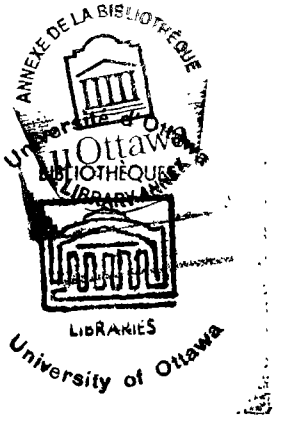
CANADIAN MUNICIPAL DEBT STRUCTURE AND BORROWING, 1946 - 1959.

by James M. Andrews

Thesis presented to the Faculty of Social Sciences of the University of Ottawa as partial fulfillment of the requirements for the degree of Master of Arts.



Ottawa, Ontario, 1961

CURRICULUM STUDIORUM

James M. Andrews was born July 9, 1923, in Lougheed, Alberta. He received a Bachelor of Commerce degree in 1943 from the University of Alberta, Edmonton, Alberta, and in 1946 completed a year of post graduate study at the University of Toronto.

TABLE OF CONTENTS

Chapter		page
	INTRODUCTION	viii
I.-	MUNICIPAL REVENUE	1
II.-	MUNICIPAL EXPENDITURES	15
	1. Current Account Expenditures	
	2. Capital Account Expenditures	
III.-	DEBENTURE DEBT OUTSTANDING	32
	1. Category of Debt	
	2. Currency of Payment	
	3. New Issues and Retirements	
IV.-	CAPITAL BORROWING BY MUNICIPALITIES	48
	1. Types of Debentures	
	2. Limitation on Borrowings	
	3. The Technique of Issuing Debentures	
	4. Bidding Procedures by Dealers	
V.-	TRENDS IN MUNICIPAL BORROWING COST	65
	1. Secondary Market Yields	
	2. Yield Differentials and Yield Relatives	
	3. Comparison of Municipal Bond Yields in the Secondary Market with Borrowing Cost to Municipalities	
VI.-	CHANGES IN HOLDINGS OF MUNICIPAL BONDS	87
VII.-	MUNICIPAL BORROWING IN THE UNITED STATES	108
	SUMMARY AND CONCLUSIONS	118
	BIBLIOGRAPHY	125

Appendix page

1. A RECONCILIATION OF DIFFERENCE AT DECEMBER 31, 1959, BETWEEN TOTAL DEBT OUTSTANDING AS SHOWN BY TABLE VIII AND BY TABLE X 129

2. EXAMPLES OF PROSPECTUSES FOR VARIOUS TYPES OF DEBENTURE ISSUES 131
   1. Sinking Fund Debentures
   2. Serial Instalment Debentures
   3. Annuity Debentures
   4. Instalment Debentures

3. BORROWING BY QUEBEC MUNICIPAL AND SCHOOL AUTHORITIES 136

4. ABSTRACT OF Canadian Municipal Debt Structure and Borrowing, 1946 - 1959. 156

LIST OF TABLES

Table		page
I.-	Current Revenue Plus Gross Debenture Issues . . .	3
II.-	Percentage Distribution of Current Revenues . . .	7
III.-	Percentage Distribution of Current and Gross Debenture Revenue	11
IV.-	Municipal Current Expenditure	17
V.-	Percentage Distribution of Municipal Current Expenditure	20
VI.-	Municipal Capital Expenditure	24
VII.-	Percentage Distribution of Municipal Capital Expenditure	28
VIII.-	Municipal Debt	33
IX.-	Categories of Municipal Debt as a Percentage of Total Bonded Debt	37
X.-	Municipal Debenture Debt by Currency of Payment	40
XI.-	New Issues and Retirements of Municipal Debentures	44
XII.-	Municipal, Provincial and Canada Bonds Outstanding	76
XIII.-	Changes in Holdings of Municipal Debenture Debt, 1946 - 1954	88
XIV.-	Distribution of Holdings of Municipal Debenture Debt, 1954 - 1959	102
XV.-	Distribution of Holdings of Municipal Debenture Debt, 1954 - 1959, (percent of total)	103
XVI.-	Changes in Holdings of Municipal Debenture Debt, 1954 - 1959	104

Table page

XVII.- Average Yield Cost of Quebec Municipal and School Borrowings, Classified by Method of Sale 140

XVIII.- Average Yield Cost of Quebec Municipal and School Borrowings, Awarded by Public Tender - Classified by Size of Issue 143

XIX.- Average Yield Cost of Quebec Municipal and School Borrowings, Awarded by Mutual Agreement - Classified by Size of Issue . . . 145

XX.- Average Yield Cost of Quebec Municipal and School Borrowings, Awarded by Public Tender - Classified by Type of Borrower 148

XXI.- Quebec Municipal and School Bond Issues, Number and Total Par Value 150

XXII.- Borrowings in the United States Market by Quebec Municipal and School Authorities . . . 154

LIST OF CHARTS

Chart		page
1.	Municipal, Provincial and Canada Bond Yields in the Secondary Market	67
2.	Municipal Bond Yields in the New Issue and Secondary Market	80
3.	Borrowing by Canadian Municipalities in Canadian and U.S.A. Markets and Comparison of New Issue Yield Costs	113

INTRODUCTION

In recent years there has been a great increase in borrowing by Canadian municipalities. This has involved municipal governments in rising debt service cost, has resulted in substantial reliance upon the United States capital market and has undoubtedly caused deferment of projects in times of credit stringency. There appears to be a problem of some indeterminate magnitude which results from the difficulty of equating expenditure with current revenue at a level which ensures an adequate provision of municipal services and capital assets. The frequent representations from the Canadian municipalities to the federal government have indicated the magnitude of the capital projects which should be undertaken by the municipalities and have emphasized the need for expanded revenues. Failure to obtain the required revenues from taxes and other current sources will result partly in greater borrowing than would otherwise be required, and/or partly in a diminution in the volume of capital expenditures.

The problem assumes special significance in view of the expanding Canadian population and the tendency for growth in urban areas to take place at a faster rate than the national average. To the problems created by urban growth (perhaps suburban growth would be a better phrase) are added serious problems of urban blight in the central

parts of our older cities. It is understandable that municipalities want to contribute the maximum amount toward improvements in living conditions, and reasonable for them to press senior governments to provide greater assistance. At the same time there should be a clear understanding of the extent to which they can help themselves and of the implications of relying upon borrowing to achieve their objectives.

It will be the main purpose of this thesis to examine the questions of municipal borrowing and debt levels in order to assess the implications of recent trends. In order to better understand the causes of borrowing there will be a brief examination of sources of, and trends in, municipal revenues and expenditures. There will then be a presentation of statistics of municipal borrowing and municipal debt. In order that the whole borrowing problem may be more easily appreciated there will be an examination of some of the legislative and administrative regulations governing the issuance of debentures, followed by an analysis of municipal borrowing costs, of changes in holdings of municipal bonds, and of borrowings in the United States market. Finally, there will be a number of suggestions for changes and developments which might assist the municipalities in solving their financial problems.

The literature on this subject is very limited and the majority of contributions are brief studies appearing in

journals, speeches and periodicals. One of the earliest major studies of municipal finances is the submission by H. Carl Goldenberg to the Royal Commission on Dominion-Provincial Relations.[1] It deals primarily with the sources of revenue and categories of expenditure, but contains some statistics on, and analysis of, municipal debt. The situation of the municipalities has changed in many ways since 1939 but there are still many similarities which make this a useful study.

Another major work dealing with municipal finances is a submission to a later Royal Commission, this being Wm. C. Hood's study for the Royal Commission on Canada's Economic Prospects.[2] This work does not deal primarily with municipal problems, but does throw a great deal of light on certain aspects of participation of municipalities in the capital markets.

A valuable, though short, study is that of D.C. Corbett dealing with urban growth.[3] It examines the reasons for rapid population growth in urban areas, enumerates

---

1 H. Carl Goldenberg, Municipal Finance in Canada, Ottawa, The King's Printer, 1939, vi - 128 p.

2 Wm.C. Hood, Financing of Economic Activity in Canada, Ottawa, The Queen's Printer, 1959, xv - 700 p.

3 D.C. Corbett, Urban Growth and Municipal Finance Montreal, 1952, 32 p.

the problems which this growth creates, and offers some suggestions to assist in making adjustments.

The most extensive and informative examination of municipal finance deals with conditions in the United States. It is a study by Roland I. Robinson, prepared as part of a broad survey of capital formation by the National Bureau of Economic Research.[4] It deals with the demand for funds, primarily for capital expenditure, and with the supply of funds from the various investor groups. It examines the marketing process and the nature of the secondary market for state and local government bonds. Finally it draws conclusions on the incidence of the benefit of the tax-exempt privilege borne by these obligations and then describes the nature of special revenue bonds. Even though portions of the study are not applicable to the Canadian situation, a considerable part of it is relevant, which increases its value to Canadian readers.

The methods used in the present study are largely dictated by the nature of the available statistics and the scope of the project. On the first point, there is a pronounced lack of statistical information relating to municipal debentures. This practically rules out any approach

---

4 Roland I. Robinson, Postwar Market for State and Local Government Securities, Princeton, Princeton University Press, 1960, xxiv - 227 p.

but a largely descriptive one; where possible, however, statistical analysis has been undertaken. On the second point, the question to be answered was whether it was better to deal with the situation in a single province or with Canada as a whole. A third possibility, that of dealing separately with the situation in each province was ruled out as being of too great magnitude. It was decided that it would be better to deal with the whole, rather than one part, even though it was recognized that there are very great differences between the situations in various provinces.

The basic source of statistical material has been the Bank of Canada publications; these were used in preference to the Dominion Bureau of Statistics publications because of a greater consistency between the various sets of figures used and because the writer was given access to certain unpublished material prepared in the Bank of Canada. Certain statistics on bond yields have been taken from periodic releases by McLeod, Young, Weir and Co. Ltd. Extensive use was made of the annual summaries of bond issues of Quebec municipal and school authorities, issued by the Quebec Municipal Commission. Some information was also drawn from the manuals issued annually by Moody's Investors Service, New York City.

Had time and other resources permitted it would have been desirable to supplement the information available in

written form with interviews of persons in both the investment industry and in municipal government. In fact this technique was only used to a limited extent and the information and impressions obtained have been used to confirm impressions gained from other sources and to give somewhat deeper insight into some of the problems. Undoubtedly greater use of the interview technique, had it been possible, would have permitted more detailed analysis and perhaps more recommendations to be made. However, the writer does not feel that the conclusions which have been reached are invalidated by the fact that interviews were few in number.

CHAPTER I

MUNICIPAL REVENUE

This chapter presents statistics of municipal revenue for the period from 1946 to 1959 inclusive. In addition to statistics of current revenue, the amount of gross debenture issues is also given, in order that a comparison may be made of the amount of current and capital account receipts.

The revenue raising capacity of municipalities has special significance because of the many demands which are pressed upon municipalities to make expenditures. These demands are so great and far reaching that the aggregate financial requirements would exceed by a substantial margin the funds which are annually available; under such circumstances budgeting primarily involves determining the minimum desirable level of services and then of eliminating projects of lowest priority until the estimated expenditures can be met from the revenue which will be produced by the existing tax structure. If it is felt that on this basis the level of some services would be unacceptable to the voters or prejudicial to the long-run best interest of the municipality then, reluctantly, increases will be made in the tax rates in order that the minimum acceptable level of expenditures may be made effective. If current revenues are inadequate to meet the minimum requirements for long-term capital projects, and this is usually the case, resort must be made to borrowing long-term capital.

The record of revenues during the period from 1946 to 1959 is given in Table I. In 1946 the real property tax, which is the principal source of municipal revenue, provided $278 million of the total current revenue of $386 million. Over the fourteen year period to 1959 the revenue from this source increased to $1,029 million, almost a four-fold increase. In 1946 sales and other taxes[a] produced revenue of $41 million and by 1959 this figure had increased to $201 million. Government subsidies were a small part of the total in 1946, amounting to only $8 million; this source of revenue increased regularly after 1947 and by 1959 was ten times as large ($80 million) as it was at the start of the period. Public utility revenues amounted to $16 million at the start of the period and $47 million at the end, nearly a three-fold increase. Other current revenue was $43 million at the start of the period and $129 million at the end, also a three-fold increase. Total current revenue amounted to $386 million in 1946 and had increased by 1959 to $1,485 million, an increase of 385%.

---

a The more important of the "other" taxes are the business tax, personal property tax, poll tax and amusement tax. In addition, revenue is derived from taxes on stock in trade, tenants and occupants and motor vehicles.

MUNICIPAL REVENUE

Gross debenture issues in 1946 were at the very low level of $32 million and increased very rapidly during the early post-war period; the rate of increase subsequently moderated but by 1959 gross debenture issues amounted to $501 million. Total receipts (including gross debenture issues) were $418 million in 1946 and $1,986 million in 1959,

TABLE I
CURRENT REVENUE PLUS GROSS DEBENTURE ISSUES
($ Millions)

SOURCE OF REVENUE	YEAR ENDED DECEMBER 31ST 1946	1947	1948	1949	1950	1951	1952
CURRENT REVENUE							
Taxation							
Real Property Tax	278	302	335	369	407	468	536
Sales Tax	11	13	15	16	24	28	30
Other Taxes	30	34	41	48	53	63	71
Total Taxation	319	349	391	432	484	559	637
Government Subsidies	8	6	9	10	14	21	25
Public Utilities	16	20	20	24	26	29	33
Other Current Revenue	43	43	50	55	59	62	69
Total Current Revenue	386	418	470	521	583	671	764
GROSS DEBENTURE ISSUES[a]	32	68	119	150	187	238	246
TOTAL REVENUE	418	486	589	671	770	909	1,010

SOURCE: Bank of Canada Statistical Summary, Financial Supplement, 1959, pp. 116, 117.

a Figures for Gross Debenture Issues are taken from Table XI.

TABLE I (continued)
CURRENT REVENUE PLUS GROSS DEBENTURE ISSUES
($ Millions)

SOURCE OF REVENUE	YEAR ENDED DECEMBER 31ST 1953	1954	1955	1956	1957	1958[b]	1959[b]
CURRENT REVENUE							
Taxation							
Real Property	581	625	682	764	866	943	1,029
Sales Tax	34	37	43	51	52	58	60
Other Taxes	76	82	94	107	118	131	141
Total Taxation	691	744	819	923	1,036	1,132	1,230
Government Subsidies	28	41	44	47	67	76	80
Public Utilities	36	37	41	37	38	51	47
Other Current Revenue	77	84	92	104	112	124	129
Total Current Revenue	833	905	996	1,110	1,252	1,382	1,485
GROSS DEBENTURE ISSUES[a]	276	343	344	355	414	488	501
TOTAL REVENUE	1,109	1,248	1,340	1,465	1,666	1,870	1,986

SOURCE: Bank of Canada Statistical Summary, Financial Supplement, 1959, pp. 116, 117.

a Figures for Gross Debenture Issues are taken from Table XI.

b Preliminary.

an increase of nearly 475% compared with the increase in current revenue of 385%.

Over the same fourteen year period Canada's population increased about 50%[1]; her Gross National Product, at market prices, increased about 300%[2]; the federal government's current revenue increased somewhat less than 200%[3]; provincial governments' revenues increased by 455%[4]. These figures indicate that municipal revenues have grown more rapidly than a number of other significant economic quantities; the average compound rate of increase is more than 10%, compared with a 3% rate of population increase and an 8% rate of increase in G.N.P. at market prices (3 1/2% in real terms).

So far we have been speaking of absolute amounts, which have shown a spectacular increase in the post-war period. However, it is also of interest to examine the relative importance of the various sources of revenue and changes in the relationship over the period.

As shown by Table II the real property tax has provided between 68% and 72% of total current revenue. By

---

1 Bank of Canada Statistical Summary, Financial Supplement, 1959, p.129.

2 Bank of Canada Statistical Summary, Financial Supplement, 1957, p.114; 1959 pp. 120, 121.

3 Op. Cit., 1959, pp. 102, 103.

4 Op. Cit., 1959, pp. 108, 109.

comparison, sales tax has furnished an average of 4% of current revenue and other taxes have provided about 9%. (It must be noted however that sales tax is a major revenue source only in the Province of Quebec, where it comprises about 11% of current revenue.) These three tax categories have furnished a nearly constant 83% of current revenue. The remaining 17% of revenues is provided by subsidies, by net contribution of public utilities and by other revenues. Over this fourteen year period the importance of subsidies has grown regularly, from less than 2% in 1946 to over 5% in 1959. The contribution of public utilities has dropped from 4% to 3%, and of other revenues from 11% to 9%.

The percentage distribution figures in Table II raise some questions, of which two are "why have public utilities contributions declined relatively", and "why have 'other revenues' declined relatively". Looking back into earlier years the answer to the first question seems to be that public utilities during the war years were unusually productive of revenue, but that with the post-war return of more normal conditions their earnings declined and the reduced contribution to municipal revenues which followed merely restored the pre-war relationship. For example during the war, because of gasoline rationing and shortage of parts, the use of automobiles was sharply curtailed and municipal transportation systems were much more fully

utilized, and profitable, than they had been formerly. The situation was slowly reversed after the war until now most municipally-owned transportation systems operate either at a deficit or at best a very small profit. "Other revenues", however, have declined in importance relative to their importance in the 1920's and 1930's. The decline is small in dollar terms, and the explanation is not apparent. It

TABLE II
PERCENTAGE DISTRIBUTION OF CURRENT REVENUE

YEAR ENDED DECEMBER 31ST

SOURCE OF REVENUE	1946	1947	1948	1949	1950	1951	1952
Taxation							
Real Property Tax	72	72	71	71	70	70	70
Sales Tax	3	3	3	3	4	4	4
Other Taxes	8	8	9	9	9	9	9
Total Taxation	83	83	83	83	83	83	83
Government Subsidies	2	1	2	2	2	3	3
Public Utilities	4	5	4	5	4	4	4
Other Current Revenue	11	10	11	11	10	9	9
Total Current Revenue	100	100	100	100	100	100	100

SOURCE: Table I.

TABLE II (continued)
PERCENTAGE DISTRIBUTION OF CURRENT REVENUE

SOURCE OF REVENUE	YEAR ENDED DECEMBER 31ST						
	1953	1954	1955	1956	1957	1958[a]	1959[a]
Taxation							
Real Property Tax	70	69	68	69	69	68	69
Sales Tax	4	4	4	5	4	4	4
Other Taxes	9	9	9	10	9	9	10
Total Taxation	83	82	82	83	83	82	83
Government Subsidies	3	5	4	4	5	5	5
Public Utilities	4	4	4	3	3	4	3
Other Current Revenue	9	9	9	9	9	9	9
Total Current Revenue	100	100	100	100	100	100	100

SOURCE: Table I.

a Preliminary

may be that other sources of revenue cover such a wide range of fees, licenses, permits and rentals that it has not seemed worth the expenditure of time and effort to maintain their productivity, but it is of interest to note that in their search for additional revenue many municipalities now are finding ways of making added use of the sundry revenue sources. A recent report[5] indicates that the City of Los Angeles has been making effective use of increased fees and service charges in raising additional funds.

A more significant question, however, relates to the reasons for the decline in the relative productivity of the real property tax, because this tax produces such a large part of total revenue. The generally accepted view is that this tax already bears too heavily upon property owners; that it is not feasible to obtain an increased proportion of revenue from this source. It is certainly apparent that the productivity of the tax cannot be increased sufficiently to provide all of the revenues required by municipalities, but it is wrong to conclude that no room exists for improvement. It seems likely that one cause of the falling relative importance of this source of revenue is the failure of assessments to fully reflect the post-war increase in property values. Most large cities have reassessed properties once

---

5 "Fees and Service Charges" The Municipal World, Volume 71, No. 4, April, 1961, p 141.

or more, but it is difficult to keep assessments at proper levels when property values are rising rapidly. Another reason for the decreased importance of the tax may arise from faulty collection systems. In the post-war period tax arrears have grown substantially;[6] this could indicate an excessive level of taxation but more likely indicates faulty administrative and collection machinery. The latter view is supported by the large amount of arrears even in the immediate post-war period, when incomes and savings were probably at higher levels than ever before, and when one would ordinarily expect overdue tax obligations to be at a minimum.[6(a)]

In the years since 1949 the inadequacy of current revenue to provide for expenditures has resulted in an average of 25% of total revenue being raised through debenture issues. In the immediate post-war years the percentage was much lower (8% in 1946, 14% in 1947), but as shown in Table III it rose steadily until 1950, when it levelled off. As a result borrowings during the later years of the period contributed more to municipal revenues each year than all of the sources of current revenues combined excluding the real

---

6 Canadian Tax Foundation, Local Finance, Number 9, January 1960.

6(a) Some of the weaknesses may be the following: inadequately trained assessors; cumbersome machinery for collecting tax arrears; tax payment intervals which are too long.

property tax. This indicates the great importance of borrowing but also emphasizes the important results which would

TABLE III

PERCENTAGE DISTRIBUTION OF CURRENT AND GROSS DEBENTURE REVENUE

SOURCE OF REVENUE	YEAR ENDED DECEMBER 31ST 1946	1947	1948	1949	1950	1951	1952
CURRENT REVENUE							
Taxation							
Real Property Tax	67	62	57	55	53	51	53
Sales Tax	3	3	3	2	3	3	3
Other Taxes	7	7	7	7	7	7	7
Total Taxation	76	72	66	64	63	61	63
Government Subsidies	2	1	2	1	2	2	2
Public Utilities	4	4	3	4	3	3	3
Other Current Revenue	10	9	8	8	8	7	7
Total Current Revenue	92	86	80	78	76	74	76
GROSS DEBENTURE ISSUES	8	14	20	22	24	26	24
TOTAL REVENUE	100	100	100	100	100	100	100

SOURCE: Table I.

