The Hedging of Commercial Transactions Between U.S. and Canadian Residents: A View from the United States

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For some time the air has been thick with recommendations to allow more flexibility in exchange rates. Among the reasons why these recommendations have gone largely unheeded, a prominent place must be given to the fear that international trade would be impaired. In particular, it is commonly alleged or implied that efficient facilities for hedging against movements in exchange rates would not be available if greater flexibility were permitted.[1]

The (presumably temporary) floating of several major currencies provides some opportunities to investigate this matter. This paper addresses the question whether efficient exchange-market facilities have been available for hedging commercial transactions between U.S. residents and Canadian residents since the Canadian dollar was floated on June 1, 1970. In this investigation two approaches are used, both of which examine evidence south of the border. The first approach analyzes information provided by U.S. commercial firms which trade with parties in Canada; the second examines evidence supplied by professional foreign-exchange traders.

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[1] For example, see H.S. Houthakker, "Exchange Rate Adjustment," in U.S., Congress, Subcommittee of the Joint Economic Committee, *Factors Affecting the United States Balance of Payments,* 87th Cong., 2d sess., 1962, pp. 292-93, and Giuliano Pelli, "Why I Am Not in Favor of Greater Flexibility of Exchange Rates," in *Approaches to Greater Flexibility of Exchange Rates,* ed. by George N. Halm (Princeton, N.J.: Princeton University Press, 1970), pp. 203-8.

I. The Evidence from Commercial Firms

The literature is replete with speculation about the effects of exchange-rate flexibility on international trade. In view of the many pages that have been published on the subject, it is surprising that so little is available on the attitudes and experiences of the international traders themselves.[2] There is no dearth of comment from economists or from those whose primary business is foreign-exchange trading; but one looks almost in vain to find statements by the businessmen whose international transactions are the ultimate object of concern. Admittedly, the experiences of businessmen are not the only relevant evidence for appraising the efficiency of the forward market for foreign exchange. But an evaluation which ignores their experience is probably no more useful than an evaluation of the railroad-commuter service which ignores the experience of the passengers.

In an attempt to learn something about this business experience, we posed a few questions in April and May to some businessmen in New England who transact business with parties in Canada, since these transactions presumably would have been complicated by any difficulties encountered in hedging in the forward-exchange market.[3] The first part of this paper examines the responses to our questions.

A. The Character of the Respondents

The recipients of our questionnaire were selected from the *Directory of United States Importers, 1969* and from the *1969-1970 Directory of International Trade of Greater Boston.*[4] From these directories we selected all those New England firms which are designated as transacting business for their own account with Canadians or with the world at large. There were 418 such firms. To each of these firms we sent the questionnaire and explanatory letter

[2] For an exception, see John H. Young and John F. Helliwell, "The Effects of Monetary Policy on Corporations," in *Appendix Volume, 1964,* by Royal Commission on Banking and Finance (Ottawa, Canada: Roger Duhamel, F.R.S.C., 1965), pp. 419-26.

[3] In devising these questions I benefited from the comments of Edward C. Stanger, Assistant Treasurer, The Gillette Company. Responsibility for any deficiencies is, of course, my own.

[4] The first is published by the *Journal of Commerce* and the second by the Greater Boston Chamber of Commerce.

that are reproduced in the appendix to this paper; 411 of these questionnaires apparently reached the parties to which they were addressed. We received replies from 183 firms, 27 of which declined to answer the questionnaire, usually on the grounds that their business experience did not qualify them to answer. Thus we had 156 completed questionnaires with which to work.

Respondents were asked to identify (1) the nature of their business and (2) the general nature of their business with Canadians. These questions were designed to ascertain whether certain lines of business experienced more difficulty than others from any inefficiencies in the forward-exchange market. Of course, the responses are not easily summarized. One summarization which can be made is that, of the firms replying to the first question, 103 can be classed as manufacturers, 11 as wholesalers, 11 as merely exporting or importing or as doing both, 5 as manufacturers and wholesalers, 5 as merchandisers, 1 as a retailer, and 19 as others the nature of whose operations was not indicated. With respect to the second question, it can be said that 11 of the respondents purchased from Canadians, 96 sold to Canadians, and 10 conducted both purchases and sales.

Recipients of the questionnaire were also asked to report their total assets and sales in 1970, on the possibility that difficulties encountered in the forward-exchange market might be correlated with the size of the firm. Tables 1 and 2 present frequency distributions of assets and sales based on responses to this question.[5]

B. Questions Relating to the Foreign-Exchange Market

The questions relating to the foreign-exchange market were generally ordered in a logical sequence in the questionnaire, and we shall summarize the responses to these questions in the same order.

Question 1. After June 1, 1970, did you at any time decide against entering into a transaction with a Canadian resident on the grounds that it would be too expensive or difficult to buy or sell Canadian dollars forward?____ . If so, please explain.

[5] While it would have been interesting to have had more very large firms included in the survey, the inclusion of the smaller firms is probably more important for the purposes of our inquiry. Had the smaller firms been poorly represented, our results might well have been questioned on the grounds that the "little fellows" would suffer most from difficulties in the forward-exchange market while the "big fellows" could take care of themselves.

TABLE 1

NUMBER OF RESPONDING FIRMS SPECIFYING SIZE OF ASSETS IN 1970, BY ASSET SIZE

Asset Size (in thousands of dollars)	Number of Firms
$ 100 and under $ 500	20
500 and under 1,000	16
1,000 and under 5,000	18
5,000 and under 10,000	9
10,000 and under 50,000	10
50,000 and under 100,000	2
100,000 and under 500,000	4
over 500,000	4
Total number of firms	93

TABLE 2

NUMBER OF RESPONDING FIRMS SPECIFYING VOLUME OF SALES IN 1970, BY SALES VOLUME

Sales Volume (in thousands of dollars)	Number of Firms
$ 100 and under $ 1,000	20
1,000 and under 2,000	18
2,000 and under 5,000	15
5,000 and under 10,000	14
10,000 and under 20,000	10
20,000 and under 50,000	8
50,000 and under 100,000	4
over 100,000	7
Total number of firms	96

There were no affirmative answers to this question.

Question 2. Did you enter into or complete a commercial or financial transaction with a Canadian resident at any time after June 1, 1970?_____If so, please proceed to the next question. If not, please return this questionnaire without answering any of the remaining questions *except numbers 12 through 16.*

There were 123 affirmative replies.

