness of monetary and fiscal weapons are now better understood in most of the major trading nations, it may be

possible to avoid large fluctuations in world trade.

It cannot be denied that one of the difficulties of imposing a tighter monetary policy in Canada relative to the United States is that fixed liabilities to non-residents are increased. The preceding analysis has merely attempted to indicate that debt capital may aggravate the balance of payments less than an equal amount of equity capital at the time when the strain of the balance of payments is greatest and that a very large increase in bonds held abroad would be possible before the burden of servicing the debt becomes even half as onerous as before World War Two. Although the increase in liabilities to foreigners is a difficulty inherent in a Canadian monetary policy that is deflationary relative to its United States counterpart, this threat to the independence of Canadian monetary policy is probably not, under present conditions, a very serious one.

The second difficulty besetting a relatively deflationary Canadian monetary policy, is that the resulting appreciation of the Canadian dollar makes it more difficult for Canadian exports to compete in the world markets. By exerting a restrictive effect on exports, inflationary pressures are reduced but in so doing a cost is inflicted upon some sectors of the Canadian economy through a redistribution of income. Those producers of export goods, the price of which is fixed in terms of United States dollars, suffer from a rise in the exchange value of the Canadian dollar.

It was in this connection that Mr. Coyne, the Governor of the Bank of Canada was questioned about the effect of monetary policy on the exchange rate.

> Q. - ... Now, I suggest that the result of that movement (inflow of portfolio investment) has been to accentuate the situation whereby the primary producers are sustaining a tremendous drop in their purchasing power.
>
> A. - Oh, Mr. Tucker, I could not say that it was by virtue of monetary action. It may be that the differential in the spread between the two markets has been a contributing factor, but what difference there would have been in the exchange rate if it had not been a contributing factor it is quite impossible to say.[21]

On the other hand, since Canadians are large consumers of imported goods, real income corresponding to a given level of money income rises as the Canadian dollar appreciates. As people are inclined to think as producers first and consumers second, the advantages stemming from the appreciation of the Canadian dollar are often considerably underestimated.

The appreciation of the Canadian dollar may retard the introduction of some Canadian manufactured goods to world markets. This helps to control inflationary pressure but it probably involves a cost. If buyers and sellers were paired at random, in international markets, then whether a product is offered now or later is of little or no consequence. Pure competition does not prevail in international markets for manufactured goods. Custom plays a very significant role.

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21. Canada, Parliament, Committee on Banking and Commerce Proceedings 1954, vol. II, p. 738.

a Canadian product of comparable quality and price will lack the prestige of products of foreign firms which have long engaged in world markets. Individuals receiving good service from a manufactured product which they have long patronized will naturally be reluctant to substitute a new good for it. Every year that Canadian manufactured goods are withheld from the world markets means that entry into those markets becomes more difficult.

If the appreciation of the Canadian dollar prevents the export of a manufactured product which otherwise could have been profitably marketed abroad, the Canadian economy may as a result have to bear a considerable cost. It has been estimated that the performance of Canadian manufacturing industry as a whole is perhaps 35 to 40 per cent below that of the United States in terms of real output per man-hour. The Royal Commission on Canada's Economic Prospects states that this lower output per man-hour in Canadian manufacturing stems overwhelmingly from the smallness of the Canadian market. Often as a result of the small market, Canadian manufacturers cannot utilize the most efficient machinery which may be economically feasible only for large outputs.[22] The appreciation of the Canadian dollar by restricting exports also may retard the introduction of the most efficient technology. As a result, a rise in real wages in Canada may also be retarded.

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22. Canada, Royal Commission on Canada's Economic Prospects, Preliminary Report, 1956, p. 63.

The indirect effects are probably not very significant. However, the redistribution of income caused by the appreciation of the Canadian dollar is unfortunate for some. The producers whose ox is gored have a legitimate complaint, but in the long run they may also benefit from the control of inflation.

The third and final difficulty in the way of a relatively deflationary Canadian monetary policy is that such a policy might tend to increase the concentration of Canadian industry. As a result of a tighter monetary policy, the chartered banks cannot satisfy as large a proportion of the demands for credit. Only to a small degree does the interest rate function as a device for allocating the limited amount of credit. Instead the rationing of credit is accomplished, to a considerable extent, through necessarily arbitrary decisions of the chartered banks. Even if the Canadian banks do consider the financial requirements of small and large businesses impartially, the foreign capital markets, by their very nature discriminate against the small businesses. A large Canadian corporation, if it does not have sufficient reserves for internal financing and if it cannot find financial accommodation in Canada, probably can obtain funds in a foreign capital market. While the small corporation, if it cannot find funds in Canada, will have to do without. A tighter monetary policy may effectively restrain the small enterprise, but the large corporation that is capable of borrowing abroad is not subject to the same restraint. In addition, the investment programme of Canadian subsidiaries of United States

corporations cannot be easily influenced by Canadian monetary policy, since funds may be obtained from the parent firm.

The importance of these factors cannot be easily determined. The large enterprise probably always has an advantage in obtaining funds. If it did not borrow abroad it could probably obtain the funds in Canada, although not on such favourable terms. A large firm can probably expand whether or not it borrows abroad and if the large firm does borrow abroad it may even leave funds available to smaller enterprises. This difficulty is not peculiar to Canadian monetary policy, but reduces to one of the usual criticisms of monetary policy: it does not have the same impact on all sectors of the economy.

In conclusion, it can certainly be stated that a flexible exchange rate, by insulating the Canadian money supply from capital movements, has extended the power of the central bank to pursue an independent monetary policy. Capital movements exert their influence by changing the velocity of circulation. There can be no doubt that foreign capital permits the Canadian economy to cut a much larger coat with a smaller rise in price than would be possible by utilizing only domestic resources. But, if resort to an outside capital market were not possible, the monetary authorities might be able to reduce the dimensions of the coat so that there was an even smaller rise in price. Foreign investment, the factor which has provided so much assistance to the growth of the Canadian economy, does impose

limitations on monetary policy. These limitations would seem to be exceedingly small price to pay for the benefits which Canadians derive from the willingness of non-residents to invest in Canada.

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