TABLE III (continued)
PERCENTAGE DISTRIBUTION OF CURRENT AND GROSS DEBENTURE REVENUE

SOURCE OF REVENUE	YEAR ENDED DECEMBER 31ST						
	1953	1954	1955	1956	1957	1958[a]	1959[a]
CURRENT REVENUE							
Taxation							
Real Property Tax	52	50	51	52	52	50	52
Sales Tax	3	3	3	3	3	3	3
Other Taxes	7	7	7	7	7	7	7
Total Taxation	62	60	61	63	62	61	62
Government Subsidies	3	3	3	3	4	4	4
Public Utilities	3	3	3	3	2	3	2
Other Current Revenue	7	7	7	7	7	7	6
Total Current Revenue	75	73	74	76	75	74	75
GROSS DEBENTURE ISSUES	25	27	26	24	25	26	25
TOTAL REVENUE	100	100	100	100	100	100	100

SOURCE: Table I.

a Preliminary

flow from improved taxing techniques. In 1959, for instance, a 7% increase in current revenues would have permitted a 20% reduction in borrowing.

The statistics indicate that municipal current revenue has increased, since 1946, at a faster rate than national income and a great deal more rapidly than Canada's population. It seems probable that much of the difficulty which municipalities experience in raising revenue can be traced to the fact that they are taking an increasing proportion of the national income. Some writers have, however, expressed doubt that municipalities have done all they can to increase their current revenues[7] and, as a consequence, they have relied to an excessive extent on long-term capital to meet their budgeted expenditures. It would seem desirable for municipalities generally to direct greater effort toward finding ways of increasing their income from taxes, services and fees and to finance themselves to a greater extent on the "pay-as-you-go" basis.

Two proposals which have been made on numerous occasions to enable more effective administration of the property tax are to have taxes payable once a month and to have more

---

7 One such opinion is that expressed in the "Preliminary Report" by the Royal Commission on Canada's Economic Prospects (Ottawa, 1955, p. 96) which says "it appears that there may be scope for some municipalities to increase their revenues by increasing either their assessments or the tax rates which they levy on real property".

frequent reassessment of property in order that changes in property values will be quickly reflected in the assessment.[8] (It should be mentioned that many municipalities have already moved in this direction.)

Increased tax revenues could logically be expected to come from users of motor vehicles since such a large amount of expenditures are for the benefit of motorists. These taxes could be levied directly on the owners of vehicles, or on operators, but would be more easily collected and less easily evaded if applied to motor fuel.

---

8 Among other sources, these suggestions appear in the reports of the following Commissions:
Royal Commission on Canada's Economic Prospects;
Commission on Municipal Taxation in the City of Winnipeg;
Commission to Investigate the Tax System of the City of Halifax.

CHAPTER II

MUNICIPAL EXPENDITURES
1. Current Account Expenditures

In this chapter the writer presents statistics of municipal expenditures on both current and capital account for the period 1946 to 1959, inclusive. There is a brief discussion of the main causes of increases in expenditures followed by an examination of the changes in each category of expenditure.

If there is any single factor which accounts for the financial problems of Canadian municipalities today it is urban growth.[1] During the fifteen year period from 1930 to 1945 the growth in Canada's population was at the average rate of 1.2% per annum. During the fourteen year period from 1945 to 1959 the average rate of growth was 3.2% per annum. (1930 - 10,208 thousand; 1945 - 12,072 thousand; 1959 - 17,442 thousand).[2] As Corbett indicates,[3] between 1941 and 1951 urban population grew by 24%, rural population by only 10%; expressed in another way, over the same decade urban increase was 74% of the total, rural increase only 26%.

---

1 D.C. Corbett, Urban Growth and Municipal Finance, Montreal, 1952, 32 p.

2 Bank of Canada Statistical Summary, Financial Supplement, 1959, p. 128.

3 Op. Cit. pp. 16, 17.

There is, over the post-war years, a compounding of the effect of population increase. In the first place the rate of growth is over 2 1/2 times as large as it was over the preceeding fifteen years. In the second place three quarters of this increase has occured in urban municipalities. Since the per capita expenditure is much higher by urban than by rural municipalities[4] it follows that the pattern of the population increase is such that it causes maximum impact upon municipal expenditures. Over the coming decade there will be felt the full effect of the movement into the labor force of the children who were born after the war. As these children, now in their teens, become independent and establish their own homes there will be a further sharp increase in the demand for many of the services supplied by urban municipalities.

As shown by Table IV there were very large increases in the various categories of expenditure. For example, total expenditure out of current funds jumped from $385 millions in 1946 to $1,460 millions in 1959. The increases in the various expenditure categories were as indicated in the tabulation on page 19.

---

4 D.C. Corbett, Op. Cit. p. 23.

TABLE IV
MUNICIPAL CURRENT EXPENDITURE
($ Millions)

EXPENDITURE CATEGORY	YEAR ENDED DECEMBER 31ST 1946	1947	1948	1949	1950	1951	1952
CURRENT EXPENDITURES							
Schools	106	123	140	158	181	207	236
Public Welfare	48	56	64	71	77	89	100
Highways, Roads, Streets	55	61	65	72	77	87	100
Protection, General Administration and Sundry	108	121	133	143	164	185	206
Total Municipal Services	317	361	402	443	498	567	642
Debt Service							
Charges	31	30	28	31	33	36	42
Repayment	37	37	41	45	51	62	66
Total Debt Service	68	67	69	76	84	98	108
TOTAL CURRENT EXPENDITURES	385	428	471	519	581	666	750

SOURCE: Bank of Canada Statistical Summary, Financial Supplement, 1959, pp.118, 119.

TABLE IV (continued)
MUNICIPAL CURRENT EXPENDITURE
($ Millions)

EXPENDITURE CATEGORY	YEAR ENDED DECEMBER 31ST 1953	1954	1955	1956	1957	1958[a]	1959[a]
CURRENT EXPENDITURES							
Schools	259	280	297	330	373	408	463
Public Welfare	106	119	128	137	140	146	151
Highways, Roads, Streets	106	120	132	147	168	179	185
Protection, General Administration and Sundry	226	253	271	306	342	390	408
Total Municipal Services	696	772	829	919	1,022	1,123	1,206
Debt Service							
Charges	47	55	61	65	82	84	94
Repayment	77	89	100	112	127	148	160
Total Debt Service	124	143	161	178	209	231	254
TOTAL CURRENT EXPENDITURES	820	915	989	1,098	1,231	1,354	1,460

SOURCE: Bank of Canada Statistical Summary, Financial Supplement, 1959, pp. 118, 119.

a Preliminary

Expenditure Category	Increase 1946 to 1959	
	Amount (millions)	Percentage of 1946
Schools	$357.	339 %
Public Welfare	103.	214
Highways, Roads, Streets	129.	234
Protection, General Administration and Sundry	300.	277
Debt Service Charges	62.	198
Debt Repayment	123.	336
Total Expenditure	$1,075.	279%

Source: Table IV

The annual increase in school expenditures remained high throughout the entire period; the increase in annual debt charges began only in 1949, and in fact not until 1950 did the annual charge exceed the 1946 charge. From 1950 to 1959 there was nearly a three fold increase in the annual debt charge. The fact is not apparent when only the 1946 - 1959 comparison is made, but over the last ten years the outlays for debt service (both for annual charges and for repayments) have increased more rapidly than for any other type of expenditure.

As shown by Table V, during the post-war years there were significant changes in the relative importance of the various categories of expenditures upon municipal services. Expenditures for protection and administration were a nearly constant 28% of the total and payments for highways, roads

TABLE V
PERCENTAGE DISTRIBUTION OF MUNICIPAL CURRENT EXPENDITURE

EXPENDITURE CATEGORY	YEAR ENDED DECEMBER 31ST 1946	1947	1948	1949	1950	1951	1952
CURRENT EXPENDITURES							
Schools	27	29	30	30	31	31	31
Public Welfare	12	13	14	14	13	13	13
Highways, Roads, Streets	14	14	14	14	13	13	13
Protection, General Administration and Sundry	28	28	28	28	28	28	27
Total Municipal Services	82	84	85	85	86	85	86
Debt Service							
Charges	8	7	6	6	6	5	6
Repayment	10	9	9	9	9	9	9
Total Debt Service	18	16	15	15	14	15	14
TOTAL CURRENT EXPENDITURES	100	100	100	100	100	100	100

SOURCE: Table IV.

TABLE V (continued)
PERCENTAGE DISTRIBUTION OF MUNICIPAL CURRENT EXPENDITURE

EXPENDITURE CATEGORY	YEAR ENDED DECEMBER 31ST 1953	1954	1955	1956	1957	1958[a]	1959[a]
CURRENT EXPENDITURES							
Schools	32	31	30	30	30	30	32
Public Welfare	13	13	13	12	11	11	10
Highways, Roads, Streets	13	13	13	13	14	13	13
Protection, General Administration and Sundry	28	28	27	28	28	29	28
Total Municipal Services	85	84	84	84	83	83	83
Debt Service							
Charges	6	6	6	6	7	6	6
Repayment	9	10	10	10	10	11	11
Total Debt Service	15	16	16	16	17	17	17
TOTAL CURRENT EXPENDITURES	100	100	100	100	100	100	100

SOURCE: Table IV

a Preliminary

and streets dropped slightly from 14% to 13%. However, welfare expenditures after rising from 12% to 14% of the total by 1949, fell to 10% of the total by 1959. In contrast, expenditure for schools rose from 27% to 32% in 1953, fell back to 30% and then in 1959 again rose to 32%.

During the first five years after the war the annual charges for debt service remained relatively stable in dollar amount but fell in relative importance, from 8% of total expenditures out of current funds to about 5 1/2%. At the same time debt repayment dropped slightly from 10% to 9%. As a result, the total cost of debt service fell from 18% to 14% of expenditures out of current funds between 1946 and 1950. Between 1950 and 1959 the combined cost of debt service rose from 14% to 17% of the total, largely as a result of the greater relative importance of debt repayments, which went from 9% to 11% while the cost of the annual charges rose from 5 1/2% to 6 1/2%.

Over the fourteen year period school expenditures gained in relative importance as an expenditure item, as did debt repayment to a lesser extent. The other expenditure categories all fell in relative importance with the decline being greatest in the category of public welfare, followed by annual debt service.

2. Capital Account Expenditures

Before looking at the record of capital expenditures since 1945, it is necessary to mention the impact which the

depression and the war had upon municipal outlays. To begin with, the depression so affected municipal revenues that the municipalities were unable to increase expenditures materially. Between 1930 and 1939 the increase was less than 6%; the whole of the increase was in public welfare payments, which increased by more than 50%, while expenditure on highways, roads, streets and schools actually declined about 10%. Then came the war, and shortages of both labor and materials. The financial condition of the municipalities improved materially; they were able to redeem maturing debentures out of current revenues but because there were limited opportunities to make capital expenditures the capital equipment continued to depreciate and to fall below the socially desirable level.

As a result, at war's end the municipalities had a back-log of capital projects upon which a start had soon to be made. The financing of expenditures on these projects and on the new ones which were made necessary by the post-war population increase were to be the major problem of the municipalities.

As shown by Table VI, in 1946 municipal expenditures from capital funds amounted to $58 millions; in 1958 (the last year for which figures are available) similar outlays amounted to $604 millions, more than ten times as large.

TABLE VI
MUNICIPAL CAPITAL EXPENDITURE (a)
($ Millions)

EXPENDITURE CATEGORY	YEAR ENDED DECEMBER 31ST 1946	1947	1948	1949	1950	1951	1952
Schools	12	17	48	63	71	80	96
Highways	13	16	25	30	34	32	43
Hospitals	2	4	8	11	11	11	8
Sanitation	10	15	18	25	25	28	28
Other Public Works	-	-	-	-	2	-	1
Other	6	11	15	15	18	26	38
Public Utilities	15	24	39	40	68	72	57
TOTAL	58	88	154	185	230	249	271

SOURCE: Bank of Canada unpublished figures.

a Out of current and capital funds.

TABLE VI (continued)
MUNICIPAL CAPITAL EXPENDITURE (a)
($ Millions)

EXPENDITURE CATEGORY	YEAR ENDED DECEMBER 31ST						
	1953	1954 [b]	1955 [b]	1956 [c]	1957 [d]	1958 [e]	1959 [f]
Schools	104	121	139	154	180	209	
Highways	61	65	63	85	93	109	
Hospitals	10	8	6	5	9	11	
Sanitation	41	46	49	63	80	92	
Other Public Works	2	-	1	3	-	1	
Other	31	45	33	89	73	70	
Public Utilities	83	91	121	80	111	112	
TOTAL	332	377	411	478	546	604	

SOURCE: Bank of Canada unpublished figures.

a Out of current and capital funds.

b Includes estimates for Ontario and Quebec.

c For Ontario and Quebec amounts for hospitals, public utilities and total are known; other figures are estimated from 1953 base.

d Includes estimates for Ontario, Quebec, Alberta and British Columbia.

e Includes estimates for Ontario, Quebec, New Brunswick, Alberta, British Columbia and Saskatchewan.

f Not available.

The year over year increases and rates of annual increase were as follows:

EXPENDITURE FROM CAPITAL FUNDS ($ Millions)

Year	Amount	Annual Increase	Rate of Annual Increase
1946	$ 58	$ -	-
1947	88	30	52 %
1948	154	66	75
1949	185	31	20
1950	230	45	24
1951	249	19	8
1952	271	22	9
1953	332	61	23
1954	377	45	13
1955	412	35	9
1956	478	66	16
1957	546	68	14
1958	604	59	11

Source: Table VI

The very sharp increases in the expenditures in 1947 and 1948 undoubtedly reflect the availability of labor and materials which had been in short supply since the outbreak of war. The continued growth in these outlays is proof of the demands which have been made upon municipalities.

The expenditures, out of capital funds, upon schools, highways, and sanitation have shown an almost uninterrupted rise between 1946 and 1958. The growth in school expenditure has been spectacular, rising from $12 millions to $209 millions; the increase in outlays on highways and sanitation combined has been slightly less than the increased expenditure for schools. The increase in these three categories

accounts for two-thirds of the increase for all categories. Expenditures on hospitals increased rapidly until 1950, remained stable for three years, dropped over the next five years and then began to rise again. Outlays on public utilities have grown substantially but somewhat erratically. Outlays in the residual category have also shown an erratic growth.

Table VII shows that school expenditures have amounted annually to about one-third of the total since 1948; expenditures on highways have fluctuated between 13% and 19%, with an average of about 16%; expenditures on hospitals have lagged very badly, and have fallen from 5% to less than 2% of the total. Expenditures on sanitation fell slightly at first, but have since risen to 15% of the total; public utilities until 1955 took an average of 26% of the total but in the three years since 1955 have taken only 19%, and it seems that there may be a lessened need for this type of expenditure. In the residual category, expenditures have, except for one year, fluctuated between 8% and 13% of the total; the exception was in 1956, when they took 19%. The pattern now seems relatively stable, with schools and highways taking over one-half of total outlays. Expenditures on public utilities are not a cost in the same sense as expenditures in the other categories, because such outlays are usually recovered from rates charged. The revenues from

TABLE VII
PERCENTAGE DISTRIBUTION OF MUNICIPAL CAPITAL EXPENDITURE

YEAR ENDED DECEMBER 31ST

EXPENDITURE CATEGORY	1946	1947	1948	1949	1950	1951	1952
Schools	20	20	31	34	31	32	35
Highways	23	18	16	16	15	13	16
Hospitals	3	5	5	6	5	5	3
Sanitation	17	17	12	14	11	11	10
Other Public Works	a	a	a	a	1	a	a
Other	10	13	10	8	8	10	14
Public Utilities	26	28	25	22	29	29	21
TOTAL	100	100	100	100	100	100	100

SOURCE: Table VI.

a Less than 1/2%.

TABLE VII (continued)
PERCENTAGE DISTRIBUTION OF MUNICIPAL CAPITAL EXPENDITURE

EXPENDITURE CATEGORY	YEAR ENDED DECEMBER 31ST						
	1953	1954	1955	1956	1957	1958	1959[b]
Schools	31	32	34	32	33	35	
Highways	19	17	15	18	17	18	
Hospitals	3	2	2	1	2	2	
Sanitation	12	12	12	13	15	15	
Other Public Works	1	a	a	1	a	a	
Other	9	12	8	19	13	12	
Public Utilities	25	24	29	17	20	19	
TOTAL	100	100	100	100	100	100	

SOURCE: Table VI.

a Less than 1/2%.

b Not available.

public utilities do not seem to have kept pace with the outlays but they do provide a return which in part defrays the borrowing cost.

Included in the expenditures out of current funds examined in Section 1, and not separated from them, are certain capital expenditures. An indication of the importance of this factor can be given by the following figures published by the Dominion Bureau of Statistics.[5]

	Expenditures on Capital Items			Other Expenditures Out of Current Funds
	Out of Current Funds	Out of Capital Funds	Col. 1 / Col. 2	
	(1)	(2)	(3)	(4)
1957	43	501	9%	1,353
1956	25a	402a	6	919
1955	22a	366a	6	828a

a - No figures are included for Quebec.

While these figures do not give the complete statistics for 1956 and 1955 because figures for Quebec are not available, they do indicate that a relatively small amount of capital account disbursements are made from current funds. They also serve to show the size of capital account in relation to current account expenditures, the former being about 30% to 40% as large as the latter.

---

5 Canada, Dominion Bureau of Statistics, Financial Statistics of Municipal Government, Ottawa, The Queen's Printer, 1955; 1956, 1957.

The most striking fact brought out in the foregoing tables is the very heavy level of both current and capital expenditures upon schools. The second most important fact is the size and growing importance of expenditures on highways and streets. These two expenditure categories, education and transportation, account for nearly one half of the total of annual expenditures, and there is very little likelihood of lessening requirements for outlays in either category. In fact with the current emphasis upon increased education for Canadian youth it seems more likely that some relative increase in the expenditure on schools will be required, and in view of the rising use of the automobile it seems clear that relatively increased expenditure on highways will also be necessary.

In addition to these considerations there is a great deal of interest, in our older and larger cities, in the problems of urban renewal. The renewal projects are expensive, involving property expropriation as well as construction of new buildings, and the work done so far in this field is just the beginning. It seems highly likely that the level of municipal expenditures will grow at an even faster rate in the future than in the recent past.

CHAPTER III

DEBENTURE DEBT OUTSTANDING

In this chapter three series of statistics are presented which indicate the purposes for which debt has been incurred, the changing significance of various lending markets, and the changing relationship of new issues to retirements. Some significant trends are visible in the statistics and these are commented on briefly. Finally some inferences are drawn concerning the future importance of the trends which have been observed.

1. Category of Debt.

The extent to which municipalities have financed their capital projects from borrowings in the post-war period has already been spoken of in Chapters I and II. Table VIII shows the resulting changes which have taken place in the outstanding bonded debt of the municipalities. Net bonded debt at December 31, 1945 was $839 millions. This figure dropped slightly the following year and then began a rise which has continued without interruption, reaching a level of $3,688 millions at December 31, 1959. The increase has been spread through all major categories but has been greatest in the "School" category.

TABLE VIII
MUNICIPAL DEBT
($ Millions)

CATEGORY OF DEBT	YEAR ENDED DECEMBER 31ST 1945	1946	1947	1948	1949	1950	1951	1952
Bonded Debt								
Direct								
Public Utilities (net)	172	165	166	182	204	261	313	340
Other Categories (gross)								
Schools	179	181	187	148[a]	190	245	313	388
Highways	169	160	159	168	183	201	227	249
Other	404	405	413	423	458	461	496	535
Sub-Total (gross)	752	746	759	739	831	907	1,035	1,173
Less Sinking Funds	129	124	109	105	104	103	99	86
Sub-Total (net)	623	622	650	634	727	804	936	1,087
Total Direct Bonded Debt	794	787	817	817	931	1,066	1,249	1,426
Guaranteed Debt	45	46	47	50	48	50	52	85
Total Bonded Debt	839	833	864	866	979	1,115	1,301	1,512
Bank Loans	29	29	41	61	70	85	91	100
Total Outstanding Debt	868	862	905	927	1,049	1,200	1,392	1,612

SOURCE: Bank of Canada Statistical Summary, Financial Supplement, 1959, pp. 112, 113.

a Drop due to re-organization of school debt of Quebec Municipalities.

TABLE VIII (continued)
MUNICIPAL DEBT
($ Millions)

CATEGORY OF DEBT	YEAR ENDED DECEMBER 31ST 1953	1954	1955	1956	1957	1958	1959
Bonded Debt							
Direct							
Public Utilities (net)	412	494	568	619	677	749	809
Other Categories (gross)							
Schools	484	564	679	808	935	1,033	1,165
Highways	287	318	352	387	440	525	582
Other	578	659	697	756	878	1,000	1,103
Sub-Total (gross	1,349	1,541	1,728	1,950	2,252	2,557	2,850
Less Sinking Funds	80	80	81	91	92	99	108
Sub-Total (net)	1,269	1,461	1,648	1,860	2,160	2,459	2,742
Total Direct Bonded Debt	1,681	1,955	2,216	2,479	2,837	3,208	3,550
Guaranteed Debt	86	114	113	135	146	140	138
Total Bonded Debt	1,766	2,069	2,328	2,613	2,984	3,348	3,688
Bank Loans	102	109	130	169	188	176	189
Total Outstanding Debt	1,868	2,177	2,458	2,782	3,171	3,524	3,877

SOURCE: Bank of Canada Statistical Summary, Financial Supplement, 1959, pp. 112, 113.

At December 31, 1945 the net debt of Public Utilities ($172 millions) was approximately equal in amount to the gross debt outstanding for Schools ($179 millions) and also for Highways ($169 millions). The residual gross direct debenture debt ($404 millions) was somewhat greater than for Schools and Highways combined. Sinking funds held about one-sixth of the gross direct debt in the latter three categories. Guaranteed debt was small ($45 millions) as were bank loans ($29 millions).

At December 31, 1959 the "mix" had changed considerably. Net Public Utility debt had increased about five times and stood at $809 millions. School debt (gross) had grown about six and one half times to $1,165 millions. Highways debt (gross) had increased only three and one half times to $582 millions. The Residual debt (gross) had grown less than three times, to $1,103 millions. A rather interesting fact appears in examining the sinking fund holdings, which ran counter to the other changes and dropped $21 millions to $108 millions. At December 31, 1954 the sinking fund holdings had dropped $49 millions to $80 millions as the result of a steady decline since 1945, but increased by small amounts in each succeeding year. The decline is probably the result of the decreasing use made of sinking fund debentures and the increasing use of serial debentures. Guaranteed debt increased about three times to $137 millions and bank loans increased about six times to $189 millions.