Questions 4a and 4b. Have you been asked by a resident of Canada to make or accept payment in Canadian dollars on transactions of a kind which before June 1, 1970, were executed in U.S. dollars?_____. If so, can you explain why? If you did not agree to a request to make or accept payment in Canadian dollars, would you explain why?

Difficulties encountered by Canadians in buying or selling U.S. dollars forward might have led them to ask that transactions be denominated in Canadian dollars. However, only 2 of the 120 replies to this question were affirmative, and neither offered an explanation. Subsequently, in the course of interviews, both of these respondents maintained that the floating of the Canadian dollar was not responsible for the requests by their Canadian customers to pay in Canadian dollars. Indeed, one of the respondents reported that his customers had made this request before the float and that he had accommodated them because, as a textile manufacturer, he was "happy to accept any kind of money" (and delighted to receive Canadian dollars). The other respondent believed that the request by one of his customers to discharge a debt in Canadian dollars was just one more nuisance tactic in a strategy designed to avoid making any payment at all.

Question 5. Have you entered into or completed transactions with Canadian residents since June 1, 1970, involving your payment or your receipt of Canadian dollars?_____. If so, please proceed to the next question. If not, please return this questionnaire without answering any additional questions *except numbers 12 through 16.*

To this question there were 23 "yes" answers.

Question 6. Have you generally tried to sell or buy forward the Canadian dollars involved in the transactions mentioned in question 5?_____. If not, why not?

Of the 23 firms responding affirmatively to the preceding question, 20 answered, "No," to this question. The reason most commonly given for this negative answer was that the Canadian-dollar amounts involved were "too small"; this reason was supplied either on the questionnaire or in follow-up interviews by 10 firms receiving Canadian dollars and by 3 firms making payments in Canadian dollars. Of course, the amount of Canadian dollars that is considered "too small" to warrant hedging is a function of the expected behavior of the exchange rate, among other things, and several firms noted, explicitly or implicitly, that the rate had not fluctuated enough for them to consider it worthwhile to enter the forward market. As one respondent put it, "We have bigger problems than the fluctuations in the exchange rate"; this respondent reported receipts of up to 2,000 Canadian dollars a day, usually with advance notice of 30 days.

Other reasons were also given for abstaining from dealings in the forward market. Two firms gave the cryptic response that they abstained because of their relationships with Canadian subsidiaries. Four others stated either that they did not know enough about the forward-exchange market or, making essentially the same point in other words, that they were not foreign-exchange "specialists" or "speculators."

This reluctance to enter the forward-exchange market on grounds of ignorance or on grounds that the amounts involved are "too small" invites speculation as to whether the reluctant firms constitute an untapped potential market for the services of professional foreign-exchange traders. Might commercial banks be able to demonstrate to these firms that it is simple and relatively costless for the firms to eliminate one source of uncertainty by dealing in the forward market? Banks once generally believed that the consumer-loan business would not be profitable, but subsequent events have shown that such small transactions can be highly remunerative. To be sure, the firms in question have not indicated a desire for the services of forward-exchange traders, but this attitude might be subject to change; a major *raison d'etre* of the advertising profession is that wants can be created. On the other hand, the number of firms with small Canadian-dollar transactions suitable for hedging may not be large enough to warrant a promotional effort. We do not wish to prejudge the issue, but it seems worth raising.

Question 7. Have any of your requests to buy or sell Canadian dollars forward been denied by a bank? ____. If so, why?

None of the respondents answered in the affirmative.

Firms were asked to answer questions 8-11 only if they had had the experience of buying or selling Canadian dollars forward. Four firms answered this block of questions.

Question 8. What is the smallest volume of Canadian dollars you have bought or sold forward in a single transaction?____. (An approximate figure will do.)

The smallest volume specified was 50,000 to 100,000. One firm stated that it never dealt in amounts of less than 1 million.

Question 9. In buying or selling Canadian dollars forward, what is the longest term to maturity you have ever contracted for?____. Have you found it impossible to obtain desired maturities?____. If so, please explain.

Ten months was the longest term to maturity. Another firm specified nine months. No respondent indicated difficulty in obtaining desired maturities.

Questions 10a and 10b. Do you generally shop around among the banks for the most favorable exchange rate when buying or selling Canadian dollars forward?____. If not, why not? If you do shop around, do you frequently encounter variations in the forward-exchange rates quoted by different banks?____. Could you illustrate the variation encountered?

Only one of the four firms answering this question stated that it did shop around, and this firm professed to find only "small" variations in the rates quoted by different banks. Of the other three firms, one stated that it did not shop around because the amounts it traded forward were "small" ($100,000 or more), and two reported that they were satisfied with the performance of the banks which served them.

When interviewed, the spokesman for one of these latter two firms was quite specific about his relationship with his bank. Over the years he had received much assistance from his bank, and he knew the key personnel there. For the sake of his relationship with the bank, to obtain its assistance in the future, he would be willing occasionally to accept a somewhat less favorable forward rate from

his bank than other banks might offer. However, he added that he could tell if his bank's quotation was far out of line by referring to the rates published in the newspapers.

Question 11. Are the forward-exchange rates quoted by banks generally less favorable for small transactions than for large transactions?_____. If so, could you illustrate?

One firm answered, "Yes," but gave no illustration. The others' response to the first part of the question was that they did not know.

Question 12. What improvements, if any, would you like to see made in the market for forward Canadian dollars?

There were no suggestions for change. The only specific comment on the functioning of the market was by a firm which reported that a particular bank gave excellent service.

Question 13. Please add here any other comments you may care to make.

A variety of comments were offered. Of special interest are the following:

> "Since payments are made in American dollars we have no problems."
> "No problems in dealing with Canadian firms. Find that they pay in American dollars with no questions asked."
> "We are not affected one way or the other between the 'Floating' Canadian dollar and the former Official Fixed Exchange Rate."
> "Cut currency loose – let them find their own level."
> "U.S. and Canadian exchange need no longer be pegged. Free market has gone just about to par and we are pleased."

This last comment is suggestive of a number of others that were received. While no firm complained about the functioning of the forward-exchange market or about exchange-rate uncertainty as such, seven firms said that they would like to see parity established between the U.S. and Canadian dollars. As one respondent put it, "We feel with the future offering greater opportunities for greater trade between both countries, business should be conducted with a

comparable dollar value. The effect would eliminate unnecessary red tape for all concerned."

Interviews with this respondent and the six others recommending parity revealed a common motivation. All reported that an exchange rate of unity would simplify their bookkeeping; thus their primary desire really was for the exchange rate to be fixed, with parity viewed as the ideal form of fixity. Understandably, two of the spokesmen giving this report occupied the position of comptroller.

This bookkeeping motivation was not the only one at work, however. The three firms which argued most strongly for fixity complained that continual variations in the exchange rate give rise to corresponding variations in the Canadian-dollar prices of their wares, leading to haggling, misunderstandings, and ill will with their Canadian customers. This complaint would be more understandable if the Canadian dollar had depreciated rather than appreciated in terms of the U.S. dollar after it was allowed to float; nevertheless, the president of one firm insisted that the float had provoked such arguments with his customers over price that he would prefer a fixed exchange rate to a continuing appreciation of the Canadian dollar.

The executive vice-president of another firm took the opposite view, saying that while fixity would be a bookkeeping convenience, he would be happy to abandon it in return for a continuing Canadian-dollar appreciation, which would stimulate his firm's sales in Canada. He went on to volunteer that the exchange rate should not be held at a disequilibrium level; such policies often led to large changes in the rate, and these caused his firm more concern than smaller, more frequent changes. Thus his firm hedged transactions denominated in the pound sterling, since it did not want to take the risk of a sudden sizable loss, but it would not hedge these transactions if the pound were allowed to float, since the firm could accommodate (and perhaps anticipate) small frequent losses from exchange-rate variations. This comment, it should be noted, runs directly counter to the common assumption that the floating of a currency will increase the demand for forward-exchange-hedging facilities.

II. The Evidence from Foreign-Exchange Traders

The second body of evidence presented in this paper was obtained primarily from the foreign-exchange departments of Boston's leading commercial banks. In this part of the investigation, we tried to ascertain whether in the exchange market the costs of hedging

commercial transactions between U.S. and Canadian residents have risen since the Canadian dollar was allowed to float.

A. Data on the Cost of Hedging

There has been much confusion over what is meant by "the cost of hedging." To begin with, there is more than one way of hedging against future movements in an exchange rate; for example, an exporter who expects to receive a foreign currency three months hence may, at least in theory, borrow the same amount of the foreign currency for the same term and sell it in the spot market now. Our interest, however, is in the cost of hedging in the forward-exchange market. In this connection, it has been argued that once a currency is floated, the demand for forward cover will rise substantially, and that the increased demand will be satisfied only partially and at much higher cost than before the float. On the other hand, there are many precedents to suggest that financial facilities can be developed or transformed fairly rapidly in response to changed conditions, the development of the Eurodollar market being a recent example of some import.

Broadly speaking, the cost to society of the services of any class of middlemen is represented by the difference between their receipts for the things they sell and their payments for the same things. In the case of foreign-exchange traders, this differential, or gross markup, is the spread between the "bid" and the "asked"; it is *not* the forward discount or premium.[6] Tables 3-6 present data on this spread for several currencies, and Tables 3 and 4 express the spread as a ratio of the bid, or as a percentage markup. Note that the data relate to interbank quotations in the New York market. While they understate the net cost to any but the largest firms of the services of foreign-exchange traders, they probably provide a good indication of trends in costs to firms of all sizes.

Table 3 shows that for the month of June 1970, the first month after the Canadian dollar was floated, the percentage markup charged on trades of Canadian dollars against U.S. dollars was approximately double the percentage markup charged in May, for both spot and 90-day forward transactions. No doubt these large markups reflected the "shock effect" of the introduction of the float, as the markups

[6] Cf. Fritz Machlup, "The Forward-Exchange Market: Misunderstandings between Practitioners and Economists," in *Approaches to Greater Flexibility of Exchange Rates, op. cit.*, pp. 297-306.

TABLE 3

ASKED MINUS BID/BID FOR SELECTED CURRENCIES: MONTHLY AVERAGES, JANUARY, 1970-JUNE, 1971

(Based on Wednesday Closing Interbank Quotations in U.S. Dollars in New York)

	Canadian dollar		British pound		German mark		French franc		Dutch guilder	
	Spot	90 days forward	Spot	90 days forward	Spot	90 days forward	Spot	90 days forward	Spot	90 days forward
1970										
January	.000222	.000436	.000094	.000219	.000115	.000402	.000329	.001078	.000159	.000453
February	.000228	.000456	.000078	.000192	.000138	.000357	.000122	.000625	.000182	.000431
March	.000215	.000402	.000094	.000208	.000126	.000368	.000260	.000764	.000148	.000420
April	.000215	.000397	.000091	.000183	.000164	.000356	.000193	.000651	.000163	.000390
May	.000242	.000429	.000088	.000182	.000102	.000262	.000207	.000658	.000204	.000408
June	.000467	.000958	.000088	.000183	.000125	.000352	.000172	.000796	.000215	.000609
July	.000248	.000515	.000084	.000184	.000082	.000300	.000124	.000499	.000181	.000468
August	.000433	.000611	.000074	.000136	.000079	.000250	.000190	.000762	.000158	.000483
September	.000336	.000610	.000092	.000337	.000072	.000177	.000138	.000623	.000107	.000447
October	.000281	.000472	.000074	.000200	.000114	.000216	.000164	.000666	.000135	.000393
November	.000230	.000408	.000079	.000163	.000045	.000250	.000086	.000363	.000146	.000382
December	.000336	.000498	.000055	.000151	.000091	.000318	.000138	.000581	.000135	.000360
1971										
January	.000278	.000507	.000104	.000219	.000159	.000341	.000121	.000449	.000056	.000225
February	.000252	.000454	.000046	.000266	.000068	.000273	.000155	.000415	.000101	.000336
March	.000231	.000473	.000078	.000238	.000091	.000282	.000124	.000470	.000126	.000359
April	.000240	.000490	.000082	.000281	.000079	.000340	.000172	.000483	.000124	.000516
May	.000227	.000628	.000072	.000197	.000530	.001056	.000293	.001259	.000532	.001258
June	.000245	.000458	.000091	.000224	.000149	.000517	.000249	.001023	.000517	.001151

Source: Computed from data provided by the First National Bank of Boston.