It is apparent that during the post-war period the greatest pressure on the municipalities has been for the construction of schools. As a result of the priority given school construction there has undoubtedly been a postponement of many other important and necessary expenditures.

It is interesting to note that just less than 90% of the net debenture debt at December 31, 1959 was issued by urban municipalities.[1] Of the 10% issued by rural municipalities, nearly 65% was for schools. In thinking of the problems brought on by growing debenture debt it is important to keep in mind that 90% of the debt burden is borne by the somewhat less than 60% of our population which is classified as urban. The municipal financial problems are largely urban problems.

The relative importance of each debt category over the post-war period is shown in Table IX. Public Utilities accounted for 21% of total bonded debt at the end of 1945. By the end of 1959 this category amounted to 22%, after having been 24% at the end of 1955. It would appear that the utility expenditures made from 1946 to 1955 resulted in excess capacity which has permitted a relatively lower expenditure on this category since 1955. School debt increased almost without interruption from 21% of the total at the end of 1945 to 32% at the end of 1959. The drop

1. Bank of Canada Statistical Summary, Financial Supplement, 1959, p. 113.

TABLE IX
CATEGORIES OF MUNICIPAL DEBT AS A PERCENTAGE OF TOTAL BONDED DEBT

CATEGORY OF DEBT	1945	1946	1947	1948	1949	1950	1951	1952
Bonded Debt								
Direct								
Public Utilities (net)	21	20	19	21	21	23	24	22
Other Categories (gross)				a				
Schools	21	22	22	17	20	22	24	26
Highways	20	19	18	19	19	18	17	17
Other	48	49	48	49	47	41	38	35
Sub-Total (gross)	90	90	88	85	85	81	80	78
Less Sinking Funds	15	15	13	12	11	9	8	6
Sub-Total (net)	74	75	75	73	74	72	72	72
Total Direct Bonded Debt	95	95	94	94	95	96	96	94
Guaranteed Debt	5	5	6	6	5	4	4	6
Total Bonded Debt	100	100	100	100	100	100	100	100
Bank Loans	3	3	5	7	7	8	7	7
Total Outstanding Debt as a % of Total Bonded Debt	103	103	105	107	107	108	107	107

SOURCE: Table VIII

a Drop due to re-organization of school debt of Quebec Municipalities.

TABLE IX (continued)
CATEGORIES OF MUNICIPAL DEBT AS A PERCENTAGE OF TOTAL BONDED DEBT

CATEGORY OF DEBT	1953	1954	1955	1956	1957	1958	1959
Bonded Debt							
Direct							
Public Utilities (net)	23	24	24	24	23	22	22
Other Categories (gross)							
Schools	27	27	29	31	31	31	32
Highways	16	15	15	15	15	16	16
Other	33	32	30	29	29	30	30
Sub-Total (gross)	76	75	74	75	76	76	77
Less Sinking Funds	5	4	4	4	3	3	3
Sub-Total (net)	72	71	71	71	72	73	74
Total Direct Bonded Debt	95	95	95	95	95	96	96
Guaranteed Debt	5	5	5	5	5	4	4
Total Bonded Debt	100	100	100	100	100	100	100
Bank Loans	6	5	6	7	6	5	5
Total Outstanding Debt as a % of Total Bonded Debt	106	105	106	107	106	105	105

SOURCE: Table VIII

a Drop due to re-organization of school debt of Quebec Municipalities.

which is shown for this category in 1948 is the result of a re-organization of school debts of Quebec municipalities, which had a portion of their indebtedness assumed by the province. Highway debt fell from 20% of the total to 16% after reaching a low point at 15% at the end of 1957. The residual category of direct debt fell from 48% to 30%; sinking funds, as an offset to gross debt, have fallen from 15% to 3%. Debt guaranteed by municipalities, although fluctuating somewhat as a result of occasional large debenture issues, has fallen from 5% to 4%. Bank loans were 3% of the bonded debt at the end of 1945, increased to 8% at the end of 1950, and then fell off to 5% at the end of 1959.

It should be noted here that municipal bank loans are subject to strong seasonal fluctuation, reaching a seasonal peak at or soon after March 31st, and a second much lower peak during September and October. Year end levels are usually near the low point for the year.

2. Currency of Payment.

Table X gives a different statistical series on municipal debenture debt from that presented in Table VIII. For the year 1959 a reconciliation of the difference between the two series is given in Appendix I. The difference arises in part from the use of direct estimates of new debenture issues and retirements to arrive at the figures given in the former table, whereas figures in the latter table are based

TABLE X
MUNICIPAL DEBENTURE DEBT BY CURRENCY OF PAYMENT
($ Millions)

CURRENCY OF PAYMENT	1946	1947	1948	1949	1950	1951	1952
Canada Only	(b)	(b)	733	847	979	1,090	1,239
Other (a)							
New York Only	3	79	73	72	89	158	205
London Only	(b)	(b)	17	16	16	14	10
Canada or London	(b)	(b)	18	18	15	14	13
Canada or New York	(b)	(b)	80	75	67	67	59
Canada, New York or London	(b)	(b)	29	27	25	24	22
Sub-Total, foreign pay debentures	(b)	(b)	217	208	212	277	309
Total (gross)	836	872	950	1,055	1,191	1,367	1,547

SOURCE: 1946 to 1951 - figures derived using "net new issues" as shown by Table XI.

1952 to 1959 - Bank of Canada Statistical Summary, Financial Supplement, 1959, p. 85.

a Unpublished estimates by Bank of Canada to and including 1958.

b Not available.

TABLE X (continued)
MUNICIPAL DEBENTURE DEBT BY CURRENCY OF PAYMENT
($ Millions)

CURRENCY OF PAYMENT	1953	1954	1955	1956	1957	1958	1959
Canada Only	1,365	1,586	1,803	1,944	2,125	2,334	2,529
Other (a)							
New York Only	253	280	309	396	503	628	756
London Only	7	7	5	5	5	5	5
Canada or London	12	8	8	8	6	6	6
Canada or New York	75	72	65	62	62	60	59
Canada, New York or London	18	16	13	12	9	9	8
Sub-Total, foreign pay debentures	365	383	400	483	585	708	834
Total (gross)	1,729	1,969	2,203	2,427	2,710	3,043	3,363

SOURCE: 1946 to 1951 - figures derived using "net new issues" as shown by TABLE XI

1952 to 1959 - Bank of Canada Statistical Summary, Financial Supplement, 1959, p. 85.

a Unpublished estimates by Bank of Canada to and including 1958.

upon year-end reports submitted by municipalities to their respective provincial governments. The principal cause of the difference, however, is the exclusion from Table X of issues sold to or guaranteed by the provincial governments.

All the figures given in Table X should be regarded as estimates for the years to 1951, and the figures for foreign-pay debt as estimates to 1958. The totals are generally consistent with those of Table VIII, and as would be expected, the differences are considerably smaller in 1946 than in 1959.

The figures point up some significant trends since 1945 and more particularly since 1950. Because of United Kingdom exchange controls, the role of the London market has become insignificant; the amount of debenture debt with a London payment feature has declined continually. Debentures payable optionally in Canadian and United States dollars have also declined in amount. In contrast, debentures payable in United States dollars have increased steadily, from almost zero in 1946 to $756 millions in 1959. The period of most rapid increase was after 1950 and the rate of increase in outstanding United States pay debt has been much more rapid than the rate of increase in outstanding Canadian pay debentures.

The total of all the foreign pay debt outstanding has increased from $217 millions at the end of 1948 (the earliest year for which a figure is available) to $834 millions

at the end of 1959, an increase of $617 millions. If we exclude debentures payable only in United States dollars, there was a $66 million decrease; the issues payable only in United States dollars increased by $683 millions. By comparison, the outstanding domestic issues increased by $1,801 millions.

3. New Issues and Retirements

In Table XI we see the way in which the changes in the outstanding debentures have been brought about. The annual total of "Net New Issues" follows a rising trend, increasing substantially each year from 1946 to 1951 inclusive and thereafter moving upward in jumps each third year. In the period 1951 to 1953 the average net new issue was $179 millions; in the period 1954 to 1956 the average net new issue was $233 millions, although the net issue in 1956 was $16 millions lower than in 1954; in the period from 1957 to 1959 the average net new issue was $324 millions which was $91 millions higher than the average of the preceeding three year period. The increase from 1957 to 1959, however, amounted to only $35 millions. Years of special significance seem to be 1952, the first year in which there was a slowing down in the rate of increase in net new issues; 1954, when next there was a substantial increase and 1957 and 1958 when again the increases over the immediately preceeding years were substantial.

TABLE XI
NEW ISSUES AND RETIREMENTS OF MUNICIPAL DEBENTURES
($ Millions)

	YEAR ENDED DECEMBER 31ST						
	1946	1947	1948	1949	1950	1951	1952
Gross New Issues Delivered							
Canadian $	(a)	(a)	(a)	(a)	(a)	(a)	(a)
Other Currencies	(a)	(a)	(a)	(a)	(a)	(a)	(a)
Total	32	68	119	150	187	238	246
Retirements							
Canadian $	(a)	(a)	(a)	(a)	(a)	(a)	(a)
Other Currencies	(a)	(a)	(a)	(a)	(a)	(a)	(a)
Total	37	37	41	45	51	62	66
Net New Issues							
Canadian $	(a)	(a)	(a)	(a)	(a)	(a)	(a)
Other Currencies	(a)	(a)	(a)	(a)	(a)	(a)	(a)
Total	-5	31	78	105	136	176	180

SOURCES: 1946 to 1952 - Total Net New Issues figure is taken from Bank of Canada Statistical Summary, Financial Supplement, 1955, Footnote 1, p. 37; Retirements from Financial Supplement, 1959, p. 118; Gross New Issues is a residual figure; 1953 to 1959 - Bank of Canada Statistical Summary, Financial Supplement, 1959, p. 83.

a Not available

TABLE XI (continued)
NEW ISSUES AND RETIREMENTS OF MUNICIPAL DEBENTURES
($ Millions)

	YEAR ENDED DECEMBER 31ST						
	1953	1954	1955	1956	1957	1958	1959
Gross New Issues Delivered							
Canadian $	203	305	302	248	292	341	354
Other Currencies	73	38	42	107	123	148	147
Total	276	343	344	355	414	488	501
Retirements							
Canadian $	77	83	86	107	110	132	160
Other Currencies	17	20	25	24	26	30	28
Total	94	103	111	131	136	161	187
Net New Issues							
Canadian $	126	222	217	141	181	209	194
Other Currencies	56	18	17	83	97	118	119
Total	182	240	234	224	278	327	313

SOURCES: 1946 to 1952 - Total Net New Issues figure is taken from Bank of Canada Statistical Summary, Financial Supplement, 1955, Footnote 1, p. 37; Retirements from Financial Supplement, 1959, p. 118; Gross New Issues is a residual figure; 1953 to 1959 - Bank of Canada Statistical Summary, Financial Supplement, 1959, p. 83.

The explanation for the significant changes is to be found not in the series on "Total Retirements" which shows a very steady progression, but in the series on "Total Gross New Issues Delivered". The annual total in this latter series increased from $32 millions in 1946 ($5 millions less than total retirements) to $501 millions in 1959 ($313 millions more than retirements). This is a total change of $469 millions in thirteen years, or an average increase of $36 millions each year. The increases were significantly greater than average in 1948, 1951, 1954, 1957, 1958 and we may later find these years to be of special interest.

The total retirement series has tended to follow a curvilinear progression, because municipal debentures have generally been of the serial type, re-payable in equal annual instalments. When there are year-on-year increases in the amount of annual issues, the total annual retirements will grow at an increasing rate. A graph of the "retirements" series would clearly show this to be the case. Retirements were $37 millions in 1946, $187 millions in 1959, an increase of $150 millions in thirteen years. The simple annual average increase is $12 millions per year, but in 1959 the increase in retirements over 1958 amounted to $26 millions.

Over the thirteen years the average annual increase in the amount of net new issues was $24 millions (the average annual increase in new issues of $36 millions, less the

average annual increase in retirements of $12 millions). Because retirements have been increasing at a faster rate than new issues, the increase in total debt outstanding has been taking place at a reducing rate.

The conclusion can be drawn from the statistics in Section 1 that an excessive financial burden is being borne by the residents of urban areas, and that some form of equalization through provincial grants especially for construction of educational facilities would be justified. It is also apparent that municipalities are becoming exposed to exchange rate risks to an increasing and, to the writer, an undesirable extent and means of raising more of the required capital in Canada should be found. Finally the changing relation of new issues to retirements implies that debt service will absorb a rising percentage of municipal revenue in future, unless means are found of relying to a lesser extent on borrowed funds, and to a greater extent on current revenue for making capital outlays. Of course to the extent that provincial grants to municipalities are increased the pressure on the municipalities to expand other current revenues will be diminished.

CHAPTER IV

CAPITAL BORROWING BY MUNICIPALITIES

Table XI indicated the Gross New Issues delivered by municipalities in years 1946 to 1959, and further divided the total figure between Canadian dollar and other issues for the years 1953 to 1959. It seems appropriate now to discuss the various types of debentures which may be issued by municipalities, the limitations imposed upon municipal borrowing by the provincial governments, the technique of issuing debentures and the bidding procedure of the underwriters. This will provide the background for a discussion in following chapters of various aspects of borrowing.

1. Types of Debentures

There are four types of debentures which all municipalities may issue:[1]

(a) Sinking Fund debentures.
(b) Serial debentures.
(c) Annuity debentures.
(d) Instalment debentures.

(a) Sinking Fund Debentures. These consist of issues with a single maturity date which are issued subject to the commitment that each year a determinate sum of money will be allocated out of current income to a fund which will

---

1 Examples of each of these four forms together with additional comment are given in Appendix 2.

be invested in these or other securities and which will by maturity provide an amount sufficient to redeem the debentures. A rate of interest (capitalization) to be used in determining the annual sinking fund payment will be stated in the borrowing legislation. This form of issue has in the past been commonly used, but has fallen out of favour as a result of inadequate observance by the issuing municipality of sinking fund requirements. In some instances the fault has been lack of knowledge on the part of municipal financial officers; in some instances it was lack of revenues, particularly during the depression years.

(b) Serial Debentures. These consist of issues of debentures a portion of which matures annually commencing with the first year after issue until the date of final maturity. The annual maturities may be equal throughout the term of the issue, or they may increase in amount. In the latter case the annual maturities may be graduated so that the annual payments of principal plus interest are nearly equal in each year; in this form the securities may be referred to as "serial instalment" debentures. This has become the most commonly used type of debenture, since there is from the date of issue complete certainty, for both borrower and lender, as to maturity dates and of the necessity to arrange funds to effect retirement of debentures. With these debentures the possibility of mismanagement of funds is almost eliminated.

(c) Annuity Debentures. These debentures, seldom if ever encountered to-day, return annually to the purchaser a portion of the principal plus interest on the unpaid principal of each debenture. Payments are in equal annual amounts, so calculated that the final payment liquidates completely the principal amount of each debenture. The aggregate annual payments are equal throughout the life of the debentures, much the same as home mortgage payments are equal through the lifetime of a mortgage. This form of debenture would be almost totally lacking in marketability, because of the difficulty of determining the price and accrued interest at the time of transfer, and although for the borrower it has the advantage of equal instalments this is a minor consideration when set against the lack of marketability of the debenture.

(d) Instalment Debentures. These are essentially serial debentures, but with annual maturities of principal being so arranged that the annual payments of principal plus interest are equal. This necessitates small repayments of principal in the early years when total interest payments are high and increasing amounts of principal repayment as the interest payments diminish owing to the reduced amount of debentures outstanding. It also necessitates the issuance of odd value denominations to fit the exact mathematical calculations.

2. Limitation on Borrowings[2]

Since in Canada provinces legally create all municipal governments they are able to exercise complete control over municipal borrowing. In fact there is in every province a fairly elaborate system of control, extending through approval of the borrowing to many of the terms of the borrowing.[3] A brief outline of the restrictions follows:

(a) Approval required. In addition to approval by municipal council, borrowings usually require approval of the ratepayers. In some instances approval by 60% of those voting is needed (Manitoba and British Columbia) although a simple majority is sufficient in most cases. No approval from ratepayers need be obtained by rural municipalities in Nova Scotia and Saskatchewan or by any municipality in Newfoundland. In Ontario the Ontario Municipal Board may waive the need for reference to ratepayers and a number of specific exemptions are listed in the Municipal Act. In Prince Edward Island and New Brunswick ratepayer approval needs to be obtained only in villages.

---

2 This section is based largely upon a memorandum prepared by Mr. W.A. MacKay, Bank of Canada.

3 In many, if not all provinces there are administrative as well as legislative controls. The administrative controls can be deduced, in part, from the rulings given by provincial boards but they are seldom known in detail. In this section the legislative controls only are discussed.

Finally borrowings usually require approval of either the Lieutenant Governor-in-Council, (St. John's and Corner-brook, Newfoundland), the Minister of Municipal Affairs (Newfoundland, Prince Edward Island, Nova Scotia and villages and local improvement districts in New Brunswick) the legislature (New Brunswick, except for villages and local improvement districts) or a regulatory board or commission. This enables the senior government to examine the financial condition of the municipality, to assess the latter's ability to carry the proposed addition to its debt burden and to appraise the municipality's need for added capital facilities. In certain instances approval is withheld, or warning is given that future approvals may not be automatically forthcoming.

(b) Duration. Longest permissible term is generally forty years (thirty years in some provinces) and for some types of borrowing, five, ten, fifteen or twenty years may be the maximum. The purpose of the restriction is to ensure that the debt will be liquidated during the lifetime of the capital work. It would appear that many, if not most, of the capital works of shorter life are financed by using current revenue, because few municipal issues have a final term of less than ten years.

(c) Coupon. The provinces of Newfoundland, New Brunswick, Prince Edward Island, Ontario, Alberta and British Columbia do not impose any restriction on coupon

rates. A limit of 6% is imposed on municipalities in Nova Scotia and Quebec and a limit of 7% applies to municipalities in Manitoba. In Saskatchewan a limit of 7% applies to rural municipalities and a limit of 8% to villages. Over and above the general legislative requirements of their provinces the following cities have specific limitations: Summerside, Prince Edward Island, 7%; Charlottetown, Prince Edward Island, 6%; St. John's, Newfoundland, 3%. These limits have in some cases recently been increased by 1% or 2% as a result of rising interest rates.

(d) Price. Generally there appears to be no restriction on issuing debentures at a discount. However in Manitoba specific approval for issue below par must be obtained from the Manitoba Municipal Board, and in Ontario and Alberta the amount of the discount must be recovered in the next year's tax levy. (In Ontario, with approval of the Municipal Board, the discount may be recovered out of the tax levy over a five year period.)

(e) Form of debenture. Debentures can in most cases be either serial or sinking fund. However, New Brunswick strongly recommends the use of serials and Ontario, by requiring that annual sinking fund contributions be capitalized at a rate of 3%, encourages the issue of serials. In Manitoba the Municipal Board has refused to authorize sinking fund debentures for many years. In

Saskatchewan, villages and rural municipalities can issue only serial debentures. In Alberta the use of sinking fund debentures is not generally approved. In British Columbia debentures must be either serial or annuity in form.

(f) Callability. Generally debentures of municipalities of the four western provinces are required to be non-callable. In Ontario it is customary for only the final maturity to be callable. In Quebec it was formerly customary for all maturities to be callable but since January, 1961, all issues must be non-callable. In Nova Scotia, on the other hand, debentures must be callable at any time.

(g) Debt limit. Municipalities in the four western provinces and in Quebec and Prince Edward Island are limited by statute in the maximum amount of debt outstanding. In Prince Edward Island the debt limit is five times the previous years tax revenues (except for Summerside which has a fixed limit of $300,000). The municipalities in the other five of these provinces are limited to varying percentages of total taxable assessment. Generally the smaller municipalities are not permitted to have as high a ratio of debt to assessment as the larger municipalities or the cities. For instance it appears that most cities must have a ratio not greater than 20% (25% in Manitoba and Saskatchewan) while villages cannot exceed a ratio of 15% in Quebec and Saskatchewan, 25% in Manitoba and 10% in British Columbia. In general school and public utility debt does not impinge upon the limit.

In the case of Ontario municipalities there is no statutory debt limit, but for administrative purposes the Ontario Municipal Board has established its own formula for determination of the maximum permissible debt limit. It seems probable that the other provinces which do not have statutory limits must also use some similar formula in deciding when to withhold approval of borrowing applications.

From this brief outline it is clear that the machinery exists for intensive supervision and scrutiny of municipal borrowings. It does not indicate the degree of supervision which is in fact exercised and there are indications that some provinces give only superficial consideration to the applications to borrow.[4]

It seems inevitable that each province will in time devote an increasing amount of attention to the examination and supervision of municipal borrowing and municipal affairs generally; certainly the record of borrowings in the recent past and the indicated trend point to the existence of problems which might be more easily met with help from an active provincial department of municipal affairs.

---

4 Eric Hardy, "Provincial Municipal Relations" Western Municipal News, Vol. 55, No. 5, May, 1960, p. 12.

3. The Technique of Issuing Debentures.

The municipalities which have completed the preliminary arrangements and have obtained the approvals needed in connection with a debenture issue have three ways in which to effect placement of the bonds with the market:

(a) By negotiating an underwriting.
(b) By sale "over the counter".
(c) By issuing a call for tenders.

Each will be dealt with separately.

(a) Negotiated underwriting. A dealer or a syndicate of dealers are selected to advise on the terms of the issue and to underwrite it. The term to maturity, coupon or schedule of coupons, amounts to mature each year, call provisions and purchase price are arrived at by negotiation between representatives of the municipality and the dealers. The timing of the offering is under better control with this type of sale, and the issue can be better fitted into the calendar of offerings.