TABLE 4

ASKED MINUS BID/BID FOR SELECTED CURRENCIES: RANGE WITHIN MONTH, JANUARY, 1970-JUNE, 1971

(Based on Wednesday Closing Interbank Quotations in U.S. Dollars in New York)

	Canadian dollar		British pound		German mark		French franc		Dutch guilder	
	Spot	90 days forward	Spot	90 days forward	Spot	90 days forward	Spot	90 days forward	Spot	90 days forward
1970										
January	.000134	.000027	.000042	.000042	.000092	.000184	.000277	.000349	.000046	.000092
February	.000107	.000215	.000021	.000042	.000092	.000231	.000070	.000277	.000000	.000182
March	.000000	.000107	.000063	.000187	.000046	.000323	.000138	.000348	.000091	.000091
April	.000107	.000054	.000042	.000042	.000047	.000092	.000139	.000279	.000091	.000136
May	.000108	.000108	.000021	.000042	.000137	.000182	.000138	.000070	.000136	.000136
June	.000307	.000511	.000021	.000042	.000090	.000045	.000069	.000763	.000226	.000447
July	.000104	.000207	.000000	.000043	.000137	.000227	.000138	.000282	.000090	.000226
August	.000408	.000409	.000084	.000105	.000091	.000136	.000207	.000555	.000090	.000090
September	.000510	.000613	.000042	.000212	.000091	.000249	.000000	.000138	.000135	.000277
October	.000102	.000153	.000042	.000126	.000137	.000182	.000172	.000311	.000090	.000135
November	.000102	.000204	.000021	.000105	.000000	.000499	.000069	.000208	.000090	.000135
December	.000459	.000714	.000042	.000126	.000091	.000138	.000207	.000276	.000135	.000179
1971										
January	.000305	.000405	.000083	.000167	.000181	.000409	.000207	.000208	.000045	.000180
February	.000503	.000707	.000062	.000313	.000046	.000181	.000069	.000138	.000090	.000090
March	.000151	.000201	.000083	.000167	.000091	.000137	.000138	.000070	.000135	.000090
April	.000100	.000050	.000083	.000187	.000091	.000362	.000069	.000138	.000180	.000448
May	.000303	.000903	.000042	.000083	.000698	.000692	.000483	.001930	.000977	.001939
June	.000205	.000301	.000166	.000207	.000090	.000438	.000346	.000415	.001470	.001589

Source: Computed from data provided by the First National Bank of Boston.

TABLE 5

ASKED MINUS BID IN U.S. DOLLARS FOR SELECTED CURRENCIES: MONTHLY AVERAGES, JANUARY, 1970-JUNE, 1971

(Based on Wednesday Closing Interbank Quotations in New York)

	Canadian dollar		British pound		German mark		French franc		Dutch guilder	
	Spot	90 days forward	Spot	90 days forward	Spot	90 days forward	Spot	90 days forward	Spot	90 days forward
1970										
January	.000206	.000406	.000225	.000525	.000031	.000109	.000059	.000194	.000044	.000125
February	.000212	.000425	.000188	.000462	.000038	.000097	.000022	.000112	.000050	.000119
March	.000200	.000375	.000225	.000500	.000034	.000100	.000047	.000138	.000041	.000116
April	.000200	.000370	.000220	.000440	.000045	.000098	.000035	.000118	.000045	.000108
May	.000225	.000400	.000212	.000438	.000028	.000072	.000038	.000119	.000056	.000112
June	.000450	.000925	.000212	.000438	.000034	.000097	.000031	.000144	.000059	.000169
July	.000240	.000500	.000200	.000440	.000022	.000082	.000022	.000090	.000050	.000130
August	.000425	.000600	.000175	.000325	.000022	.000069	.000034	.000138	.000044	.000134
September	.000360	.000600	.000220	.000800	.000020	.000049	.000025	.000112	.000030	.000125
October	.000275	.000462	.000175	.000475	.000031	.000059	.000030	.000120	.000038	.000109
November	.000225	.000400	.000188	.000388	.000012	.000069	.000016	.000066	.000041	.000106
December	.000330	.000490	.000130	.000360	.000025	.000088	.000025	.000105	.000038	.000100
1971										
January	.000275	.000500	.000250	.000525	.000044	.000094	.000022	.000081	.000016	.000062
February	.000250	.000450	.000112	.000638	.000019	.000075	.000028	.000075	.000028	.000094
March	.000230	.000470	.000190	.000570	.000025	.000078	.000022	.000085	.000035	.000100
April	.000238	.000488	.000200	.000675	.000022	.000094	.000031	.000088	.000034	.000144
May	.000225	.000625	.000175	.000475	.000150	.000300	.000053	.000228	.000150	.000356
June	.000240	.000450	.000220	.000540	.000042	.000148	.000045	.000185	.000145	.000325

Source: Computed from data provided by the First National Bank of Boston.

TABLE 6

ASKED MINUS BID IN U.S. DOLLARS FOR SELECTED CURRENCIES: RANGE WITHIN MONTH, JANUARY, 1970 - JUNE, 1971
(Based on Wednesday Closing Interbank Quotations in New York)

	Canadian dollar		British pound		German mark		French franc		Dutch guilder	
	Spot	90 days forward	Spot	90 days forward	Spot	90 days forward	Spot	90 days forward	Spot	90 days forward
1970										
January	.000125	.000025	.000100	.000100	.000025	.000050	.000050	.000062	.000012	.000025
February	.000100	.000200	.000050	.000100	.000025	.000062	.000012	.000050	.000000	.000050
March	.000000	.000100	.000150	.000450	.000012	.000088	.000025	.000062	.000025	.000025
April	.000100	.000050	.000100	.000100	.000012	.000025	.000025	.000050	.000025	.000038
May	.000100	.000100	.000050	.000100	.000038	.000050	.000025	.000012	.000038	.000038
June	.000300	.000500	.000050	.000100	.000025	.000012	.000012	.000138	.000062	.000125
July	.000100	.000200	.000000	.000100	.000038	.000062	.000025	.000050	.000025	.000062
August	.000400	.000400	.000200	.000250	.000025	.000038	.000038	.000100	.000025	.000025
September	.000500	.000600	.000100	.000500	.000025	.000069	.000000	.000025	.000038	.000077
October	.000100	.000150	.000100	.000300	.000038	.000050	.000031	.000056	.000025	.000038
November	.000100	.000200	.000050	.000250	.000000	.000138	.000012	.000038	.000025	.000038
December	.000450	.000700	.000100	.000300	.000025	.000038	.000038	.000050	.000038	.000050
1971										
January	.000300	.000400	.000200	.000400	.000050	.000112	.000038	.000038	.000012	.000050
February	.000500	.000700	.000150	.000750	.000012	.000050	.000012	.000025	.000025	.000025
March	.000150	.000200	.000200	.000400	.000025	.000038	.000025	.000012	.000038	.000025
April	.000100	.000050	.000200	.000450	.000025	.000100	.000012	.000025	.000050	.000125
May	.000300	.000900	.000100	.000200	.000200	.000200	.000088	.000350	.000275	.000550
June	.000200	.000300	.000400	.000500	.000025	.000125	.000062	.000075	.000412	.000450