With this form of sale there is, of course, always the possibility that the price obtained by the municipality is less than would have been received from a public tender and the procedure is therefore not followed generally.

(b) Sale "over the counter". This form of sale is not general, but is found occasionally, especially in the Province of Quebec. In Quebec, terms of issue are established with the advice of the Quebec Municipal Commission

and the issue is then distributed by the municipality itself, presumably to individuals and ratepayers in the municipality.

It seems probable that issues are made in this manner as a last resort, and the purchase of the debentures is a matter of good citizenship rather than of economic investment.

(c) Sale by public tender. This is the customary method of arranging a sale of debentures. Competitive tenders are invited through the distribution of a "notice of call" to investment dealers known to be interested. The "notice of call" will vary with the municipality but will normally provide the following information:

(i) Closing date and hour for receipt of tenders and address at which tenders will be received.

(ii) Date of issue of debentures and maturity schedule, showing dates of maturity and amounts.

(iii) Either the specific interest rates for each maturity or the maximum interest rate.

(iv) Period covered by each interest coupon.

(v) Places of payment of principal and interest.

(vi) Denominations of debentures.

(vii) Call provisions (if any) applicable to the issue.

(viii) Amount of deposit (if any) required with tender.

(ix) Requirements regarding payment of accrued interest by underwriter to date of delivery.

(x) Arrangements to be made for acceptance of tenders, including a qualification that the municipality "does not bind itself to accept the highest or any tender".

A call for tenders issued by the city of Halifax, dated September 22, 1960, included the following information in addition to the information noted above:

(i) Estimated delivery date of debentures.

(ii) Debentures a direct and general obligation of the city.

(iii) The expense of an investigation into the legality of the issue to be borne by the tenderer.

(iv) The city would not sell or offer further securities for a period of ninety days after acceptance of the tender without the consent of the successful tenderer.

(v) Counter-offers would not be considered.

(vi) Debentures were to be validated by the Deputy Minister of Municipal Affairs.

Maurice Turgeon, Chief of the Economic Research Bureau, Quebec Municipal Commission, in an article in "La Revue Municipale"[5] gives some interesting insights into the technique of calling for tenders. In particular he recommends that tenders be called at a time of evening which will permit representatives of the tenderers to be present without having to take time away from work; that tenders be called for a day other than Monday, which tends to be a day congested by a majority of tenders; that calls for tenders be avoided during the "summer doldrums" of late July and August

---

5 Maurice Turgeon, "Preparation of Notices in Respect to Calls for Tenders", La Revue Municipale, June, 1949.

and finally that denominations lower than $500 be avoided, as they tend to suffer a discount because less popular.

In conjunction with the issue of a "notice of call" the municipality must prepare background statistics and information to assist tenderers to evaluate the credit worthiness of the borrower and to rate the debentures. The information is largely standardized, and normally includes:

(i) The purpose of the loan.

(ii) Population.

(iii) Assessed value of property, total and per capita, usually sub-divided between commercial, industrial and residential assessment.

(iv) Current tax levy, total and per capita.

(v) Current tax collections and this amount as a percentage of current levy.

(vi) Total tax collections (current and arrears) and this amount as a percentage of current levy.

(vii) Accumulated tax arrears, and reserves, total and per capita.

(viii) Debenture debt, gross and net, total and per capita.

(ix) Annual debt charges as percentage of current revenue.

(x) Current revenue and expenditure.

If possible this information should be provided for a series of years in order that trends may be observed.

4. Bidding Procedures by Dealers

For the purpose of bidding on a debenture issue a dealer may bid alone if the issue is small, or "in syndicate"

if the issue is large. The syndicate may be small, and for the one issue only, or it may be large and continuing; in the former case arrangements are likely to be informal with decisions reached by negotiation among the dealers, whereas in the latter case arrangements are likely to be subject to established custom and precedent and a formal agreement.

In a "continuing account" syndicate the participation of each dealer in the underwriting is related to the length of time the firm has been a member of the syndicate (seniority) and to its distributive capacity. In the larger syndicates it is frequently difficult for a new firm to gain admission, or for smaller and newer firms to increase their participation in the underwriting because of lack of seniority.

In each underwriting one member of a continuing syndicate acts as manager and this responsibility may alternate between two or more senior members with succeeding underwritings. The responsibilities of the manager include the following:

(i) To acquaint members with details of proposed new issues, and to obtain financial and other statistics for syndicate use.

(ii) To arrange syndicate meetings to consider the bidding basis, and price differentials.

(iii) To prepare bidding schedules to facilitate preparation of the bid.

(iv) To forward a syndicate agreement form to each member, setting out the conditions governing the syndicate.

(v) To adjudicate the various views on bidding and, if there are differences which cannot be reconciled otherwise, to establish the basis upon which the bid will be submitted.

(vi) To submit the tender (this is a most important function because the tender letter forms a binding contract if accepted and therefore must cover all significant limitations and understandings).

(vii) If the tender is successful, to arrange banking accomodations, delivery arrangements, and to maintain records and accounts of the distribution of the debentures.

(viii) After an issue has been underwritten the manager will keep in touch with the market for the issue and may maintain or support the market if that appears to be necessary.

There are two important features of syndicate operation relating to the distribution of debentures in the event of a successful tender; the first relates to "exempt" accounts, the second to the establishment of a "divided" or "undivided" account.

"Exempt" accounts are a group of insurance companies, chartered banks and trust companies which are to be sold securities only for account of the entire syndicate and only by the salesmen or firms designated by the syndicate. This method conserves the time, and presumably the patience of the major investors, and at the same time establishes a monopolistic advantage for the syndicate, eliminating the possibility of competition among members for the business of the most profitable accounts. Although price restrictions are imposed during the period of the agreement, there are ways

of making price allowances which do not contravene the letter of the agreement (e.g. rebates of commission; "over-trading" or over pricing securities purchased in exchange for new securities sold at the official offering price) and the establishment of a monopolistic market group prevents price competition which would adversely affect the syndicate especially with a slow moving issue.

"Divided" syndicate accounts are those in which sales by members are credited against their own proportion of the underwriting; "undivided" accounts are those in which sales by members are credited against the entire underwriting. The former arrangement benefits the firm with a strong selling potential by permitting it to extinguish its liability at a more rapid rate than other dealers; the latter arrangement leaves each member with a liability until the entire underwriting has been sold. If an issue is slow moving, and bonds are still unsold when the account is broken up, each member receives unsold bonds in proportion to its participation in the account although some firms may have already sold more than their original participation. A combination of these two approaches may be made by permitting sales up to the basic participation to be credited against each firms liability but requiring that subsequent sales be made for account of the syndicate thus extinguishing part of the remaining liability of other members.

Another compromise arrangement can be effected by having the syndicate members draw down bonds at a higher price than cost. This provides a profit to the syndicate but permits each firm to realize a further return linked directly to its sales results.

It is customary for a secondary group of investment dealers, known as the "selling group" to participate in large underwritings. The firms in this group receive debentures at a discount from the offering price which still allows the "banking group", or underwriters, a mark-up. This group assumes no financial liability and their sales are credited to the whole syndicate in the same manner as sales to exempt accounts.

The agreements are written for a set period of thirty or sixty days subject to prior termination or to extension to some maximum time if necessary. The reception accorded an issue determines the duration of the agreement; a successful issue may be sold quickly ("go out the window") and may enable termination of the account before the agreed time, while an unsuccessful issue may lead to extensions to the maximum. If further extensions are not feasible, and bonds remain unsold, the account may be broken up and the bonds sold pro-rata to the underwriters. Often before this happens the offering price will be reduced to speed up liquidation of the account; this is especially likely to happen if bond

yields in general have moved higher (and prices lower) since the initial offering.

It can be seen from the information given in this chapter that debenture issues may involve rather complex procedures, with which smaller municipalities would be unfamiliar. It would seem desirable to have in every province a board to which municipalities would look for advice and assistance in marketing their debentures. In Quebec the Quebec Municipal Commission has filled this role for many years and in New Brunswick a Bond Co-ordinator has recently been appointed to fill this function. This would seem to be a suggestion which municipalities should press upon their respective provincial governments.

CHAPTER V

TRENDS IN MUNICIPAL BORROWING COST

The preceding chapter described the characteristics of municipal debentures and other factors relating to their issue; this chapter will examine the pattern of yields on municipal debentures and the relationship which these yields bear to those on bonds of the two senior levels of government.

1. Secondary Market Yields

One measure of changes in the cost of borrowing is the yield on securities in the secondary market i.e. the yield on bonds traded after time of original distribution by the underwriters. These yields do not, of course, measure the cost of obtaining new money because of commissions allowed to the underwriting group and also because yields on new issues customarily provide a return to purchasers somewhat higher than the return they would obtain from purchasing outstanding issues. But the new issue market tends to be discontinuous, especially for Canada and provincial issues, because of the limited number of issuing agencies, but also for municipal issues and a continuous record of representative yields is less readily obtained. Another advantage in using a series of secondary market yields based upon

identical issues is the comparability of the figures during given time periods. Borrowing costs reflect the credit ratings of different municipalities, and as it is difficult to evaluate the magnitude of the influence of this factor a series on yield cost of new issues is less continuous and comparable than it might, at first glance, appear to be.

Chart 1 illustrates the trend in municipal bond yields from 1946 to 1959, with comparative yields for provincial and Canada Bonds. The plotted values are quarterly averages of monthly yields from the following sources:

1. Municipal and Provincial Bonds.

McLeod Young Weir and Co. Ltd., average yield of ten municipal and ten provincial bonds, at first of the month. Available from 1948 only.

2. Canada Bonds.

1946 to 1951 inclusive: Bank of Canada Statistical Summary; fifteen year theoretical[1] at mid-month.

1952 to 1956 inclusive: Bank of Canada Statistical Summary; fifteen year theoretical at first of month.

1957 to 1959 inclusive: Calculations of average yield on Canada bonds having earliest payment date of ten years or more; yields taken at first Wednesday of every month.

The yield pattern from 1948 to 1959 illustrates the dramatic shift which has occurred in the post-war period in

---

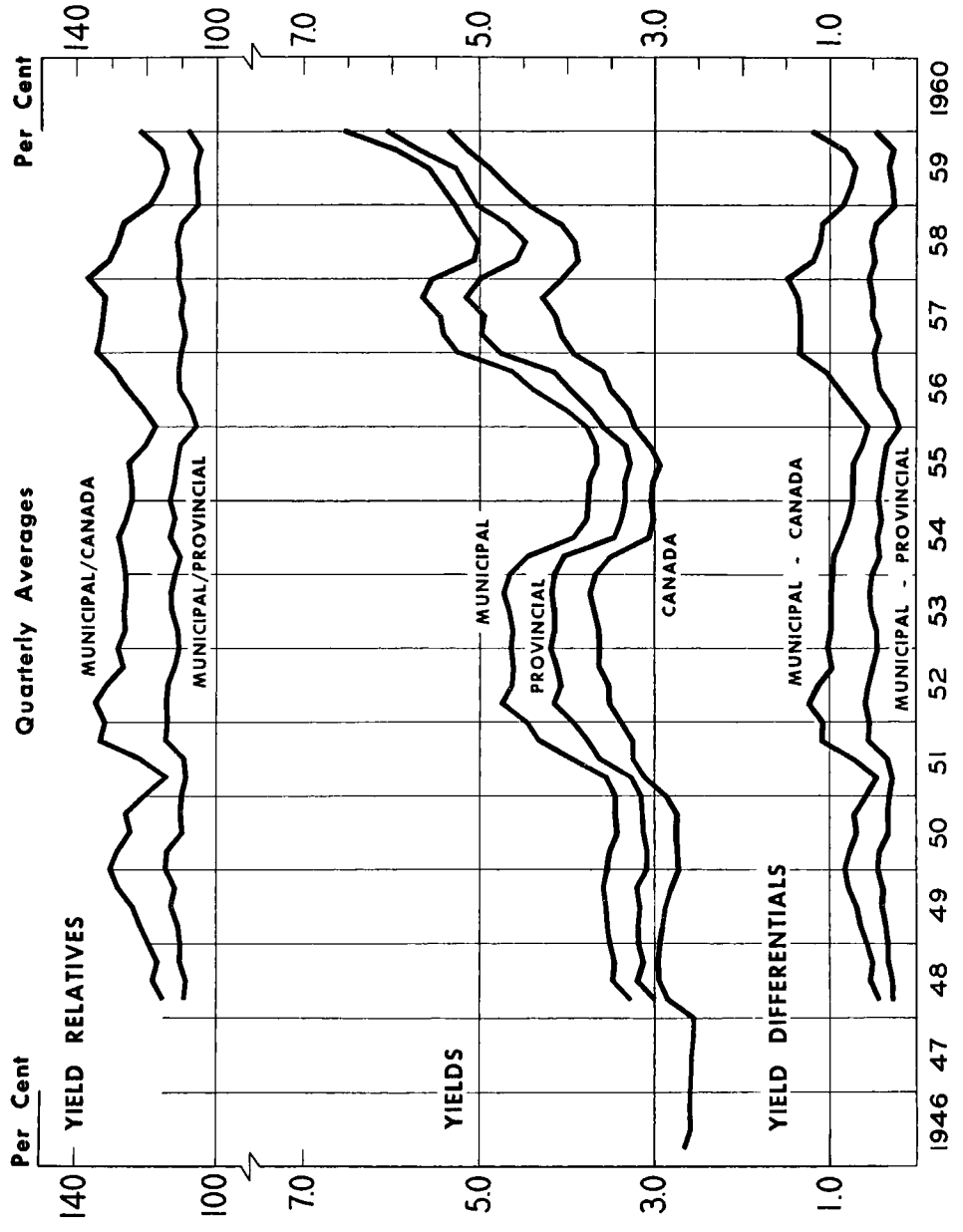
1 Estimated yield for a bond of this term, read from a free hand curve which reflects the yields on outstanding marketable Government of Canada securities.

TRENDS IN MUNICIPAL BORROWING COST

CHART 1

MUNICIPAL, PROVINCIAL AND CANADA BOND YIELDS IN THE SECONDARY MARKET

Quarterly Averages



SOURCE: See text, p. 66

the level of yields. In early 1948 the initial rise occurred from the low yield levels of the period of wartime finance. The Canada fifteen year bond rose from a yield which had fluctuated between 2.50% and 2.60% for two years up to about 2.95%. Under the impact of this change, municipal yields rose to the 3.50% area and provincial yields rose to the 3.10% area. The yields on municipal and provincial bonds held at these levels for about three years, to the end of 1950, tending to drop off at the end of the period. Early in 1951 municipal bond yields began to rise sharply, following a similar movement by provincial and Canada bonds, up to the 4.60% area. The upward movement lasted through 1951 and yields stayed at the new high levels until the end of 1953. During this period provincial bond yields were in the 4.20% area, and the Canada fifteen year bond in the range 3.50% to 3.70%. A decline in yields began at the end of 1953 which gathered momentum during the early months of 1954 and which by the summer had brought yields down eighty basis points (i.e. .80%) from their previous highs. The new levels held for a year, until mid-1955 when yields began to rise again. The new rise continued for about two years, bringing municipal yields to a high of 5.65%, provincial yields to a high of 5.15%, and the fifteen year Canada yield to a high of 4.25%. There was a slight overall increase in yields during 1957, with rates rising moderately in the first three quarters but

turning down in the fourth quarter, declining to the second quarter of 1958. The decline lowered municipal and provincial yields by about 65 basis points, and Canada yields by somewhat less. This decline was reversed sharply in the third quarter of 1958, and yields continued upward with the averages still rising sharply at the end of the period under review. (However, the peak in yields actually came early in October, and a decline in yields began during the month which continued through to the end of 1960, with a temporary reversal in the fall of 1960).

By the fourth quarter of 1959, yields had reached a thirty year high; municipal yields were at the 6.50% level, provincial yields at the 6.00% level, and the long term Canada average at the 5.30% level. To find comparable yield levels one has to go back to the early 1930's, when for a brief period in 1932 Canada and provincial yields broke through the 5% and 6% levels respectively. Prior to that comparable rates were experienced during a period which ended in 1922.

Through the period from 1946 to 1959, the dominant factors in the level of bond yields were the federal government's fiscal policies and the implementation of monetary policies which of course were varied to suit the different emerging economic conditions. It is obvious from examination of even the chart of quarterly average yields that the changes

in the yields on Canada bonds had a leading relation with other yields; this lead factor would be more apparent from examination of the monthly data.

Can it be concluded, on the basis of information so far considered, that municipal governments have been placed at a disadvantage relative to the senior governments in their search for funds? In order to examine this question we should look at yield differentials, and at the "yield relatives" which is a term used by the writer to indicate the percentage obtained by dividing municipal yields by provincial and Canada yields for the same time periods.

2. Yield Differentials and Yield Relatives

The absolute differences between yields on municipal and other bonds are of importance in evaluating the changing costs, but the ratios of municipal to other yields are more important in evaluating the real significance of the changes. Since the three series of yields, municipal, provincial and federal, do not move in parallel paths it is desirable to first compare municipal and provincial yields and then to compare municipal and federal yields.

(a) Municipal - Provincial Comparison. In the first quarter of 1948, municipal yields were 25 basis points higher than provincial yields. At three other periods up to the end of 1959 the differential was at approximately the

same level. Each of these three periods (first quarter 1951, fourth quarter 1955, fourth quarter 1958 to the third quarter 1959) followed declines in the level of municipal yields. The last period in fact extended well beyond the decline of yields and into the succeeding rise, indicating that in 1959 at least, municipal governments did not experience any disadvantage vis-à-vis provincial governments.

During periods of rising municipal yields the spread from provincial yields tends to increase, and to reach a peak about the same time municipal yields reach their peak. The differential also tends to remain in the higher range until municipal yields begin to fall, at which time the differential begins to narrow, and it continues to narrow as long as yields are falling. In fact the decline in the differential appears to extend slightly beyond the point at which municipal yields turn up, which indicates that they lag behind the provincial yields, which by reaching a turning point first will be rising while municipal yields are falling thus producing a narrower (in fact, the narrowest) differential.

In its upper range the differential has not exceeded 60 basis points, and has been generally between 50 and 60 points. This holds a good deal of significance in view of the very great increase in yield levels. In other words, when municipal yields were 4.60% to 4.70%, the differential was 50 to 60 basis points; when municipal yields were 5.60%

to 5.70%, the differential was again 50 to 60 points; when municipal yields were 6.50% the differential was still 50 points. This quite clearly represents the level at which quality differences between municipal and provincial bonds are offset by the differences in yield, and indicates that when yield differences approach one half of one per cent, demand for municipal bonds grows relative to the demand for provincial bonds, thus tending to prevent a further increase in the differential.

We have indicated the reason for the decline of the differential to its lowest level (lags in municipal yields) and for the maximum level of the differential (margin at which yield differences equate with quality differences); we have not yet explained the reason for widening differentials at the time of rising yields, and falling differentials at the time of falling yields. An explanation can be made in terms of the different supply-demand relations in the two markets, but this appears, in turn, to be related to the effect of quality of bonds upon expectations.

At the time of rising yields (falling prices) the holders of bonds are exposed to capital losses; if the rise in yields is expected to continue, then there will be tendency for investors to favor the highest quality bond available, and also to shift from lower to higher quality bonds. There should therefore be a changed demand situation which will tend to reduce demand for municipal bonds (lower

quality) and to transfer it to the higher quality provincial bonds. On the supply side (i.e., availability of bonds) there is reason to feel that municipal governments have a less flexible or variable need for funds than provincial governments and also that they have income sources which are less exposed to cyclical variation. This would imply a more rapid increase in provincial revenues in time of expanding business activity which would seem to relieve them of the need for borrowing funds to the extent which might otherwise have been necessary. This would then reduce the supply of provincial bonds compared with municipal bonds, and would tend to reinforce the influences on the demand side to produce widening differentials at the time of rising yields.

An examination of the chart of what is called "yield relatives" shows that it follows generally the chart of yield differentials. One point which appears very clearly though, and one which should be emphasized, is that relatively municipal yields have not risen as much as provincial yields over the post-war period. In 1948 and 1949 they were 20% to 30% higher than provincial yields (yield relative of 120 to 130) while in 1958 and 1959 they were only 10% to 20% higher. Over the period, succeeding high points have consistently been lower as have succeeding low points. This seems to result from the fact that, regardless of yield levels there is a tendency for investors to think that municipal yields

are attractive if 50 basis points higher than provincial yields. The situation would be different, of course, if investors thought that municipal yields were attractive only if 20% or 30% higher than provincial yields.

(b) Municipal - Canada Comparison. Much of the comment regarding the relation of municipal and provincial yields also applies to municipal and Canada yields. The differentials, however, are much wider and tend to show a greater cyclical variation.

In 1948 the differential was 40 basis points; in 1951 it reached a low of 45 points; in 1955 the low point was 56 points and in 1959 the low point was 70 points. This would seem to indicate some worsening of the position of municipal governments in relation to the federal government. In 1949 the differential reached a maximum level of 80 points; in 1952 the high point was 120 points and in 1957 the high point was 150 points.

What factors would account for the trend to rising differentials? We have seen that the differential between municipal and provincial yields had moved within stable limits; why hasn't the same relation held for the differential between municipal and Canada bonds? Part of the answer appears from the examination of the "yield relative". In 1948 municipal yields were 14% higher than the fifteen year Canada bond; at the low points in 1951 and 1959 they were again 14% higher while in 1955 they were 17% higher. At

the high points in 1949, 1952 and 1957 they were 30%, 35% and 37% above Canada yields respectively. What at first appeared to be a sharp deterioration of the position of municipal bonds now seems to be mostly a result of higher yield levels, with municipal yields tending to have the same rate of change as Canada bonds. There is still, however, an indication that at the cyclical high points municipal yields have risen at a greater rate than Canada's. This can be partly explained in terms of expectations. Since Canada bonds are the highest quality bonds in the market, at times of falling prices (rising yields) there will be a tendency, as noted previously in the discussion of the municipal-provincial differentials, for funds to shift toward Canada bonds from both provincials, and municipals. Provincial yields are not affected as much as municipals because they pick up some demand from a shift away from the latter bonds, but Canada yields are, relatively, affected least unfavourably of all.

In part it should also be possible to explain the shifts by examination of changes in the supply of bonds in the market.

The following table shows total municipal, provincial and marketable Canada bonds (excluding Canada Savings Bonds, Treasury Bills and Notes) outstanding from 1946 to 1959.

TABLE XII
MUNICIPAL, PROVINCIAL AND CANADA BONDS OUTSTANDING
($ Millions)

YEAR ENDED		Municipal [a]	Provincial [b]	Canada [c]
December 31,	1946	833	1,672	14,500
	1947	964	1,698	14,047
	1948	966	1,826	13,735
	1949	979	1,951	13,314
	1950	1,115	2,018	13,123
	1951	1,301	2,259	12,719
	1952	1,512	2,417	12,517
	1953	1,766	2,605	12,588
	1954	2,068	2,592	11,772
	1955	2,328	2,679	11,812
	1956	2,613	2,905	11,091
	1957	2,983	2,994	10,874
	1958	3,348	3,377	12,016
	1959	3,688	3,441	11,830

SOURCE: Bank of Canada Statistical Summary, Financial Supplement, 1959, p. 86.

a Includes bonds with provincial guarantees.

b Excludes treasury bills and guaranteed debt.

c Excludes treasury bills, treasury notes, deposit certificates, War Savings certificates and Canada Savings bonds but includes guaranteed debt.

Because there has been a substantial increase in the amount of Government of Canada debt outstanding in the excluded categories, a reduction has been possible in the marketable category, while provincial and municipal bonds outstanding have shown very substantial increases. This increased supply, relative to Canada bonds, creates greater selling pressure when expectations lead to a shift away from municipal bonds, and hence tends to depress municipal bond prices, even to a greater relative degree than the prices of Canada bonds. If this is a valid analysis, it is significant for future trends in bond yields because it seems likely that the outstanding total of municipal bonds will grow much faster than the total of Canada bonds, and the differentials may be expected to become even wider than they have been in the past.

3. Comparison of Municipal Bond Yields in the Secondary Market with Borrowing Cost to Municipalities

Statistics of yield cost (i.e. cost to the borrower, taking into account the sale price of the debentures and the annual interest charges, expressed as an annual rate) are inadequate; while from various sources details can be obtained of the amount of various borrowings, information on yield cost is less readily available. The Financial Post annual summary of new issues does not report yields, but either the underwriter's purchase or offering prices and this

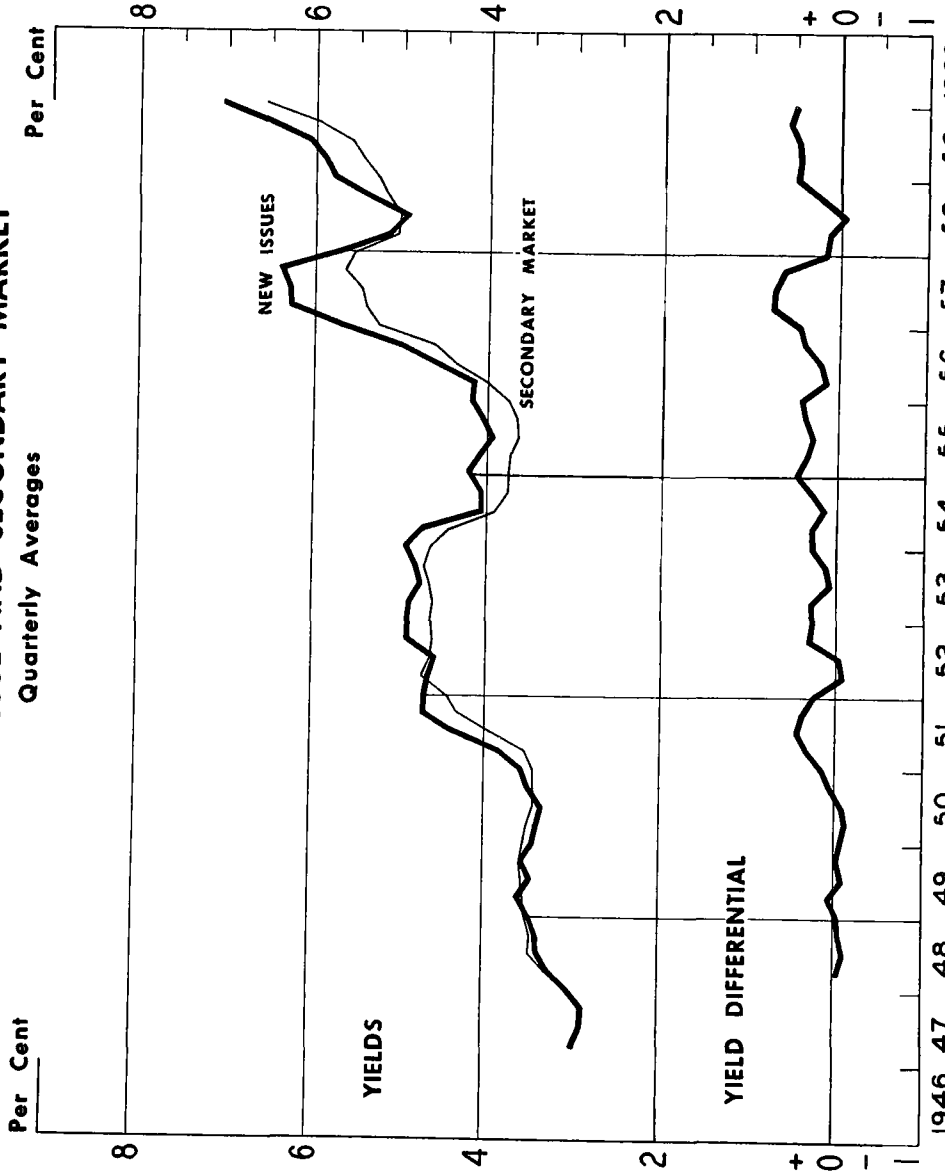
not in all cases. Prospectus circulars issued by the underwriting groups frequently do not quote either prices or yields, or if the circulars give prices and yields they may be different for various maturies, rather than "through the piece" (i.e. price for a block of bonds which contains an equal number of bonds maturing in each year). Finally, with serial bond issues, calculation of yield from price is an involved and time consuming operation. With the exception of the Quebec Municipal Board no provincial body assembles and publishes data on bond issues awarded. The Quebec body, however, provides detailed information in the form of periodic news bulletins as well as an annual summary of bond issues, and these reports form the basis of the calculations of yield cost which are referred to in this section. It should be kept in mind that our primary interest is the cost of borrowing for all Canadian municipalities; to use statistics for municipalities in one province as representative of all provinces may introduce some slight inaccuracies but this is unavoidable in view of the lack of comprehensive statistics. Because the cost figures used are for only one province it does not seem advisable to give an extensive analysis of the figures in the main text. There is, however, a great deal in the statistics which is of interest and an analysis has therefore been undertaken which appears in Appendix 3. The appendix also contains an explanation of

the manner in which the statistics which we will use in the present section have been derived. It should be noted that the figures used in this section have been derived using only the issues which were awarded by public tender; negotiated sales and over-the-counter sales have not been included.

A graphic representation is given in Chart 2 of the course of yield costs from 1947 (when the first annual summary by the Quebec Municipal Board was made available) to 1959. For purposes of comparison the yields on municipal bonds in the secondary market are also shown, and the differential between the two series.

Through 1948, 1949 and the first half of 1950 the new issue yield costs were slightly less than secondary market yields. This would presumably be a result of the excessive liquidity of the economy (i.e. supply of funds), the lack of municipal issues during the war years and perhaps the price competition among investment dealers to underwrite these issues during a period when there were no issues by the federal government to fill the gap left by discontinuation of issues for war finance. In connection with the last supposition it may be noted that the first post-war issue of marketable bonds by the federal government was delivered on June 15, 1950; it consisted of $395 millions of four-and-one half year bonds and $350 millions of eighteen year bonds. The latter issue was in direct competition with municipal

CHART 2
MUNICIPAL BOND YIELDS
IN THE NEW ISSUE AND SECONDARY MARKET
Quarterly Averages



SOURCE: New issues - Quebec Municipal Commission; Secondary market - McLeod, Young, Weir & Co. Ltd.

issues (which generally have a final term to maturity of between ten and twenty years) and perhaps led in the third quarter of 1950 to the increase in new issue yield cost which began at that time to exceed secondary market yields consistently. Yield costs rose continuously from the second quarter of 1950 to the third quarter of 1951 and rose both sooner and more rapidly than secondary yields. As a result yield costs exceeded market yields by 42 basis points by the second quarter of 1951. New issue costs increased further during the third quarter but secondary yields increased even more and the differential fell to 39 basis points. Over the next three quarters yield costs fell while secondary yields continued to rise and exceeded new issue costs in the first and second quarters of 1952. This relation was again reversed in the third quarter by a sharp rise in new issue costs. From this point to the end of 1959 there was a rising trend in the differential; at the fourth quarter of 1959 it amounted to 50 basis points. There were numerous fluctuations during the interval, with the differential tending to widen during the third and fourth quarters of each year (when the number of issues offered at tender increases sharply) and narrow during the first and second quarters. Even during the period of declining yields in 1954 and 1955 the differential continued to widen.

During this period changes in new issue costs seemed to lag slightly behind changes in market yields. As a result when yields turned sharply upward in 1956 the differential narrowed slightly, and for the whole of 1956 averaged 30 basis points compared with the average of 35 basis points in 1955. When market yields began to level out in the first quarter of 1957, new issue costs continued to rise sharply and the differential increased to a maximum of 84 basis points in the first quarter, remaining at 83 basis points in the second quarter. In the fourth quarter both series of yields began to fall, with new issue costs dropping more rapidly for the next three quarters; at the end they were 7 basis points below market yields. Then in a sharp reversal, yields turned higher in the third quarter of 1958. New issue yield cost rose over the next one and a half years from a quarterly average of 4.94% to 7.05% at the end of 1959. (On the basis of monthly figures the maximum change was from 4.87% in June 1958 to 7.15% in December 1959.) During the last half of 1958 new issue costs rose much more rapidly than secondary market yields and the differential changed from minus 7 basis points to plus 47 basis points; over the next four quarters it remained fairly stable, touching a low of 44 and a high of 54 basis points.

Except for the fact that during the first three quarters of 1957 the differential was substantially greater

than 50 basis points one would be tempted to say that this was approximately the maximum level. The question one asks, of course, concerns special circumstances which may have held during 1957 to explain the excessively large differential.

Table XII indicated that there was a drop of $217 millions in the federal government's direct and guaranteed marketable bonds outstanding and only a small increase in provincial bonds ($89 millions); there was, however, an increase of $370 millions in the total of municipal bonds outstanding in this year. Approximately 30% of the new municipal issues were offered in the United States, which is about the same proportion as held in 1956, so this does not appear to have been a factor. Net corporate financing is estimated to have amounted to $1,466 millions[2] which is about the same as for 1956, but much higher than the $782 millions raised in 1955. The year 1957 marked the peak of the business cycle and during most of the year conditions in the money market were stringent. For the first time since the end of the war monetary restraints were being employed rigorously.

During the previous twelve post-war years a large part of the economy's excessive liquidity had been extinguished; for instance there had been substantial liquidation of bank and general public holdings of Government of Canada

---

2 Unpublished Bank of Canada estimates.

Bonds during 1951 and 1952 to enable the purchase of bonds of municipalities, provinces and corporations.[3] By the peak of the 1955-57 business cycle the chartered banks were fully invested in loans and had little ability to acquire new municipal offerings, and for that matter probably little ability to finance dealer inventories. Since, as already indicated, municipal issues did not decline in 1957 (in the case of Quebec municipalities there are indications that, undoubtedly because of rising costs, some borrowings were deferred in the last three months of 1956 and the first month of 1957; these were apparently added to the borrowings later in 1957, at even higher cost) it may well be the case that some part of the excessive increase in new issue costs was due to underwriting difficulties and, perhaps, to increased underwriting margins to compensate for greater risks. This latter is a very difficult point to establish because information on underwriting margins is sparse and scattered. To obtain reliable comparative information for a series of periods would be extremely difficult and would require considerable expenditure of time. In the circumstances it is necessary to offer only the unsupported conjecture.

If the answer has been found to the question raised by the large 1957 differential, it has only raised another

---

3 Bank of Canada Annual Reports: 1951, p. 12; 1952, p. 9.

question, this concerning the size of the differential in 1959. It is true, of course, that in terms of cyclical comparisons the peak of the most recent cycle would be placed in early 1960, and a comparison of 1957 with 1959 may not be wholly valid. However, most bond yields attained their highest levels in the third quarter of 1959, so there should be good comparability of yields and yield-costs. In 1959 the economy again operated under rigorous monetary restraint; chartered bank liquidity was near minimum levels; during parts of the autumn the bond market was near a state of panic. Why, in the circumstances, did the differential of new issue yield-costs remain at or near the 50 basis point level? During 1959 marketable federal direct and guaranteed bonds outstanding fell by $186 millions while provincial bonds outstanding increased by only $64 millions. The $340 millions increase in municipal bonds outstanding may have been aided by the decline in the federal government's marketable bonds, as well as by what appears to have been a deferment of borrowings by the provinces (which had increased their debt by $383 millions in 1958). However, a more important fact seems to be that net corporate financing in 1959 amounted to $513 millions, a much lower figure than the $1,466 millions raised in 1957.

Gross new issues of provincial and municipal bonds and corporate bonds and stocks were about $247 millions

greater in 1957 than in 1956. Gross new municipal issues showed an increase of about $60 millions; provincial issues increased about $170 millions; corporate offerings increased only $16 millions. Developments in 1959 followed quite a different pattern, when there was a drop in gross "non-Canada" bond issues of some $300 millions partly offset by an increase of approximately $100 millions in corporate stocks. Gross provincial borrowing increased by $170 millions and gross municipal borrowing increased by about $20 millions from the previous year's levels; corporate financing declined by $390 millions and the main factor in the decline was greatly reduced corporate borrowing. This then would appear to be the principal factor accounting for the relatively lower rise of municipal yield costs in 1959 compared with 1957.

To sum up it appears that, although municipal governments have been required to pay higher rates for borrowed funds during the post-war period, they appear to have fared relatively better than the provincial governments and little worse than the federal government for borrowings of comparable term to maturity. There is a possibility also that at times of congestion in the new issue market there have been additional elements of cost probably due to the increased underwriting risks.

CHAPTER VI

CHANGES IN HOLDINGS OF MUNICIPAL BONDS

There is no single source from which information concerning changes in holdings of municipal bonds can be obtained for the entire fourteen year period. However, statistics for the first nine years are available in a submission by Wm. C. Hood to the Commission on Canada's Economic Prospects.[1] For the last five years statistics are available in the Bank of Canada Statistical Summary,[2] which although not completely comparable with those for earlier years are similar in some respects.

It should be noted that the statistics which are presented in Table XIII are not entirely consistent with those given earlier in Table XI; however, the differences are small except for 1948 when the difference is over $100 millions. The figures in Table XI appear to be more reliable, and the component in Table XIII which appears to be most likely in error is the category "Consumers and Non-Financial Corporations" which at minus $71.2 millions changed from plus $90.8 millions the previous year, which is a decline of unusual magnitude.

---

1 Wm. C. Hood, Financing of Economic Activity in Canada, Ottawa, The Queen's Printer, 1959, XV - 700 p.

2 Bank of Canada Statistical Summary, Financial Supplement, 1959, p. 87; November, 1960, p. 639.

TABLE XIII[a]
CHANGES IN HOLDINGS OF MUNICIPAL DEBENTURE DEBT, 1946-54
($ Millions)

CATEGORY OF HOLDER	YEAR ENDED DECEMBER 31ST 1946	1947	1948	1949	1950
Consumers & Non-Financial Corp.	29.7	90.8	-71.2	-1.3	-14.3
Government Business Enterprise	2.3	-2.0	-0.8	3.5	-1.4
Chartered Banks	24.0	18.0	7.0	21.0	33.0
Life Insurance Companies					
Federal	-14.4	-3.6	32.5	32.6	35.6
Provincial	-1.1	-0.3	2.5	1.2	26.2
British & Foreign	-10.1	-21.2	0.1	6.4	1.2
Total	-25.6	-25.1	35.1	40.2	63.0
Other Financial Institutions					
Quebec Savings Banks	1.9	-3.8	0.5	3.1	2.7
Credit Unions	1.3	0.4	1.2	1.1	-
Gov't Savings Institutions	-	-	-	0.4	-
Trust Companies	3.1	2.9	3.8	4.2	1.9
Mortgage Loan Companies	-0.7	-0.3	0.5	1.3	0.8
Fire & Casualty Companies	-0.8	-0.8	3.7	2.6	2.2
Fraternal Benefit Societies	9.6	-32.3	10.4	31.6	27.0
Total	14.4	-33.9	20.1	44.3	34.6
Provincial Governments	-7.7	-4.6	5.5	5.4	9.0
Municipal Governments	-16.5	-16.7	1.4	5.4	-3.1
Rest of World	-41.9	-3.3	-19.7	-2.1	10.5
Total	-21.3	23.2	-22.6	116.4	131.3

SOURCE: Royal Commission on Canada's Economic Prospects, Financing of Economic Activity in Canada, Wm. C. Hood, p. 680.

a Excludes municipal debt guaranteed by provinces.

TABLE XIII[a] (continued)
CHANGES IN HOLDINGS OF MUNICIPAL DEBENTURE DEBT, 1946-54
($ Millions)

CATEGORY OF HOLDER	YEAR ENDED DECEMBER 31ST 1951	1952	1953	1954	TOTAL CHANGE 1946-54
Consumers & Non-Financial Corp.	48.4	81.7	83.8	88.6	336.2
Government Business Enterprise	-2.7	-9.4	10.7	9.1	9.3
Chartered Banks	-27.0	-8.0	-7.0	25.0	86.0
Life Insurance Companies					
Federal	39.7	27.7	14.2	19.6	183.9
Provincial	2.9	2.4	1.5	14.2	49.5
British & Foreign	1.3	-3.6	1.2	2.9	-21.8
Total	43.9	26.5	16.9	36.7	211.6
Other Financial Institutions					
Quebec Savings Banks	2.7	5.2	4.3	9.6	26.2
Credit Unions	1.2	3.0	2.0	1.7	11.9
Gov't Savings Institutions	-	-	-	-	0.4
Trust Companies	2.6	2.5	0.3	10.0	31.3
Mortgage Loan Companies	-0.2	1.8	-1.2	3.1	5.1
Fire & Casualty Companies	9.0	9.8	12.3	11.8	49.8
Fraternal Benefit Societies	4.3	6.0	-5.8	9.7	60.5
Total	19.6	28.3	11.9	45.9	185.2
Provincial Governments	40.5	20.2	-10.4	15.6	73.5
Municipal Governments	-19.6	-0.3	-2.6	7.0	-45.0
Rest of World	63.2	24.7	57.4	20.0	108.8
Total	166.3	163.7	160.7	247.9	965.6

SOURCE: Royal Commission on Canada's Economic Prospects, Financing of Economic Activity in Canada, Wm. C. Hood, p. 680.

a Excludes municipal debt guaranteed by provinces.

In the year by year comments which follow the information concerning the various sectors has been derived from the tables of National Account Transactions which appear in "Financing of Economic Activity in Canada".[3]

1946: In 1946 the categories of "Consumers and Non-Financial Corporations", "Chartered Banks", and "Fraternal Benefit Societies" added large amounts to their holdings while "Life Insurance Companies", "Provincial Governments", "Municipal Governments" and "Rest of World" reduced their holdings by substantial amounts. The Sector analysis for "Consumers" indicates that they increased their holdings of all assets except Government of Canada Bonds. The Sector analysis for "Non-Financial Corporations" shows that they increased their holdings of all assets except bonds, which they decreased. It would seem likely then that the latter group reduced their holdings of municipal bonds and that for the two sectors combined the entire increase was due to increased holdings by "Consumers". Chartered Banks increased their holdings in each asset category, and increased their holdings of corporate bonds by a much greater amount than they increased their holdings of municipal bonds. Fraternal Benefit Societies liquidated Government of Canada bonds and employed the proceeds together with other income

---

3 Wm. C. Hood, Op. Cit., p. 680.

to purchase stocks and municipal bonds mainly, and other bonds to a minor extent. Life Insurance companies liquidated holdings of both provincial and municipal bonds, and were substantial purchasers of Canada and corporate bonds and of mortgages. It would seem likely that the decline in holdings of municipal bonds resulted from maturities which could not be replaced because of the low level of new municipal offerings. We have also seen earlier, in Chapter V, that the yield differential between Canada and municipal bonds was narrow in the immediate post-war period. It is possible that the Life Insurance companies were being far-sighted in preferring the senior issues at the prevailing prices. The drop in holdings by municipal governments would probably be due to the maturity of bonds held in sinking funds. The "Rest of World" holdings fell in all categories of bonds and stocks.

1947: In 1947 the Consumer and Non-Financial Corporations and Chartered Bank categories increased their holdings of virtually all types of assets except Canada bonds, and holdings of municipal bonds increased in line with other increases. Holdings of municipal bonds were decreased by practically all other categories. Life Insurance companies increased holdings of all types of assets except Canada and municipal bonds. Again it seems probable that the decline was mainly due to maturities which were not replaced because yields on new issues were not attractive, or competetive.

(The data presented in Appendix 3 suggests that new issue yields were below secondary market yields in 1947.) Fraternal Benefit Societies, presumably influenced by the low level of yields on municipals, increased their holding of other investments at the expense mainly of municipals but also of Canada's. Municipal Government holdings, presumably for sinking funds, also declined.

1948: In 1948 Table XIII shows a decline of $22.6 millions in municipal bonds outstanding, whereas, as noted previously, another source indicates an increase of $78 millions. The major part of the decline occurred in holdings of "Consumers etc", and this figure is likely incorrect. The other sector which showed a significant decline in holdings was "Rest of World"; all but one of the remaining sectors showed increases. Chartered Banks increased their holdings of all types of bonds except provincials, with the increase in municipal holdings being very modest in relation to the total asset increase. Life Insurance companies, at the expense of their holdings of Canada bonds, increased their holdings of all other bonds. Fraternal Benefit Societies decreased their holdings of federal and provincial bonds and increased their holdings of municipals and corporates. The sector "Rest of World" increased its holdings of Canada's but reduced its holdings of the other three categories.