Source: Computed from data provided by the First National Bank of Boston.

have generally been much lower in the months after June 1970. During the first six months of 1971 the markups have generally been slightly, but only slightly, higher than during the five months of 1970 preceding the flotation. On the basis of these data it seems that the percentage markups might eventually stabilize at the levels that prevailed before the Canadian dollar was floated.

To be sure, the percentage markups on 90-day forward transactions in Canadian dollars have been about twice as high as for spot transactions in recent months; but roughly the same relationship prevailed in the first five months of 1970, and there are plausible reasons for such a relationship which have nothing to do with the flexibility of the exchange rate. One is that the volume of business in the forward market for a particular future date is surely much smaller than the volume of business in the spot market; and, among other things, in a smaller market it is generally harder for an intermediary to find an offer (or offers) to correspond with a specific bid, or to find a bid (or bids) to correspond with a specific offer. Another reason for the relationship is that there is less credit risk for a bank in a spot transaction than in a forward contract, in which the bank's clients promise to discharge their obligations at a future date.

Table 3 also shows that the percentage markups on 90-day forward transactions in Canadian dollars were little different from the markups on corresponding transactions in French francs over the period from July 1970, through April 1971 (that is, over the period after the Canadian dollar was floated but before the German mark and Dutch guilder were floated). On the other hand, these markups on Canadian-dollar transactions generally were noticeably higher than the corresponding markups for guilders, still higher than the corresponding markups for marks, and occasionally three or four times as great as the corresponding markups for sterling; are these discrepancies to be accounted for by the floating of the Canadian dollar?[7]

A negative answer is suggested by at least two considerations. First, as we have already noted, the markups on forward transactions in Canadian dollars in recent months have not been much above the markups in 1970 before the flotation. Second, factors other than the flexibility of the exchange rate *per se* play a major role in determining the spread between the bid and the asked. Among these factors are the size of the markets for the currencies involved, their

[7] The percentage markup on each of these currencies was about the same for 30 and 60-day forward transactions as for 90-day forward transactions.

stability, and their freedom from exchange controls.[8] While there are no data on the total volume of transactions in all the foreign-exchange markets of the world, the low transactions costs of dealing in sterling are no doubt explained largely by the vastness of the sterling market. It should also be noted that the spread between bid and asked widens appreciably in a nervous market; therefore, given the history of sterling since World War II, it is not altogether fair to the Canadian-dollar market to compare the spread on the Canadian-dollar with the spread on the pound sterling during only the recent halcyon period for sterling.

B. Other Evidence from Foreign-Exchange Traders

Cost is not the only consideration in appraising the functioning of a market. Certain other relevant information was supplied by professional foreign-exchange traders in Boston and by staff of the Foreign Department of the Federal Reserve Bank of New York.

The four major Boston traders all report that they have not experienced an increased demand for forward cover of transactions denominated in Canadian dollars in the period since the currency was floated. One trader volunteered that this phenomenon was attributable at least in part to a lack of knowledge about forward currency on the part of many nonbanking firms, and he stated that he had been trying to educate some of his bank's customers on the facilities that are available. All traders report that the float is causing them no difficulty, and some see it as an opportunity to enhance their profits through speculation. In New York the situation is reported to be somewhat different; apparently the demand for forward cover has increased somewhat, and reaction among traders to the float is mixed.

Forward cover in the amount of $50,000 is considered very small, but some traders expressed a willingness to provide cover in even smaller amounts for the bank's best customers. A term of one year is regarded as long, but, again, for a good customer a bank would negotiate a 2-year or perhaps even a 3-year contract.

[8] Alexander Swoboda, "Vehicle Currencies and the Foreign Exchange Market: the Case of the Dollar," in *The International Market for Foreign Exchange,* ed. by Robert Z. Aliber (New York: Frederick A. Praeger, Publishers, 1969), pp. 30-40.

III. Conclusions

The evidence presented in this study does not support the claim that international trade is impaired by flexibility in the exchange rate. In particular, we have found no confirmation for the argument that there will be a lack of efficient facilities for hedging against movements in exchange rates if greater flexibility is permitted. These conclusions are based on two related classes of evidence, one supplied by commercial firms in New England which trade with parties in Canada, the other by professional foreign-exchange traders in Boston.

These two independent sources are mutually confirming on a number of points. Neither suggests that the flotation of the Canadian dollar has stimulated a substantially increased demand for forward cover. Neither indicates that the cost of forward cover has increased appreciably or that forward cover is unavailable to those who desire it.

To be sure, one reason for these findings is that commercial transactions between Canadian and U.S. firms are commonly denominated in U.S. dollars. Some transactions, however, are expressed in Canadian dollars. Moreover, the U.S. firms queried have not been requested by their Canadian customers or suppliers to start denominating transactions in Canadian dollars, a request which might well have been made if Canadian firms had experienced difficulties in hedging. Further indirect evidence is provided by the continuing growth of trade between the United States and Canada since the Canadian dollar was floated; for example, the total value of merchandise trade between the two countries rose by nearly $500 million from the first quarter of 1970 to the first quarter of 1971, little different from the average change for the corresponding period over the three preceding years.[9]

Our conclusions, of course, are based solely on the U.S.-Canadian experience since June 1, 1970. Other experiments with flexible exchange rates might yield different results. But perhaps the information presented in this paper will go a little way toward allaying the common concern that more exchange-rate flexibility would mean less trade.