1949: In 1949 there was a substantial increase in municipal bonds outstanding and with only two minor exceptions, all sectors increased their holdings. Chartered Banks reduced holdings of corporates, kept provincials unchanged, and increased their holdings of municipals and Canada's. Life Insurance companies continued to liquidate Canada bonds, and to add to their holdings of other categories of bonds. Fraternal Benefit Societies liquidated holdings of Canada and provincial bonds, and increased holdings of both municipals and corporates.

1950: In 1950 there was a substantial increase in municipal bonds outstanding and only three sectors reduced their holdings of municipals. Only one of these three, namely "Consumers etc." showed a significant decline. Chartered Banks reduced their holdings of Canada and provincial bonds but increased their holdings of municipals and corporates. Life Insurance companies again decreased their holdings of Canada bonds and increased their holdings of other bonds. Fraternal Benefit Societies, as in the previous two years, liquidated Canada and provincial bonds and acquired municipals and corporates. The sector "Rest of World" had a very substantial increase in all categories of assets; the increases in municipal holdings was a very minor part of the whole.

1951: The Chartered Banks and Municipal Governments decreased their holdings of municipal bonds by substantial amounts and the other sectors increased their holdings. Chartered Banks assets fell for the first time in the post-war period, and in order to expand their loans they sold bonds of all categories. Life Insurance companies again sold Canada bonds, plus provincials and augmented their holdings of municipals and corporates, mainly the latter. Fire and Casualty Companies became net buyers in size of municipals for the first time in the post-war period, while continuing to acquire other categories of bonds. Provincial Governments increased their holdings of bonds in the three government categories; the increase in holdings of Canada's was less than in other years, while the increase in municipals was greater. The sector Rest of World while having a large net increase in assets, also shifted out of bank deposits and Canada bonds into other asset categories including municipal bonds.

1952: Chartered Banks and Government Business Enterprises reduced their holdings of municipal bonds and other sectors increased their holdings. The greatest part of the Chartered Banks increase in assets went into loans, but there was also an increase in holdings of Canada bonds. Holdings of other categories of bonds declined. The principal increase was shown by the "Consumer etc." sector. Life Insurance

companies again liquidated Canada bonds to invest in other assets, including municipal bonds. Fire and Casualty companies again diversified their investments and bought a substantial volume of all categories of bonds. Provincial Governments were heavy buyers of all types of bonds, including municipals. The Rest of World again liquidated bank deposits and Canada bonds and bought other categories of bonds.

1953: The pattern of changes was similar to that of 1952, with Chartered Banks and Provincial Governments reducing their holdings, and ot her categories increasing theirs. The Chartered Banks in order to expand loans by the desired amount were forced to liquidate holdings of all categories of bonds. Life Insurance companies and Fire and Casualty companies employed a part of their increased resources in acquiring municipal bonds. The greatest part of the increase in municipal bonds was absorbed by the "Consumer etc." sector and by the Rest of World.

1954: In 1954, for the first time in the post-war period, all sectors and sub-sectors increased their holdings of municipals. The "Consumer etc." sector absorbed a large part of the increase. Chartered Banks total assets showed a substantial increase, but loans absorbed only a small portion of the available resources, which went mainly into Canada bonds. There was also a relatively small increase in holdings of municipal bonds. As in previous years, Life Insurance

companies sold Canada bonds and bought other bonds. Quebec Savings Banks sold Canada bonds in volume and for the first time post-war were a substantial buyer of other bonds. Trust Companies assets showed an extremely large increase, and they were heavy buyers of all types of bonds. Fire and Casualty companies continued to diversify with investments in all types of bonds. Fraternal Benefit Societies sold Canada and provincial bonds and bought municipal and corporate securities.

1946 - 1954: Over the entire nine year period only two investor groups reduced their holdings of municipal bonds: British and Foreign Life Insurance companies and Municipal Governments. The "Consumer and Non-Financial Corporation" sector was the principal purchaser of municipal bonds, followed by the Life Insurance sector, Other Financial Institutions, Rest of World, Chartered Banks, Provincial Governments and finally, Government Business Enterprises. In the sector accounts, "Consumers" and "Non-Financial Corporations" sectors combined are a residual category, and the accounts for each sector show a combined figure for changes in holdings of provincial, municipal and other bonds. However, the "Consumer" sector contributed, over the whole period, more than five and one half times as much to the increased holdings of the three types of bonds as did the "Non-Financial Corporations", and it seems reasonable to assume

that the major part of the increase in holdings of municipal bonds, if not the whole increase, took place in the Consumer group. Although the Consumer sector appears as the largest single purchaser of municipal bonds, that category of investment was a very small part of the sector's total investments. Bank and other deposits, insurance and pension holdings, and business equity absorbed a far greater total of the available funds. This would seem to indicate the availability of a large pool of available savings if only a means of tapping it could be found.

The Chartered Banks, as one would expect, applied the largest part of their added resources toward expansion of loans. After the loan demand was satisfied the banks were purchasers of bonds. During the period 1946 to 1950 they were net buyers of municipal bonds; during the next three years they were net sellers of municipal as well as of other bonds, and in 1954 they were again net buyers of municipal bonds. Peculiarly, in 1954 although loan demand was extremely weak and the overall increase in banks' resources very large, they continued to liquidate provincial and corporate bonds. It seems clear from the sector accounts that banks are not a dependable and continuing source of funds for municipal obligations.

The Life Insurance sector, as a whole, augmented its available income by liquidation of holdings of Canada

bonds. In addition to their mortgage investments, the Life companies invested heavily in corporate bonds, and to a much smaller extent in municipal and provincial bonds. In 1946, the volume of new issues of municipal, provincial and corporate bonds was very small, and in the case of municipal bonds less than the volume of retirements. The Life companies' available income was, therefore, placed largely in Canada bonds, and their holdings of provincial and municipal bonds actually fell. Again in 1947 their holdings of municipals fell, but in each subsequent year they invested substantial amounts in this bond category. These investments represented a larger proportion of net current income in the early post-war period than later; in later years the liquidation of holdings of Canada bonds had begun to eliminate this source of funds for investments in other types of bonds. One fact which appears when examining the sub-sector accounts is the very small percentage of current income which the British and Foreign Life companies invested in municipal bonds. They devoted about 2% of their income (which amounted to about one-quarter of the income of the entire sector) to purchasing municipal bonds, while the federally licensed Life Companies, in the later years of the period, applied an average of 9% to this category of bond. The British and Foreign Companies preferred to invest in corporate bonds, although they did at times invest substantially in provincials too. This would

seem to be an area in which municipalities could make some progress in placing their issues.

In the sector "Other Financial Institutions", the various sub-sectors contributed to the overall increase in municipal holdings. A high proportion (about 50% during the later years of the period) of the increased assets of the Quebec Savings Banks were invested in municipal bonds. The greatest part of Credit Union funds were placed in loans and mortgages, but they appear to have been regular buyers of municipal bonds in modest size. Trust Companies invested most heavily in mortgages, but during the earlier years of the period applied their remaining resources more heavily to the purchase of Canada bonds than other kinds. Starting with 1951, a period of sharply rising yields, they continued investing in municipal, provincial and corporate bonds, but began liquidating Canada's. Mortgage Loan companies invested all the net additions to their cash resources in mortgages and sold Canada bonds to obtain additional funds. Investment in municipal bonds was quite small. Fire and Casualty Companies investments were limited almost entirely to bonds; Canada bonds and corporate bonds were purchased to a greater extent than the other categories, but particularly in the later years of the period the investment in municipal bonds absorbed a significant part (about 15%) of the available resources. Fraternal Benefit Societies, although on

balance substantial buyers of municipal bonds, appear to have an extremely volatile investment policy. In three of the nine years they reduced their holding of mortgages; in eight they reduced their holdings of Canada's; in five they reduced their holdings of provincials; holdings of municipals fell in two years, and of corporate bonds in one. There were, however, net increases in stock holdings in each year. The volume of additions (gross) to holdings in various categories was in each year substantially greater than the net increase in assets, indicating the extent to which shifting of investments between categories occurred.

The Provincial Governments sector records fairly heavy purchases of municipal bonds, especially in later years. It would seem likely that this was a result of the beginning of the various provincial programs of capital assistance to municipalities.

The Municipal Government sector on balance reduced its holdings of municipal bonds. This is likely the result of reductions in the amount of bonds held for sinking fund purposes. This view is borne out by the sinking fund figures in Table VIII (Chapter III) which show a decline of $49 millions from the end of 1945 to the end of 1954.

The Rest of World sector showed a substantial increase in holdings of municipal bonds. In the later years of the period the amounts of the annual increases are nearly

the same as the net increase in municipal United States pay debentures as shown by Table XI (Chapter III).

1955 - 1959: The statistics for this period, which are given in Tables XIV, XV and XVI, are drawn from the Bank of Canada Statistical Summary and it is desirable to deal separately with them because of the different sector classification. Chartered banks increased their holdings of municipal bonds in 1955 and 1958, which were periods of lagging (though expanding) business activity, and in 1959, and decreased their holdings in 1956 and 1957 which were years of high level business activity. Provincial governments added very substantially to their holdings of municipal debentures in each of the five years, in a continuation of the trend observable in the latter part of the earlier period. Municipal governments also added to their holdings in each year; the additions were small in the first two years but large in the last three with the larger increase in holdings probably due to a renewed growth in the size of sinking funds after many years of decline. Life Insurance and Other Insurance companies added substantially to their holdings each year, again continuing the trend established in the earlier period. Quebec Savings Banks increased their holdings in 1955, 1958 and 1959, but reduced their holdings in 1956 and 1957. Since they invest almost exclusively in bonds the reductions in 1956 and 1957 imply increases in holdings

TABLE XIV

DISTRIBUTION OF HOLDINGS OF MUNICIPAL DEBENTURE DEBT, 1954-1959[a]

($ MILLIONS)

HELD BY	YEAR ENDED DECEMBER 31ST					
	1954	1955	1956	1957	1958	1959[b]
Chartered Banks	177	218	185	168	195	204
Provincial Governments	106	137	156	192	237	256
Municipal Governments	112	115	117	137	156	193
Life Insurance Companies	328	374	399	427	456	507
Other Insurance Companies	63	76	85	97	103	111
Quebec Savings Banks	47	57	56	52	53	47
Trust & Mortgage Loan Companies	48	54	48	47	55	54
Pension Plans and All Other Resident	657	722	831	934	1,008	1,074
Total Resident Holdings	1,538	1,753	1,877	2,054	2,263	2,446
Non Residents	431	450	550	656	780	916
TOTAL	1,969	2,203	2,427	2,710	3,043	3,362

SOURCE: Bank of Canada Statistical Summary, Financial Supplement, 1959, pp. 86, 87; November 1960, pp. 639, 640.

a Excludes municipal debt guaranteed by provinces.

b Preliminary

TABLE XV

DISTRIBUTION OF HOLDINGS OF MUNICIPAL DEBENTURE DEBT, 1954-1959[a]

(% of total amount)

HELD BY	YEAR ENDED DECEMBER 31ST					
	1954	1955	1956	1957	1958	1959[b]
Chartered Banks	9.0	9.9	7.6	6.2	6.4	6.1
Provincial Governments	5.4	6.2	6.4	7.1	7.8	7.6
Municipal Governments	5.7	5.2	4.8	5.1	5.1	5.7
Life Insurance Companies	16.7	17.0	16.4	15.8	15.0	15.1
Other Insurance Companies	3.2	3.4	3.5	3.6	3.4	3.3
Quebec Savings Banks	2.4	2.6	2.3	1.9	1.7	1.4
Trust & Mortgage Loan Companies	2.4	2.5	2.0	1.7	1.8	1.6
Pension Plans & All Other Resident	33.4	32.8	34.2	34.5	33.3	31.9
Total Resident Holdings	78.1	79.6	77.3	75.8	74.4	72.7
Non Residents	21.9	20.4	22.7	24.2	25.6	27.3
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0

SOURCE: Bank of Canada Statistical Summary, Financial Supplement, 1959, pp. 86, 87; November, 1960, pp. 639, 640.

a Excludes municipal debt guaranteed by provinces.

b Preliminary

TABLE XVI
CHANGES IN HOLDINGS OF MUNICIPAL DEBENTURE DEBT, 1954-1959
($ Millions)

HELD BY	YEAR ENDED DECEMBER 31ST 1955	1956	1957	1958	1959
Chartered Banks	41	-33	-17	27	9
Provincial Governments	31	19	36	45	19
Municipal Governments	3	2	20	19	37
Life Insurance Companies	46	25	28	29	51
Other Insurance Companies	13	9	12	6	8
Quebec Savings Banks	10	- 1	- 4	1	- 6
Trust & Mortgage Loan Companies	6	- 6	- 1	8	- 1
Pension Plans & All Other Resident	65	109	103	74	66
Total Resident Holdings	215	124	177	209	183
Non Residents	19	100	106	124	136
TOTAL	234	224	283	333	319

SOURCE: Table XIV

of other bonds; since 1956 and 1957 were periods of falling bond prices (rising yields) with prices of municipal bonds falling more rapidly than prices of other bonds, it is possible that to protect their capital position the Quebec Savings Banks switched from municipal to other bonds (mainly Canada's). Trust and Mortgage companies increased their holdings in 1955 and 1958 and reduced them in 1956, 1957 and 1959. The Trust companies are undoubtedly a more important part of this group than the Mortgage Loan companies and it seems reasonable that they, like the Quebec Savings Banks, would also be vitally concerned with maintenance of capital values and that they very likely switched from municipal to other less volatile bonds during the period of falling prices. Pension Plans and Other Resident holders were the second largest category of purchasers of debentures over the five year period. It would seem likely that in this category purchasers would be most concerned with income, and therefore would be attracted to municipal bonds, both new and outstanding issues, in periods of rising yields. This is what appears to have happened because the holdings increased by much more in 1956 and 1957 than in the other three years. Non-residents were the largest category of purchasers, acquiring somewhat more over the five year period than the Pension Plans and Other Residents. There is again, as in the earlier period, a very close correlation between the annual volume of

municipal issues payable in United States funds and the change in non-resident holdings.

Over the five year period, the significant changes in holdings of municipal debt, as shown by Table XV, would seem to be the drop in relative importance of the Chartered Banks which held only 6.1% of the total outstanding compared with 9.0% five years earlier; the increasing importance of provincial governments which increased their holdings from 5.4% to 7.6% of the total; the decreasing importance of Life Insurance companies which reduced their holdings from 16.7% to 15.1% and the increasing reliance which has been placed upon the Non-Resident, principally United States, investor, whose percentage of the holdings have grown from 21.9% to 27.3%. The implications of the changes made by the Minister of Finance in his December, 1960 budget are highly significant in view of the importance of non-resident purchasers of municipal bonds during the last ten years.

Life Insurance companies (excluding the British and Foreign companies) and Pension Plans and Other Residents Holders share with the Non-Resident group the distinction of being the largest holders of municipal bonds. The requirements of these purchasers in a debenture or bond are for good yield and safety of principal. In general it would not seem likely that they benefit directly from the serial characteristics of most municipal bond issues; it is possible that a

sinking fund debenture, if adequate control over the sinking fund were exercised by a competent board, would have greater attraction to them. If this were so, it would be of considerable benefit to municipalities to be able to offer sinking fund as well as serial debentures as a means of both broadening and deepening the market for their debentures.

CHAPTER VII

MUNICIPAL BORROWING IN THE UNITED STATES

It is a well known fact that Canadian municipalities have borrowed extensively in the United States in recent years because yields were lower in the United States than in Canada, and borrowing could be carried out more cheaply. Both the Canadian and United States markets are accessible to Canadian borrowers and the economic factors which are important in the decision to borrow in the United States are the following:

(i) The interest cost of borrowing in the Canadian market;

(ii) The interest cost of borrowing in the United States market;

(iii) The cost of converting United States dollar proceeds to Canadian funds;

(iv) The prospective future cost of purchasing United States dollars for debt service.

Once the difference in borrowing cost between the two markets is known the only other factor to be taken into account is the exchange rate differential. There are, however, two considerations which should be especially noted: one of these is related to the fact that most issues in the United States market by Canadian borrowers are negotiated deals, and these as noted in Appendix 3, appear to bear an added cost. The second is the possibility that a Canadian

issue would be rated as a poorer risk by the United States market than by the Canadian market and would therefore be issued at greater cost. There are indications that these latter two considerations do apply and that they result in an erosion of a large part of the advantage that would appear to be available to a Canadian municipality borrowing in the United States.

In making the decision on whether or not to borrow in the United States the factor which cannot be evaluated with certainty is the prospective level of the exchange rate and the effect this will have upon the cost of borrowing. It has been estimated by C.G. Bale[1] that Canadian borrowers would be able to absorb a thirteen percent appreciation in the exchange value of the United States dollar without suffering financial loss from selling a twenty year bond in the United States market, provided the interest rate differential was one percent. This leaves a considerable latitude for exchange rate movements before Canadians lose from borrowing in the United States. In making a decision to borrow, the possibility of a greater movement in the exchange rate would have to be compared with the known monetary gain which would accrue because of lower borrowing costs. A most important

---

1 C.G. Bale, "On the Exchange Risk Involved in Borrowing Abroad". Canadian Journal of Economics and Political Science, February, 1961, p. 97.

consideration is that the interest rate benefit is finite (and can be established in advance), while the possible exchange loss is theoretically without limit. The longer the term of the borrowing the greater is the uncertainty of an adverse movement in the exchange rate. The record of changes in the Canada - United States exchange rate in the recent past shows that exchange rate movements of five per-cent over a period of one or two years have a high degree of probability, and under special circumstances (such as were experienced in 1939 following the outbreak of war and the imposition of exchange control, or in 1952 after exchange control was abolished) changes of ten to twenty percent are possible. The record in other countries would give greater movements a higher probability. It would seem clearly desirable that there be a substantial measure of protection (through a large interest rate differential) against adverse rate movements before borrowings are completed in the United States market.

It seems that there is a wide variation in the attitude of different municipalities to this problem. For instance the City of Hamilton has not borrowed outside of Canada since 1951, while the City of Montreal has borrowed very heavily in the United States; as a result at December 31, 1959 only 6% of Hamilton's bonded debt was payable in the United States, whereas at April 30, 1960, 57% of

Montreal's debt was payable in the currency of that country.[2] The record of borrowings by Quebec municipalities shows that numerous authorities make repeated borrowings abroad, but in terms of dollar volume the greatest proportion is attributable to a small number of large borrowers. It seems that the financial advisers of many of the larger cities take a more optimistic view of the probabilities than do the officials (usually not financial specialists) of most of the small municipalities. It is also possible that because of the size of their financial needs many of the larger cities have been persuaded, rightly or wrongly, that the Canadian market could not absorb their securities. If it is true that the Canadian market's absorbtive capacity is limited at a given time, then it should be possible to borrow more frequently in smaller amounts. Perhaps a realization of the adverse effects upon the Canadian economy of continued large foreign borrowings would be sufficient to encourage municipalities to borrow in the domestic market. They are now having to accept additional financial burdens (as a result of unemployment and reduced production) which, in part, may be a result of their past reliance upon foreign resources;[3]

---

2 Moody's Municipal and Government Manual, Moody's Investors Service, New York, 1961, pp. 2465, 2511.

3 It is generally agreed that large imports of capital by forcing up the exchange value of the Canadian dollar have encouraged shifts away from Canadian production and resulted in lower employment of Canadian resources, including Canadian labor.

these are burdens which may not have been foreseeable but which now must be taken into account. These extra financial responsibilities also tend to erode the benefits which apparently are gained from lower foreign interest rates and it will be the large metropolitan areas (which are the largest foreign borrowers) which will bear the largest part of these additional burdens.

The available statistics, which are represented graphically in Chart 3, seem generally to bear out what has already been said. The chart shows the annual volume of municipal borrowing in the United States market, (first, for all municipalities and secondly, excluding the borrowings by the municipalities and school commissions in the area of Greater Montreal), the annual average of new issue interest costs for Quebec municipalities, the annual average of new issue interest costs on United States utility bonds and finally the differential between the two interest cost series. The sources of the statistics are as follows:

(i) Annual dollar volume of borrowing in the Canadian and United States market - Table XI, and Quebec Municipal Commission annual summaries.