Like most research projects, this one raises questions for still further research. In particular, we are somewhat puzzled by the fact

[9] *Survey of Current Business:* June, 1971, and December issues for 1968-1970.

that Boston's major commercial banks have experienced no discernible increase in the demand for forward cover on Canadian-dollar transactions since the Canadian dollar was floated. A related question is whether there is a potential market for forward cover among at least those U.S. commercial firms whose Canadian-dollar business consists of relatively small transactions.

APPENDIX

FEDERAL RESERVE BANK

OF BOSTON

BOSTON, MASSACHUSETTS 02106
Telephone (617) 426-7100

Dear _________:

The purpose of this letter is to ask your cooperation in a study of the effect of the "floating" Canadian dollar on transactions between U.S. and Canadian residents. We are writing to you because your firm is listed as dealing with Canadians (or with the world) in one or both of the following publications:

Directory of United States Importers, 1969
(published by the *Journal of Commerce)*
1969-1970 Directory of International Trade of Greater Boston
(published by the Greater Boston Chamber of Commerce).

We should deeply appreciate your taking a few minutes to respond to the enclosed questionnaire. The questions probably do not request information that you would consider highly sensitive; nevertheless, your replies will not be attributed to you in any way in our communications with others. Indeed, you may not wish to divulge the name of your firm, although we hope you will do so in the space provided on the questionnaire so that we will be able to contact you if questions arise regarding your responses.

If enough firms respond to the questionnaire, a good foundation will be laid for our study, and toward the end of this year the results will be made available upon request to all who are interested. As you may know, there is widespread interest in the effects of a floating exchange rate and, more specifically, in the kind of facilities that are available for hedging against changes in the rate. We hope that you will be sufficiently interested or sympathetic with our study of this subject to complete the questionnaire. The questions are ordered so that you may find you are asked to supply only a few brief answers.

A stamped, addressed envelope is provided for your convenience in returning the questionnaire. If you have any questions about the questionnaire or the study, please contact Mr. Norman S. Fieleke, Assistant Vice President and Economist at this bank, who is responsible for the study.

Thank you for your cooperation. If at all possible, please return this questionnaire no later than May 21, 1971.

Sincerely yours,

Frank E. Morris
President

QUESTIONS FOR FIRMS IN NEW ENGLAND TRANSACTING BUSINESS WITH CANADIAN RESIDENTS

Note: For purposes of this questionnaire, "Canadian resident" means any party in Canada, including individuals or firms or other organizations.

1. *After June 1, 1970,* did you at any time decide against entering into a transaction with a Canadian resident on the grounds that it would be too expensive or difficult to buy or sell Canadian dollars forward? ________. If so, please explain.

2. Did you enter into or complete a commercial or financial transaction with a Canadian resident at any time after June 1, 1970? ________. If so, please proceed to the next question. If not, please return this questionnaire without answering any of the remaining questions *except numbers 12 through 16.*

3. What has been the *general* nature of your business with Canadian residents since June 1, 1970?

4a. Have you been asked by a resident of Canada to make or accept payment in Canadian dollars on transactions of a kind which before June 1, 1970, were executed in U.S. dollars?________. If so, can you explain why?

b. If you did not agree to a request to make or accept payment in Canadian dollars, would you explain why?

5. Have you entered into or completed transactions with Canadian residents since June 1, 1970, involving your payment or your receipt of Canadian dollars?________. If so, please proceed to the next question. If not, please return this questionnaire without answering any additional questions *except numbers 12 through 16.*

6. Have you generally tried to sell or buy forward the Canadian dollars involved in the transactions mentioned in question 5?________. If not, why not?

7. Have any of your requests to buy or sell Canadian dollars forward been denied by a bank?________. If so, why?

Note: If you have never bought or sold Canadian dollars forward, please return this questionnaire without answering any additional questions *except numbers 12 through 16.*

8. What is the smallest volume of Canadian dollars you have bought or sold forward in a single transaction?________. (An approximate figure will do.)

9. In buying or selling Canadian dollars forward, what is the longest term to maturity you have ever contracted for?________. Have you found it impossible to obtain desired maturities?________. If so, please explain.

10a. Do you generally shop around among the banks for the most favorable exchange rate when buying or selling Canadian dollars forward?________ . If not, why not?

b. If you do shop around, do you frequently encounter variations in the forward exchange rates quoted by different banks?________. Could you illustrate the variation encountered?

11. Are the forward exchange rates quoted by banks generally less favorable for small transactions than for large transactions?________. If so, could you illustrate?

12. What improvements, if any, would you like to see made in the market for forward Canadian dollars?

13. Please add here any other comments you may care to make.

14. The following questions (14a and 14b) are asked merely for the purpose of classifying responses to this questionnaire. Your answers will be held in strict confidence.

a. What is the nature of your business?

b. What were your total assets in 1970?________Total Sales?________

15. Would you please state the name of your firm:

16. Date you completed this questionnaire: ____________________.

DISCUSSION

GEORGE H. CHITTENDEN

I am delighted with the opportunity to comment on Norman Fieleke's excellent paper, especially before a distinguished group such as this.

There are many interesting points made in the paper and of course there is a lot for the growing fraternity of flexibility fans to cheer about in the paper's conclusions. But let me return to the flexibility a bit later and comment on two or three specific points in the text which I felt were of particular interest.

Of the 123 firms which completed transactions with Canadians since June 1970, only 2 have been asked to settle in Canadian dollars instead of U.S. dollars, and these for insignificant reasons; only 23 firms settled their transactions with Canadians in Canadian dollars, indicating that 100 of the 123 normally settled their business with Canadians in U.S. dollars. This tendency for Americans to do business, not just with Canadians but generally with all foreign markets, in U.S. dollar terms is a natural by-product of our national habit of looking at international business as a relatively minor matter as compared with doing business in our own domestic market. If there is any surprise in this 23 figure it is that it is relatively high. And incidentally this is one reason why the Eastman paper, which, as I understand it, is in a sense the companion piece to the New England survey, has relatively so much more fertile ground to work over on the Canadian side of this two-way marketplace.

Of the 23 firms mentioned as settling transactions in Canadian dollars it is interesting, and again quite typical of the U.S. market as a whole, that only 3 or 4 have used the forward exchange market to any extent. I was amused by the reasons given for not using the forward market – they are so poignant and typical.

George Chittenden is a Senior Vice President at the Morgan Guaranty Trust Company.

In this context Mr. Fieleke raises the question of whether American banks have been derelict in not "selling" the facilities of the spot and particularly the forward exchange markets to their customers. That is a good question and I'll try to give you my explanation. The exchange market and the exchange business are highly technical in nature. The sensible banker should have at his finger tips precise and factual knowledge of the principal foreign exchanges when discussing with customers their foreign exchange exposure problems. At best there are very few men in any U.S. commercial bank who are qualified to give advice in this area. In most U.S. banks about the only men who are both technically qualified and well enough informed on current market conditions to "sell" the facilities of the spot and forward exchange markets are the bank's one or two or three full time foreign exchange traders. And these fellows, by the very nature of their responsibility, simply do not have the time to leave the trading desk to go out and "sell" the customer. Even those able people in the domestic or international divisions of our leading banks who have had the opportunity to participate in and learn the foreign exchange business, once they leave the trading market, lose touch with the subtleties and feel themselves unqualified to give meaningful and useful advice to the customer on these matters.

I'd like also to comment briefly on the corporate comptroller's preoccupation with exchange rate unity and related questions which Mr. Fieleke discussed. The typical comptroller is concerned with reporting profit and loss and valuations to the chief financial officer. Revaluations and devaluations, and the sudden and sizeable impact these events have on his reports and forecasts, give him fits. No wonder he wishes for worldwide currency unity. But in the absence of such unity, he very often will hedge foreign exchange exposures with little regard to the economics involved in the relative cost of hedging versus the risk. He only too often would rather suffer the exchange hedging cost which he can explain as a normal operating expense than run the risk of being criticized for the occasional adjustment to profits necessitated by large parity changes. Conservative financial management of this type is often more expensive over time than reasoned risk taking.

I found the comments of the financial officer which are cited to be a good common plea for stable but free exchange rates and very typical of responsible corporate financial thinking across the country, and perhaps around the world. In discussions with such financial officers I have noticed the recurrent theme that they feel

quite competent to deal with exchange rates which move freely in response to cyclical economic trends. Anything is better, they say, than living with the rigidities and periodic crises and explosions of recent years. They say they and their economists are smart enough to identify prospective exchange rate moves of genuinely free currencies in time to adjust their financial planning to accommodate these moves. But when an out-of-line rate is perpetuated and its inevitable day of reckoning is delayed, they have to go through all sorts of gymnastics, and some of these at considerable cost, to avoid the danger of major loss.

Now I should like to exercise my freedom as a commentator to pursue a few tangential thoughts which the Fieleke paper has prompted.

Right at the start Mr. Fieleke refers to the oft-made suggestion that greater flexibility in exchange rates would militate against efficient hedging facilities to cover normal trade and financial transactions. The Canadian experience of the last year, and in fact the years preceding the 1962 pegging of the rate, provides strong evidence that forward markets for flexible rate currencies can be quite adequate and can at times be even improved in a floating rate situation. A bit later I'll mention a market event which occurred in 1968 during the ufixed-rate period which adds further support to this thesis.

But in using the Canadian example to support his arguments, the floating-rate buff must always remember that indeed the Canadian-U.S. financial relationship is unique in its relative freedom from official intervention in the form of exchange controls, banking regulations, and related obstacles to the free market process of determining money values, both spot and forward.

In contrast, the school which perennially worries about what freely floating exchange rates will do to the forward markets can look today at the havoc, perhaps even total wreckage, of the forward markets for the yen and the major European currencies which have been floating for the past month or months. The markets are thin and erratic; they bear little relationship to interest parities other than to the very short dated Euro-dollar market; and the spreads between bid and asked prices are shockingly wide.

In this context let me read a few comments made by our Morgan Guaranty traders just last week in response to questions from Head Office as to how they felt the floating currencies were performing in the marketplace.

From our London office:

"To confirm our views from London, in general the so-called floating rates do not give a true reflection of the individual currency's worth in the markets, as believe that all central banks concerned are keeping a strict control on rate levels. Secondly, with ever increasing regulations issued by the respective central banks restricting free movement of funds by residents and non-residents alike, it is hitting the genuine commercial requirements of exporters and importers alike. The classic example, of course, is the yen where there is virtually no forward market to operate in and commercial banks there are being strictly controlled on their cash oversold position. With regards to Sterling, the spot market is undoubtedly being controlled by the Bank of England where they are obviously concerned to keep the *de facto* revaluation to as low a level as possible, with restrictions and exchange controls which paradoxically attempt to keep non-resident funds out and resident funds in; we are finding that the forward market is becoming more and more difficult to operate in. In summary, with the exception of the yen, believe there had been some improvement in spot markets generally and also in the forward markets in some of the currencies. Believe that one can operate well with floating rate system providing there is an adequate forward market and that we are not hemmed in more and more by ever increasing control regulations."

From our Paris office:

"Yours of 9/8 regarding comments on the present state of the international financial market. Many international institutions, EEC high commission, financial papers, economists, ETC argue that it is too early to assess success of (A) French two-tier system, (B) Belgian two-tier system, (C) simple floating system such as Germany's and Switzerland's. Fact is that pros and cons about floating cannot be formulated due to world-wide trend toward regulations and restrictions on markets. Fact is that the French two-tier system puts unduly

heavy burden on banking, industry, as well as on whole economy. As to your questions: (1) feel that spot markets are extremely thin creating many difficulties for execution of large client's orders. From our experience would judge that only most urgent, unavoidable commercial business is carried out on the markets these days. Difficulties described are particularly true for markets with total foreign exchange control, such as franc market. As an example Banque De France instructions may indirectly force French banks to abandon the sale of Francs to non-residents at the end of the month because of control of the net external position. Do not need to add comment about untradability of Japanese yen. (2) Volume and efficiency of forward markets are definitely deteriorating. Prohibition of interest payment, limitations as to borrowing and lending in foreign currencies etc. make it tough to maintain markets at all. (3) Let's have free floating without control. It would be fun. However, as we are all living in western style democracies where no politician dares to wear a deflation hat, we'll have to swallow compromise solutions such as fixed rate systems with realignments and subsequent introduction of wider bands. (4) Paris euro-market will be dormant as long as Banque De France August 31 instructions are in force requiring banks to maintain the August 3, 1971 balance sheet situation vis-a-vis non-residents to prohibit increase of net debit of French banking system to non-residents.