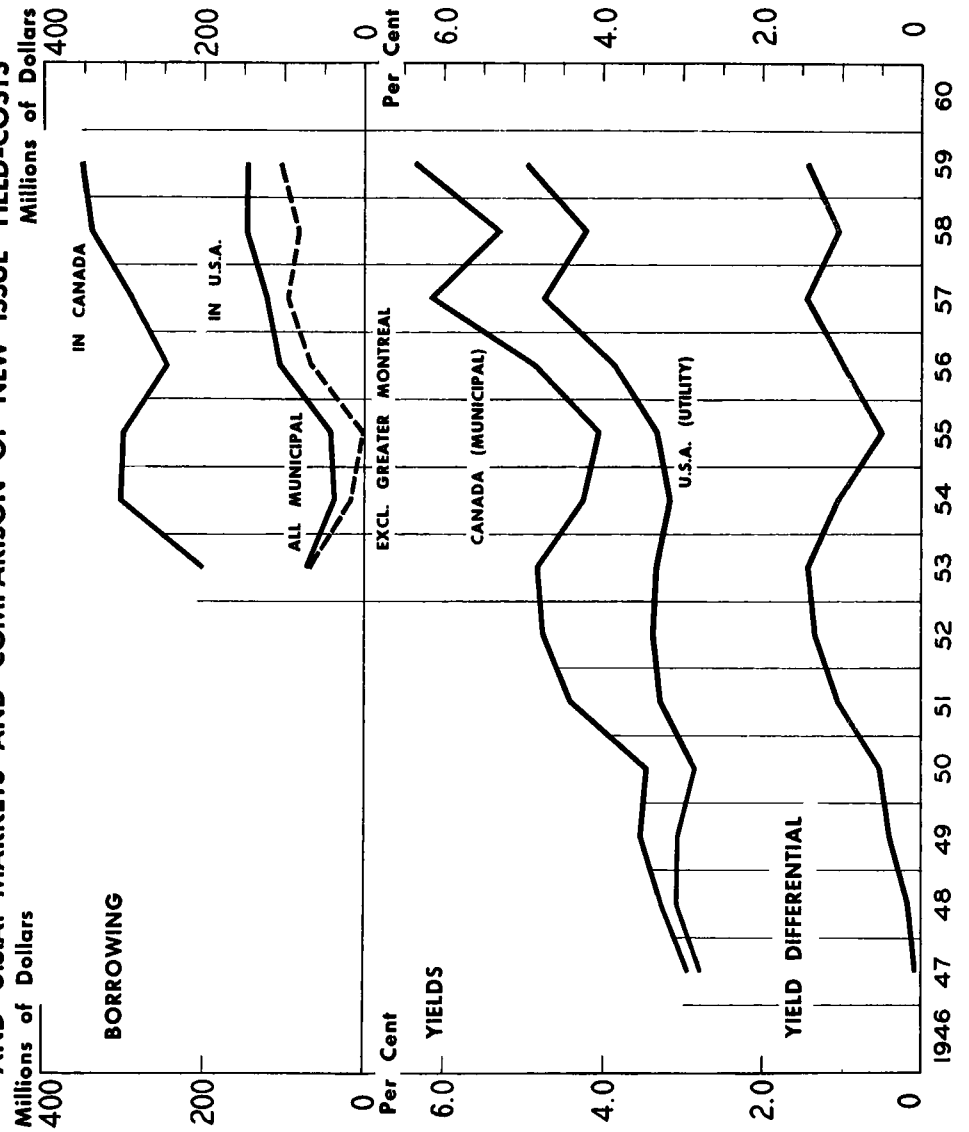
(ii) New issue interest costs of Quebec municipalities- Quebec Municipal Commission annual summaries.

(iii) New issue interest costs on United States utility bonds - Moody's Survey of Industrials, 1960, p. a 19.

Unfortunately a breakdown of gross new issues between the Canadian market and the United States market is not

CHART 3

BORROWING BY CANADIAN MUNICIPALITIES IN CANADIAN AND U.S.A. MARKETS AND COMPARISON OF NEW ISSUE YIELD-COSTS



SOURCE: See text, p. 112.

available for the years prior to 1953, and the analysis must therefore be limited to the period from 1953 to 1959. For United States interest costs the series on utility bonds has been selected as the most comparable to a series of Canadian municipal yields; a series on United States municipal bonds would not be suitable because of the tax-exempt feature of such bonds.

In 1953 approximately 26% of the gross new issues by Canadian municipalities were offered in the United States and the average differential was 142 basis points. In 1954 and 1955, 11% and 12% respectively of the issues were offered in the United States; the average differential was 105 basis points in 1954 and 51 basis points in 1955. It seems logical to conclude that the lower differential in these two years accounts for the drop in United States dollar borrowings from 1953, but the correlation between size of borrowing and amount of the differential is not as close as might be expected; borrowings increased in 1954 both absolutely and relatively, although the differential declined by a substantial amount. It is significant, however, that United States dollar issues by the City of Montreal, its Protestant School Commission and its suburban municipalities (i.e. Greater Montreal) accounted for 53% of the total of such issues in 1954 and 95% of the total in 1955. As noted previously Montreal appears to have an unusually high

propensity to borrow in the United States and if its borrowings are excluded from our statistics there appears to be a higher positive correlation between the borrowings and the differential. There also appears to be support for the idea that, in general, a fairly large differential is required to justify borrowing in the United States market, because in 1955, when the differential amounted to 51 basis points, borrowings in the United States market fell to approximately $2 million if we exclude the $35 million borrowed by the City of Montreal and the $5 million borrowed by the Montreal Protestant School Board.

In 1956 borrowings in the United States increased to 32% of the total, and the differential rose to 99 basis points. In 1957 borrowings in the United States amounted to 30% of the total, and the differential rose further to 145 basis points. In 1958 the United States borrowings again amounted to 30% of the total and the differential fell to 105 basis points. As the graph shows, in 1958 the increase in the absolute amount of borrowing in the United States was due to borrowings by the municipal and school authorities of Greater Montreal; for the rest of Canada, United States borrowings declined, presumably in response to the falling differential. In 1959 the United States borrowings amounted to 29% of the total, and the differential rose to 144 basis points. Again if we exclude United States borrowings by

Greater Montreal, borrowings by the rest of the Municipalities increased materially, apparently as a result of the rising differential.

It has already been suggested that some part of the differential between yields in Canada and the United States is lost to Canadian borrowers. In support of this belief one can offer the following evidence: in January, 1959 Baie Comeau sold $1,000,000. of thirty year serial debentures in Canada at a cost of 6.20%; at the same time they sold an issue of $2,042,000. of thirty year serial debentures in the United States at a cost of 5.66%. The difference was .54% although differential read from the graph, was approximately 1.25%. Similarly in December 1959, Beaconsfield issued debentures in Canada at a cost of 6.99% and in the United States at a cost of 6.14%; a difference of .85% compared with an average differential for the year, as shown by the graph, of 1.44%. These two municipalities clearly lost a substantial part of the advantage which was apparently available to them; this loss would appear to amount to between .60% and .70%. A similar conclusion, but somewhat more tentative, is reached after making a comparison of the United States borrowing costs of the City of Montreal with the average cost to other municipalities of borrowing in Canada. In January 1954 Montreal borrowed in the United States at a cost of 3.86% while the January average for borrowings in

Canada was 4.98%; the difference in this case was 1.12%, compared with a differential, read from the graph, of 1.23%. Again in January 1955 Montreal borrowed in the United States, this time at a cost of 3.60%; during January the average cost of borrowing in Canada was 4.18%. The difference in this case was .58% compared with a differential, read from the graph, of about .77%. In December, 1956, Montreal borrowed at a cost of 5.68%, when the average cost of borrowing in Canada was 6.02%. The difference was .34% compared with a differential, read from the graph, of about 1.20%.

The analysis does not permit a categorical conclusion, but it strongly suggests that a comparison between even the most comparable series of Canadian and United States yields gives a very inaccurate picture of the advantage to Canadian municipalities of borrowing in the United States market. The evidence leads one to wonder whether enough attention has been paid by Canadian municipalities to the possibilities of so arranging their borrowings that the necessary funds can be obtained in Canada, and also whether sufficient analysis has been made of the extent to which adverse movements in the exchange rate can offset the limited advantage of lower interest costs in the United States.

SUMMARY AND CONCLUSIONS

The examination of municipal current revenues indicates that an impressive increase has taken place since 1945, but that, over the period surveyed, the real property tax, and licenses, permits, and fees have declined in relative importance as sources of revenue. Provincial subsidies have, however, provided a steadily increasing percentage of municipal revenue and may be expected to grow in importance.

Since 1945 the growth in expenditures out of current revenue has, of course, kept pace with the growth in current revenue, and there has, in addition, been a great increase in expenditures on capital assets using borrowed funds. Expenditures on schools, on both current and capital account, have shown the most dramatic increase although through the later years of the period the cost of debt service has also grown in relative importance.

The growing cost of debt service is an indirect indication of the increase which has occurred in municipal debenture debt. The growth in debenture debt has resulted from borrowings for all major categories of expenditure, but the greatest increase has been for school purposes. The volume of issues grew each year of the period under examination, although the growth was irregular. A greater relative increase has taken place in borrowings based on debentures payable in United States funds, than in Canadian pay debentures.

The cost of borrowing has fluctuated with changing economic conditions but has followed a rising trend. Although the cost of borrowing by municipalities has increased more than for provincial governments or for the federal government, this could be expected since municipal obligations generally are not given as high a rating as are the obligations of the senior governments. However, municipal governments do not appear to have experienced any greater percentage increase in borrowing costs than the provincial governments. In view of the very heavy potential demand for funds by municipal governments it appears that high borrowing costs perform an important rationing function.

Municipal debentures have a very broad market, but from year to year substantial shifts can occur in the volume of such debentures which the various investor groups are prepared to purchase and it is clear that municipal debentures are in competition at all times with the bonds and debentures of other borrowers.

The heavy borrowings by some municipalities in United States funds, in contrast with the avoidance of such borrowing by other municipalities, indicates a wide difference of opinion on the advantages of issuing debentures payable in a foreign currency. Some of these borrowings appear to have been undertaken without sufficient consideration of the alternatives or of the net economic advantages of such borrowings. A more critical approach to this problem seems called for.

The statistics suggest that sources of current revenue may not be yielding the maximum possible returns. Improvements in the property tax, which occupies such an important place in municipal finance, would appear to offer the greatest opportunity to increase current revenues.

It also seems that there should be a formula that would permit municipalities to benefit from the increment to property values which flows from improved services and expansion of services. This could perhaps take the form of an assessment in which land was valued on a higher basis than buildings, and could include provision for more frequent reassessment of land. This might discourage inefficient use of land, and encourage, say, the elimination of slum dwellings from downtown areas; it might also discourage land speculation.

Licenses, permits and fees should be examined carefully to ascertain whether they are producing sufficient revenue to cover all costs related to them, including an adequate charge for overhead and administrative costs. If they do not, then the level of charges should be raised. Service charges for municipal utilities should be sufficient to cover all costs including charges for replacement of capital assets. (If a subsidy is considered desirable for a particular service, it should be provided through the budget, out of current municipal revenues.)

Resort to borrowing would still be necessary even though there were significant increases in current revenues and steps should be taken to reduce the cost of borrowings, or alternatively to increase the supply of funds. Increases in the supply of funds might be brought about in a number of ways.

(1) Municipal Loan Fund. This is a favorite suggestion of the municipalities and in the form usually suggested involves a federally supplied pool of savings from which municipalities would borrow at preferred rates. A variation of this suggestion would have such a fund as the lender of last resort.

It is the writer's feeling that money is always available at a price; municipal loan funds would be desirable but should only be called upon to provide assistance when capital is not available at reasonable cost from other sources; they should not remove the test of the market, but should only alleviate the strain of excessive borrowing costs. The fact that a municipality can borrow only at excessive cost implies that it has special financial problems, and to grant funds without attempting to remedy the financial problems would be inadvisable. But municipal affairs are a provincial responsibility; it would seem then that the loan funds should be under provincial control and should be administered by a staff capable of examining a municipality's

financial condition, of recommending changes and of enforcing the recommendations. Borrowings should be made from the fund at rates at least as high as the rates paid by other municipalities in the open market.

(2) Sinking Fund Debentures. Although serial debentures are a desirable investment for some types of institutions, they present some accounting problems, they do not lend themselves to resale, and they do not permit the entire investment to be made for a single term. These factors would seem to reduce the amount of funds available for investment in this type of debenture. It seems also that the price and yield on serial debentures would be related to the longest maturity; since yields usually increase as term increases, and since municipalities have the use of funds for an average of only one half of the full term, it would appear that municipalities issuing serial debentures do not get full value for their interest payments. It would seem desirable, therefore, that greater use be made of sinking fund debentures. The sinking fund investments would, however, need to be made by provincial authorities in order to ensure safety of the funds and expert administration.

(3) Mutual Funds. One of the problems of mobilization of savings of small savers for investment in municipal debentures is the large minimum size of investments (usually $500 or $1,000) and lack of marketability. One way of

overcoming these disadvantages would be to create an open-end mutual fund for investment in municipal debentures. Alternatively, a corporation could be formed which would issue its own debentures, in order to obtain funds to invest in municipal debentures; the corporation debentures could be of any term, for any amount, and could be tailored to the requirements of individual investors. Such a corporation might underwrite municipal offerings in order to obtain a margin sufficient to cover the expense of selling its own stock or debentures.

In another area, a useful and long overdue development would be the creation by each province of a strong department dealing solely with municipal affairs. These departments could arrange for the collection and publication of statistics of municipal revenues, expenditures and borrowings; they could examine critically the financial affairs of all municipalities; they could initiate inquiries into ways and means of strengthening the municipalities' credit ratings, and where necessary give them technical assistance.

The municipalities would undoubtedly benefit if they were to expand the functions of their national association to enable it to undertake extensive research into municipal problems, and to act as a central clearing house of information relating to administrative, technical and engineering

matters. It would also be a desirable development if all municipalities were to follow the example recently set by Ontario municipalities by organizing a course for municipal finance officers similar to the courses offered to bankers, investment dealers, or accountants, in order to raise to a higher level the standard of training, and qualifications of the finance officers.

BIBLIOGRAPHY

Bale, C. G., "On the Exchange Rate Risk Involved in Borrowing Abroad", Canadian Journal of Economics and Political Science, Vol. 27, No. 1, February 1961, p. 97.
A brief article which establishes mathematically the equation for determining the "break-even" point for Canadian municipalities which, by borrowing in the United States, are exposed to losses due to fluctuations in the exchange rate. A useful contribution.

Bank of Canada, Annual Reports, annually 1946 to 1959.

Bank of Canada, Statistical Summary, Financial Supplements, 1954 to 1959, and various monthly volumes.
These volumes are the basic source of the statistics used in this thesis. They provided a unified and consistent framework upon which to prepare the analysis.

Canada, Department of Trade and Commerce, Private and Public Investment in Canada, Outlook, Ottawa, The Queen's Printer, 1946 to 1960.
This is an annual publication which contains estimates and realized totals of municipal expenditure of a capital nature. Useful for verification of other source material but not used as a primary source.

Canada, Dominion Bureau of Statistics, Comparative Statistics of Public Finance, 1945 and 1951 to 1959, Ottawa, The Queen's Printer, 1959.
A voluminous record of statistics of municipal and other levels of government giving comparative figures for a number of years. There are numerous gaps in the statistics which made it preferable not to use this as a primary source in spite of the valuable information it contains.

Canada, Dominion Bureau of Statistics, Financial Statistics of Municipal Governments, Actual, Ottawa, The Queen's Printer, annually 1946 to 1959.
Statistics on assessments, revenues, expenditures and debenture debt assembled from reports of provincial governments.

Canadian Federation of Mayors and Municipalities, Forecast of Urban Growth Problems and Requirements, 1956 - 1980 Montreal, 1956, 258 p.
This is a brief submitted to the Royal Commission on Canada's Economic Prospects, which contains detailed municipal statistics. Useful background information.

Canadian Federation of Mayors and Municipalities, Municipal and Inter-governmental Finance, 1930 - 1951. Montreal, 1953, 52 p.

This is a survey and report on the distribution of federal, provincial and municipal government revenues and expenditures together with an analysis of the financial problems of municipal governments in Canada. Presents the municipal view point with considerable vigor.

Canadian Federation of Mayors and Municipalities, Submission to the Government of Canada on behalf of the Municipal Governments of Canada, Montreal, February, 1958, 24 p.; April, 1959, 32 p.; November, 1959, 36 p.

These briefs deal with timely problems of the municipalities and offer suggestions on the remedies which are, from the municipal view, most satisfactory. The briefs tend to be repetitious.

Canadian Tax Foundation, Canadian Fiscal Facts, Toronto, 1957, 215 p.

This publication of the "Principal Statistics of Canadian Public Finance" brings together statistics from many sources and gives most of the significant series over a wide span of years. It is not a primary source but does present, in one volume, information which would otherwise be widely scattered.

Canadian Tax Foundation, Local Finance, occasional papers dealing with revenue sources. November, 1959 to March, 1961.

A series of nine studies, up to March 1961, dealing with the various sources of municipal revenue, current and capital, analyzed on a province by province basis. A very informative and useful series of papers.

Corbett, D. C., Urban Growth and Municipal Finance, Montreal, 1952, 32 p.

This is an excellent analysis of one of the more important emerging civic problems, and of the relation of the problem to the financial capacity of the municipalities. A very informative and worthwhile study.

Dupré, J. Stefan, The Property Tax in Canada Philadelphia, 1958, 7 p.

This is a short study of the role of the property tax, the limitations on its use, and some suggestions for improvements. It is an excellent, well documented study.

Goldenberg, H. Carl, Municipal Finance in Canada, Ottawa, The King's Printer, 1939, vi - 128 p. A study prepared for the Royal Commission on Dominion-Provincial Relations.

A very broad survey of municipal institutions, expenditures and revenues, using a province by province approach. There is a serious lack of adequate statistics, and there is little emphasis upon municipal borrowing. However, it is significant that the problems which were important at that time are still among the most important. A valuable study.

Hardy, Eric, "Provincial Municipal Relations" in Western Municipal News, Vol. 55 No. 5, May, 1960.

An examination of the role of provincial governments in establishing the area of municipal responsibility, of allocating revenue sources, and of controlling borrowing. An improved system of provincial control over borrowing is recommended.

Hood, Wm. C., Financing of Economic Activity in Canada, Ottawa, The Queen's Printer, 1959, xv - 777 p.

This volume was prepared for the Royal Commission on Canada's Economic Prospects. In addition to an analysis of Canadian financial markets it contains a "flow-of-funds" analysis, the first such to be published in Canada. It contains a wealth of information and is an invaluable source of material to any student of the Canadian capital markets.

The Investment Dealers' Association of Canada, Course II, Principles and Practice of Investment Finance in Canada; Section on Municipal Finance.

A course of instruction which deals in considerable detail with technical aspects of municipal administration and financing. The passages on investment dealer bidding and underwriting procedures have been of considerable usefulness.

Moody's Investors Service, Moody's Municipal and Government Manual, New York, 1961.

A volume containing detailed information relating to the financial markets in the United States and the financial condition of government units in all countries. A very valuable reference manual.

Netzer, D., "State-Local Response to Changing Credit Conditions: The Institutional Obstacles" in the Journal of Finance, Vol. 15, No. 2, May, 1960.

An examination of the legislative limitations imposed upon two categories of United States borrowers and the problems created by these restrictions. The conclusion is reached that borrowing problems of the state and local governments are due in large part to these institutional factors. Not unrelated to the Canadian scene.

Perry, Harvey, "Municipal Finance Needs and Federal Fiscal Policy" a paper delivered to the annual conference of the Municipal Finance Officers' Association, June, 1959 and reproduced in the Canadian Tax Journal, Vol. 3, No. 4, July - August, 1959.

A discussion of the impact of recent fiscal and monetary policy upon the finances of Canadian municipalities. Some of the conclusions are open to argument.

Quebec Municipal Commission, Summary of Municipal and School Bond Issues, annually 1947 to 1959.

The summaries constitute a complete record of the issues awarded, their coupon, term to maturity, price and yield. The statistics are classified according to the method used in awarding the issue and for the later years, according to the type of borrower. This is a valuable source of information.

Robinson, Roland, I., Postwar Market for State and Local Government Securities, Princeton, Princeton University Press, 1960 xxiv - 227 p. National Bureau of Economic Research, Study No. 5 in Capital Formation and Financing.

This book deals only with United States markets; nevertheless it has been very useful in providing examples and in its general approach. There are good descriptive passages on the technique of issuing debentures and on secondary market technique. It is an excellent study which provides much original information.

APPENDIX 1

Reconciliation of difference at December 31, 1959 between totals of debenture debt outstanding as shown by Table VIII and Table X

		($ millions)
Table VIII:	Net Direct and Guaranteed Bonded Debt	3,688
	Add: Sinking Funds [1]	153
	Gross Direct and Guaranteed Bonded Debt	3,841
Table X :	Gross Direct and Guaranteed Debt Outstanding	3,363
Difference		478

Reconciliation of Difference [2]

A. Municipal Debentures Guaranteed by Provinces

British Columbia	
Public Schools Construction Act of 1953	$91,447,400
Greater Vancouver Sewerage and Drainage District (net)	13,107,191
Improvement Districts Assistance Loan Act	5,527,300
City of New Westminster (Issued July 1959)	3,500,000
New Brunswick [4]	
School Debentures	3,613,000
Newfoundland	
Municipal Debentures	10,278,500
School Debentures	788,000
Nova Scotia	
School Debentures	255,000
Prince Edward Island	
School Debentures	781,800
Quebec [5]	
Municipal Debentures	221,000
School Debentures	471,800
Quebec Municipal Commission	27,603,700

B Direct Loans from and Debentures sold to Provinces	
Alberta	
Alberta Municipal Financing Corporation[6]	$ 86,998,477
Self Liquidating Projects Act of 1950	14,643,560
Municipal Capital Expenditure Loans Act	112,187,339
School Borrowing Assistance Act	64,974,157
British Columbia	
Village Municipalities, Assistance Act 1948	7,446,000
Municipal Improvements Assistance Enabling Act 1938	397,561
Municipalities Assistance Act	13,051,275
Ontario	
Ontario Municipal Improvement Corporation	45,602,537
Total (A and B)	$501,894,947
Residual Error	-23,894,947
Net Difference	$478,000,000

SOURCE: Moody's Municipal and Government Manual, Moody's Investors Service, New York, 1960, pp. 2217 to 2335.

1 Bank of Canada Statistical Summary, Financial Supplement, 1959, p. 85.

2 Figures for March 31, 1959 unless otherwise noted.

3 Included $5,000,000 proceeds of debentures sold in July, 1959.

4 Issues outstanding in amounts greater than $100,000.

5 At August 31, 1959.

6 Included $48,500,000 United States dollar proceeds of debentures offered May 21, 1959.

APPENDIX 2

1. Example of Prospectus - Sinking Fund Debentures

The Municipality of Metropolitan Toronto.

$20,728,000 5 1/2% and 5 3/4% Sinking Fund Debentures.

Dated: May 16, 1960.

Maturing: May 16th, as follows:

Principal amount	Interest	Year of Maturity
$ 616,000	5 1/2%	1965
2,012,000	5 3/4%	1970
363,000	5 3/4%	1975
17,420,000	5 3/4%	1980
317,000	5 3/4%	1990
$20,728,000		

Interest: Payable semi-annually.

Denominations: Initially $1,000, $5,000, $25,000 and $100,000. For subsequent exchanges, $1,000 denominations only to be issued.