This theme repeats itself in the analysis of our traders in Milan, Frankfurt, Brussels, Tokyo, and Zurich with special comment on the technical problems of each of those markets.

The Fieleke paper indicates that except for a brief period, while the market adjusted to the Canadian dollar float in June and July 1970, and marginally wider spreads appeared between bid and ask prices, there has been little difficulty either for commercial firms or for bank traders in obtaining such forward Canadian/U.S. dollar cover as they required. This is essentially correct and I am sure that if the Fieleke questionnaire had gone country-wide the answers obtained from the smallish New England sample would be consistently repeated.

In fact the questionnaire is so good and to the point that I wish it could have been extended across the country. Perhaps our energetic hosts can persuade the Federal Reserve Banks in New York, Chicago, Minneapolis, and San Francisco to do a similar job with respect to the commercial and banking interests in their districts. As a matter of fact, there is a lot of Canadian business and Canadian exchange done in the Cleveland-Detroit area, in the Dallas district and the Pacific Northwest as well as in Southern California. And I'm sorry to have to tell you that not all the exchange business related to U.S. commercial involvement with Canada in those parts of the country clears through the New York market – try though we do!

One of the difficulties of sampling New England's involvement with Canada is that it does not pick up the problems and hedging practices of such important industries and activities as the automobile manufacturers, the grain dealers, the metals companies or the gas and oil people, including at times the pipeline operators. Also my guess is that there is relatively little interest-arbitraging done between the Boston financial community and the Montreal/Toronto money markets, though of course New England institutional investors have always had a major position in Canadian portfolio securities, equities, and particularly fixed interest obligations.

Mr. Fieleke's research has only just lifted the corner of the bed-sheet on the most important element of Canadian-U.S. financial activity, namely the cash-and-exchange-risk management practices between U.S. parent companies and their majority - or minority-owned Canadian subsidiaries and affiliates. When these fellows get worried and decide that they wish to reduce or eliminate their exchange risk exposure, the bed clothes fly and the whole structure of Canadian-American financial involvement moves and shakes. Such a rumble has not occurred since the winter of 1968, despite the great strength of the Canadian dollar during 1969 and the first half of 1970 which brought the Canadian officials to the decision of floating their currency in preference to permitting a further large build-up in their external reserves.

The book value of U.S. direct investment in Canada was estimated at the end of 1969 to be $21.1 billion and of Canadian direct investment in the United States to be $2.8 billion. The OFDI, as a result of its fact-gathering endeavors vis-a-vis some 469 American companies, gives us a composite balance sheet of those companies' affiliates in Canada, a group of companies which incidentally represent $13 billion of the total $21 billion of all U.S. direct investment in Canada. This composite balance sheet indicates that

the net current assets of the U.S. affiliates in Canada was at the end of 1969 approximately $5 billion, in contrast to about $4.5 billion at the end of 1967. When corporations decide they will cover their intra-company exchange risks, the figure they often look at for hedging purposes is the net current asset position of their foreign affiliate. Thus in early 1968, in the wake of the sterling devaluation of late November 1967, and frightened by the belief that the U.S. Government would impose restrictions on capital flows to Canada, the American financial community undertook to hedge the Canadian dollar exposure to the extent indicated on the inter-company books. The selling pressure in the forward Canadian dollar market which developed in waves during the first three months of 1968 drove the discount on the six month forwards – for instance, between January 4th and March 15th – from 19 points to as low as 220 points. And the spread between bid and asked prices also widened dramatically. Typical of the market in those days were the following quotes for six-month forwards: January 4, 19 to 16; January 25, 80 to 55; March 13, 125 to 100; March 15, 200 to 120; and then in early April, 76 to 68.

I mention that early-1968 bit of history with reference to another point which appears in the Fieleke paper, namely that most of the time the biggest part of the exchange risk borne by commercial, industrial, and natural resources firms in connection with U.S.-Canadian investment and current business is not hedged. On the American side in particular (and this is symptomatic of why our Canadian friends complain that the United States does not take Canada seriously enough) the exchange risk of doing business in Canada is not thought of as being in the same category of concerns as those involved in sterling, Deutschemarks, or yen, or in fact any other currency situation. By and large, and over time, people doing business across our northern border have just not bothered to hedge against loss from the exchange rate which can be expected to go up and down but never get so far away from the starting point as to leave them permanently damaged.

Some across-the-border businesses use the forward market either constantly, from time to time as the spirit moves them, or only when an important move upward or downward is expected either in the parity, if there is one, or in the level of the freely-floating rate. There are intricate and interesting patterns of activity here which were not disclosed by the Fieleke questionnaire or by the answers to the questions. I might comment briefly on one or two of these, though my research has been hurried, empirical, and may in fact be misleading.

A moment ago, I mentioned the automotive industry and the grain trade. In looking at our forward Canadian book, which incidentally runs on average plus or minus some $500 million total of purchases and sales, I notice that at the moment we have outstanding with three major firms in the automotive field only $11 million of forward contracts as against a high earlier this year of $80 million. Our outstanding contracts with a sampling of four grain trading firms show present outstandings of only $33 million of forward contracts as against a high during the earlier part of this year of approximately $77 million. Oddly enough, our automotive customers have traditionally been sellers of forward Canadian dollars; the grain traders buyers of forward Canadian dollars. A similar contrast between present outstandings and highpoints earlier in the year shows up in our business with Canadian securities houses and American corporations in connection with the hedging of short-term money market transactions, predominantly from the United States to Canada.

Perhaps I should leave it for group discussion whether these figures support or contradict the Fieleke conclusions.

RESPONSE

NORMAN S. FIELEKE

George Chittenden's comments constitute a welcome addition to the meager literature dealing with the behavior of foreign exchange market participants. Moreover, his observations alert me to the need to record one or two points that were not explicit in my paper.

It is often asserted that the foreign-exchange markets perform well with floating rates only if governments refrain from introducing exchange controls. There is a contradiction in this kind of statement. Under the customary definitions, the more forcefully governments attempt to manipulate exchange rates, whether by controls or other measures, the more nearly the system becomes one of "fixing" the rates, not one of floating rates.

On another matter, it was not the purpose of my paper to explore the business motivations behind foreign-exchange dealings, except insofar as such exploration directly assisted in appraising the performance of the forward-exchange market; the underlying assumption is that one need not know the detailed motivations behind specific transactions in order to appraise the efficiency with which transactions are executed.