Payable: At any branch in Canada of the chartered bank or banks named in the debentures.

Sinking Fund: An annual deposit will be made in a consolidated Sinking Fund of such an amount as with interest at an estimated rate of 3% per annum capitalized yearly will be sufficient to repay the sinking fund debentures in full at maturity.

Comments on the Sinking Fund Debenture Prospectus:

Annual Payments for interest and sinking fund are as follows:

ANNUAL PAYMENTS

Due Date	Interest	Sinking Fund	Total By Issue	Cumulative
1990	$ 18,227.50	$ 6,663.10	$ 24,890.60	$ 24,890.60
1980	1,001,650.00	648,297.62	1,649,947.62	1,674,838.22
1975	21,472.50	19,517.26	40,989.76	1,715,827.98
1970	115,690.00	175,507.77	291,197.77	2,007,025.75
1965	33,880.00	116,026.41	149,906.41	2,156,932.16

The importance of the capitalization rate of 3% used in the above calculations should be stressed. For the debentures due in 1990, the use of this rate requires a total sinking fund contribution of $199,893.00 over 30 years. If a rate of 3 1/2% were used, the annual contribution would be $6,140.71 and the total contribution $184,221.30; at a rate of 4 1/2%, which would not be inconsistent with present interest rate levels, the annual contribution would be $5,196.12 and the total contribution $155,883.60.

The official prospectus contains the following note regarding sinking fund debentures of the Metropolitan Corporation:

> "..... a specific annual sum shall be raised which, with the estimated interest at a rate not exceeding 3 1/2% per annum, capitalized yearly, will be sufficient to repay the principal of such debentures or any set of them when due. No allocation of sinking fund assets is required to be made for any particular issue of debentures ..... Sinking fund investments are limited to securities which are trustee investments under the Trustee Act (Ontario) including debentures of the Metropolitan Corporation ....."

2. Example of Prospectus - Serial Instalment Debentures

Township of Onondaga, Ontario.

$120,000 5 1/2% Serial Instalment Debentures.

Dated:	January 1, 1959.
Maturing:	January 1, 1960 - 1974.
Payable:	At principal offices of Township's bankers in Brantford, London, Kitchener, Hamilton and Toronto.
Denominations:	$500 and $1,000.
Interest:	Payable semi-annually.
Purpose of Issue:	Construction of new central school.
Legality:	Issue authorized by Ontario Municipal Board and is a direct liability of the Township of Onondaga.

Schedule of Maturities:

1960 - $5,000	1965 - $7,000	1970 - $9,000
1961 - 6,000	1966 - 7,000	1971 - 10,000
1962 - 6,000	1967 - 8,000	1972 - 10,000
1963 - 6,000	1968 - 8,000	1973 - 11,000
1964 - 7,000	1969 - 9,000	1974 - 11,000

Comments on the Serial Instalment Debenture Prospectus.
Annual interest payments are noted below, with t he total of interest and principal shown in brackets.

1960 - $6,600	($11,600)	1968 - $3,740	($11,740)
1961 - 6,325	(12,325)	1969 - 3,300	(12,300)
1962 - 6,000	(12,000)	1970 - 2,805	(11,805)
1963 - 5,665	(11,665)	1971 - 2,310	(12,310)
1964 - 5,335	(12,335)	1972 - 1,760	(11,760)
1965 - 5,000	(12,000)	1973 - 1,210	(12,210)
1966 - 4,565	(11,565)	1974 - 605	(11,605)
1967 - 4,180	(12,180)		

It can be seen that the combined total of interest and principal is approximately equal each year, ranging from a low of $11,565 to a high of $12,335.

3. Annuity Debenture

The following is a fictitious example, as it has not been possible to find the prospectus for an actual issue of this kind.

$100,000 4 3/4% - 10 year annuity issue

Year	Annual Payment per $1000 Bond			Balance of Principal outstanding at end of each year
	Principal	Interest	Total	
-	-	-	-	$1,000.00
1	$ 80.44	$ 47.50	$127.94	919.56
2	84.26	43.68	127.94	835.30
3	88.26	39.68	127.94	747.05
4	92.45	35.49	127.94	654.59
5	96.84	31.10	127.94	557.75
6	101.44	26.50	127.94	456.31
7	106.26	21.68	127.94	350.05
8	111.31	16.63	127.94	238.74
9	116.60	11.34	127.94	122.14
10	122.14	5.80	127.94	-
	$1,000.00	$279.40	$1,279.40	

4. Example of Prospectus - Instalment Debentures

Town of Newmarket, Ontario.

$12,800 6 1/2% Debentures.

Dated: August 15, 1960.

Maturing: August 15, 1961 - 1970.
(1970 maturity callable)

Interest: Payable annually.

Denominations: $1,000 and odd amounts.

Payable: Newmarket, Toronto and Montreal.

Validation: Each debenture certified by Ontario Municipal Board.

Purpose: Public Works.

Schedule of Maturities:

1961 -	$1,911.90	1966 -	$2,619.47
1962 -	2,036.17	1967 -	2,789.74
1963 -	2,168.52	1968 -	2,971.07
1964 -	2,309.48	1969 -	3,164.19
1965 -	2,459.60	1970 -	3,369.86

Comments on Instalment Debenture Prospectus.

Annual interest payments are given below, with the total of interest and principal shown in brackets:

1961 -	$1,677.40	($3,589.30)	1966 -	$869.43	($3,588.90)
1962 -	1,552.73	(3,588.90)	1967 -	799.16	(3,588.90)
1963 -	1,420.38	(3,588.90)	1968 -	617.83	(3,588.90)
1964 -	1,279.42	(3,588.90)	1969 -	424.71	(3,588.90)
1965 -	1,129.30	(3,588.90)	1970 -	219.04	(3,588.90)

It can be seen that the combined total of interest and principal is equal each year, except for the first year in which a small adjustment has been made.

APPENDIX 3

BORROWING BY QUEBEC MUNICIPAL AND SCHOOL AUTHORITIES

As reported by the Quebec Municipal Commission in its annual statement of new issues, sales of securities are made in three ways:

1. Public tender
2. Mutual agreement
3. Over-the-counter

Generally sales by public tender are both most numerous and of largest size, although during some periods a smaller number of issues are sold by tender than are sold by negotiation. The second category includes all issues payable in United States funds and special issues sold to the provincial government or taken up by sinking funds, as well as a large number of issues sold for distribution in Canada. The number of issues sold over-the-counter is invariably quite small.

In terms of average size the issues sold by tender are largest, those sold over-the-counter smallest. In terms of average cost the issues sold by tender cost the borrower less than those sold by mutual agreement by a statistically significant amount, although in certain months a reverse relation has held true. Issues sold over-the-counter are low-cost issues, sold generally at par and carrying a low coupon; this seems to indicate that they are purchased as a matter of civic responsibility and that the ordinary

economic considerations do not apply.

The purpose of the statistical analysis which has been undertaken was to determine the nature of the relationships which exist between borrowing costs when issues are classified according to several criteria. Three classifications of issues have been used, as follows:

1. By method of sale. Over-t he-counter issues were not considered (for reasons already given) and the analysis was limited to issues sold by tender and by negotiation.

2. By size of issue. Average borrowing costs were calculated separately for issues of $100,000 and less, and issues over $100,000.

3. By type of borrower. Borrowings by municipal authorites and by school authorities were segregated.

In order to make the data more consistent certain issues (in addition to all of the issues sold over-the-counter) have been eliminated as outlined in the following paragraphs.

One factor which is soon apparent from an examination of the statistics on borrowing costs is the very wide dispersion of the data. In some months the spread from the lowest to highest yield cost is as much as 250 basis points; spreads of 100 to 150 basis points are the rule rather than the exception. This is indicative of the wide variation in the quality of offerings. Since in Canada we do not have any organization which provides a rating service it would be difficult to segregate the issues into risk categories; the

yield cost statistics are therefore subject to a wider dispersion than is desirable for analytical purposes, and are also subject to random shifts as the "mix" of good and bad risk issues changes. This factor probably accounts for the fact that in some months the yield cost of issues sold at public tender is greater than the cost of issues sold by mutual agreement while generally the reverse is true.

In order to partly eliminate the influence of extremely low grade bonds, issues have been ignored whose yield cost exceeded by more than 200 basis points the cost of the two issues in the same month which had the lowest yield cost; e.g. in the month of October, 1952, an issue by Chandler, sold at a cost of 6.067%, was excluded because the two lowest cost issues in that month were sold on a 4% basis. The total number of issues thus excluded amounted to eighteen, distributed as follows: 1949 - four; 1951 - seven; 1952 - six; 1954 - one.

Since interest levels have been consistently higher in Canada than in the United States, fifty issues offered in the United States have been excluded, distributed as follows: 1947 - one; 1951 - two; 1952 - four; 1953 - three; 1954 - five; 1955 - four; 1956 - nine; 1957 - eight; 1958 - five; 1959 - nine.

Since the representative municipal and school issues are of long term, seven issues with a maximum term of five years or less have been excluded distributed as follows:

1948 - one; 1950 - four; 1956 - one; 1959 - one.

Finally a number of special issues have been excluded, which were sold to the provincial government, to municipal sinking funds or for a purpose which made the cost unlikely to be determined by the market. In this category there were twelve issues distributed as follows: 1951 - one; 1952 - five; 1953 - two; 1956 - two; 1959 - two.

In summary, the conclusions reached are as follows:

1. Issues sold at tender have a significantly lower cost than those sold by mutual agreement.
2. Issues of small size ($100,000 and less) do not have a higher cost than larger issues.
3. School issues and municipal issues are sold at comparable cost.

Table XVII compares, by quarters for fifty-two periods, the average yield cost of issues awarded by tender and of those awarded by mutual agreement. In forty-six periods the cost of issues awarded by mutual agreement was higher, and in only six was it lower. Of these six instances the maximum difference was 11.6 basis points (i.e. 0.116%); in contrast, the maximum positive difference was over 100 basis points (1.008%). Over one half of the differences exceeded 30 basis points, and just less than three-quarters of the differences exceeded 20 basis points. Translated into price, assuming a 20 year serial bond issue, a difference of 20 basis points would be approximately $2.00 per $100.00 bond. To some extent the differences in yield could

APPENDIX 3

TABLE XVII

AVERAGE YIELD COST OF QUEBEC MUNICIPAL AND SCHOOL BORROWINGS, Classified by Method of Sale (Quarterly Averages)

Quarterly period	Method of Sale: Public Tender	Method of Sale: Mutual Agreement	Difference
1947 - 1	2.986%	3.025%	.039%
2	2.892	3.036	.144
3	2.868	2.977	.109
4	3.010	2.991	-.019
1948 - 1	3.248	3.184	-.064
2	3.376	3.658	.282
3	3.402	3.588	.186
4	3.479	3.828	.349
1949 - 1	3.595	3.947	.352
2	3.483	4.063	.580
3	3.583	3.997	.414
4	3.460	3.868	.408
1950 - 1	3.399	3.852	.453
2	3.344	4.116	.772
3	3.495	3.848	.353
4	3.585	3.876	.291
1951 - 1	3.861	4.123	.262
2	4.383	4.593	.210
3	4.710	4.693	-.017
4	4.698	5.184	.486
1952 - 1	4.669	5.087	.418
2	4.599	4.882	.283
3	4.902	5.125	.223
4	4.904	5.357	.453
1953 - 1	4.884	5.250	.366
2	4.747	4.995	.248
3	4.823	5.106	.283
4	4.916	5.285	.369
1954 - 1	4.734	5.265	.531
2	4.068	4.931	.863
3	4.066	4.444	.378
4	4.209	4.492	.283

TABLE XVII (continued)

AVERAGE YIELD COST OF QUEBEC MUNICIPAL AND SCHOOL BORROWINGS, Classified by Method of Sale (Quarterly Averages)

Quarterly period	Method of Sale: Public Tender	Mutual Agreement	Difference
1955 - 1	4.088	5.030	.942
2	3.949	4.334	.385
3	4.044	4.387	.343
4	4.186	4.671	.485
1956 - 1	4.166	4.460	.294
2	4.600	4.485	-.115
3	4.995	5.151	.156
4	5.696	5.857	.161
1957 - 1	6.254	6.265	.011
2	6.294	6.178	-.116
3	6.384	6.424	.040
4	5.718	6.347	.629
1958 - 1	5.159	6.167	1.008
2	4.937	5.306	.369
3	5.370	5.297	-.073
4	5.747	5.816	.069
1959 - 1	5.876	6.641	.765
2	6.068	6.097	.029
3	6.508	6.517	.009
4	7.054	7.226	.172

TABULATION OF DIFFERENCES

	0 to .100%	.101 to .200%	.201 to .300%	.301 to .400%	.401 to .500%	Over .500%	Total
Plus	6	6	10	9	7	8	46
Minus	4	2	-	-	-	-	6
Total	10	8	10	9	7	8	52

SOURCE: Quebec Municipal Commission - annual statements of bond issues.

represent differences in the quality of the offerings, but as already indicated a number of the high risk issues have been eliminated from the tabulation of negotiated offerings and the presence of a number of issues of very low cost tends to counter balance some of the remaining low quality issues. Issues awarded by mutual agreement cost an average of .305% more than issues awarded by tender; the standard deviation of the differences is .258% and the value of "t", with 51 degrees of freedom, is 8.47. The null hypothesis of no difference between the two series has a probability of less than .001, and can be rejected.

Tables XVIII and XIX compare for each quarterly period from 1947 to 1959 yield-cost of issues of different size. The differences in Table XVIII (based upon issues awarded by tender) are evenly divided between pluses and minuses. Issues of over $100,000 cost an average of .020% less than issues of $100,000 and under; the standard deviation of the differences is .133% and the value of "t", with 51 degrees of freedom, is 1.087. The null hypothesis of no difference between the two series has a probability of .306 and is therefore not rejected. However over the five year period from 1955 to 1959, there were fifteen quarters in which the larger sized issues were awarded at higher cost, and only five quarters in which their cost was lower; the average difference over this period was plus .041%. There is

TABLE XVIII
AVERAGE YIELD COST OF QUEBEC MUNICIPAL AND SCHOOL BORROWINGS
Awarded by Public Tender - Classified by Size of Issue
(Quarterly Averages)

Quarterly period	Size of Issue $100,000 or less	Size of Issue over $100,000	Difference
1947 - 1	3.144%	2.855%	-.289%
2	2.737	2.761	.024
3	2.875	2.867	-.008
4	3.006	3.001	-.005
1948 - 1	3.231	3.256	.025
2	3.364	3.390	.026
3	3.385	3.432	.047
4	3.532	3.449	-.083
1949 - 1	3.703	3.479	-.224
2	3.532	3.475	-.057
3	3.724	3.428	-.296
4	3.466	3.424	-.042
1950 - 1	3.335	3.419	.084
2	3.366	3.312	-.054
3	3.559	3.391	-.168
4	3.626	3.521	-.105
1951 - 1	3.806	3.904	.098
2	4.423	4.279	-.144
3	4.770	4.669	-.101
4	4.661	4.822	.161
1952 - 1	4.806	4.655	-.151
2	4.501	4.639	.138
3	5.017	4.931	-.086
4	4.866	4.894	.028
1953 - 1	4.860	4.932	.072
2	4.859	4.670	-.189
3	4.786	4.808	.022
4	4.948	4.883	-.065
1954 - 1	4.845	4.650	-.195
2	4.166	4.004	-.162
3	4.079	4.038	-.041
4	4.254	4.179	-.075

TABLE XVIII (continued)
AVERAGE YIELD COST OF QUEBEC MUNICIPAL AND SCHOOL BORROWINGS
Awarded by Public Tender - Classified by Size of Issue
(Quarterly Averages)

Quarterly period	Size of Issue $100,00 or less	Size of Issue over $100,000	Difference
1955 - 1	4.056%	4.098%	.042%
2	3.965	3.930	-.035
3	4.029	4.059	.030
4	4.175	4.190	.015
1956 - 1	4.135	4.172	.037
2	4.566	4.620	.054
3	4.965	5.014	.049
4	5.693	5.680	-.013
1957 - 1	6.450	6.110	-.340
2	6.366	6.239	-.127
3	6.300	6.421	.121
4	5.714	5.719	.005
1958 - 1	5.086	5.193	.107
2	4.909	4.954	.045
3	5.242	5.460	.218
4	5.682	5.787	.105
1959 - 1	5.985	5.839	-.146
2	5.922	6.114	.192
3	6.351	6.584	.233
4	6.914	7.097	.183

TABULATION OF DIFFERENCES

	0 to .100%	.101 to .200%	.201 to .300%	over .300%	Total
Plus	17	7	2	-	26
Minus	12	10	3	1	26
Total	29	17	5	1	52

SOURCE: Quebec Municipal Commission - annual statements of bond issues.

TABLE XIX

AVERAGE YIELD COST OF QUEBEC MUNICIPAL AND SCHOOL BORROWINGS Awarded by Mutual Agreement - Classified by Size of Issue (Quarterly Averages)

Quarterly period	Size of Issue $100,000 or less	Size of Issue Over $100,000	Difference
1947 - 1	3.018%	3.096%	.078%
2	3.044	3.073	.029
3	2.975	2.958	-.017
4	2.991	2.974	-.017
1948 - 1	3.184	-	-
2	3.684	3.633	-.051
3	3.565	3.640	.075
4	3.829	3.789	-.040
1949 - 1	3.947	-	-
2	3.990	4.433	.443
3	4.031	3.844	-.187
4	3.850	3.971	.121
1950 - 1	4.114	3.613	-.501
2	4.094	4.443	.349
3	3.860	3.692	-.168
4	3.834	4.015	.181
1951 - 1	4.136	4.024	-.112
2	4.554	4.465	-.089
3	4.554	4.977	.423
4	5.052	5.292	.240
1952 - 1	4.982	5.666	.684
2	4.677	5.176	.499
3	5.066	5.284	.218
4	5.360	5.601	.152
1953 - 1	5.490	5.007	-.483
2	4.929	5.160	.231
3	5.055	5.207	.241
4	5.427	4.804	-.623
1954 - 1	5.265	-	-
2	4.389	5.334	.945
3	4.418	4.439	.021
4	4.499	4.603	.104

TABLE XIX (continued)
AVERAGE YIELD COST OF QUEBEC MUNICIPAL AND SCHOOL BORROWINGS
Awarded by Mutual Agreement - Classified by Size of Issue
(Quarterly Averages)

Quarterly period	Size of Issue $100,000 or less	Size of Issue Over $100,000	Difference
1955 - 1	5.263%	4.695%	-.568%
2	4.387	4.053	-.334
3	4.499	4.218	-.281
4	4.738	4.340	-.393
1956 - 1	4.835	4.223	-.612
2	4.573	4.411	-.162
3	5.085	5.208	.123
4	5.755	5.882	.127
1957 - 1	6.249	6.269	.020
2	6.194	6.134	-.060
3	6.365	6.446	.081
4	6.396	6.301	-.095
1958 - 1	6.162	6.149	-.013
2	5.274	5.298	.024
3	5.316	5.215	-.101
4	5.823	5.799	-.024
1959 - 1	6.772	6.558	-.214
2	6.178	6.087	-.091
3	6.328	6.583	.255
4	7.034	7.341	.307

TABULATION OF DIFFERENCES

	0 to .100%	.101 to .200%	.201 to .300%	Over .300%	Total
Plus	6	7	5	7	25
Minus	10	5	2	7	24
Total	16	12	7	14	49
No comparison					3
Total number of periods					52

SOURCE: Quebec Municipal Commission - annual statements of bond issues.

a suggestion in this statistic that the smaller issues may actually receive more favourable treatment. However, this is not borne out by the tabulation of differences given in Table XIX, which is based upon negotiated issues. Here over the same five year period the large issues had a lower cost in thirteen quarters and were higher in only seven. Once again over the thirteen year period, the pluses and minuses were in balance and the average difference was only plus .015%. In this case, however, because of the wide dispersion of yields the null hypothesis of no difference in the two populations produces a value for "t" of 3.488, which has a probability of only .002 .

It appears sound to conclude that the cost of borrowing to smaller municipalities is not greater than the cost to larger municipalities; it is possible, although the statistics do not give conclusive support, that they may even borrow at lower cost.

Table XX compares, by months, the average yields on municipal and school debenture issues which were sold by tender in 1958 and 1959. Monthly rather than quarterly averages are used because of the shorter period considered.

Over the twenty four periods the school debentures were sold at a yield cost which averaged .012% higher than the yield cost of municipal issues; the standard deviation of the differences was .051% and the value of "t", with 23

APPENDIX 3

TABLE XX
AVERAGE YIELD COST OF QUEBEC MUNICIPAL AND SCHOOL BORROWINGS Awarded by Public Tender - Classified by Type of Borrower (Monthly Averages)

	Municipal Issues	School Issues	Difference
1958-January	5.257%	5.219%	-.038%
February	5.116	5.275	.159
March	4.988	5.145	.157
April	4.931	4.936	.005
May	4.957	5.103	.146
June	4.868	4.864	-.004
July	5.446	5.376	-.070
August	5.443	5.085	-.358
September	5.523	5.422	-.101
October	5.498	5.518	.020
November	5.794	5.664	-.130
December	6.016	5.977	-.039
1959-January	5.928	6.406	.478
February	5.798	5.750	-.048
March	5.999	5.707	-.292
April	5.961	5.997	.036
May	6.067	6.064	-.003
June	6.204	6.122	-.082
July	6.223	6.151	-.072
August	6.242	6.285	.043
September	7.012	7.107	.095
October	7.076	7.195	.119
November	6.790	7.005	.215
December	7.123	7.167	.044

TABULATION OF DIFFERENCES

	0 to .100%	.101 to .200%	.201 to .300%	Over .300%	Total
Plus	6	4	1	1	12
Minus	8	2	1	1	12
Total	14	6	2	2	24

SOURCE: Quebec Municipal Commission - annual statements of bond issues.

degrees of freedom, was 1.714. The null hypothesis of no difference between the two series has a probability of .100; in view of the dispersion of the raw data, it would seem that the null hypothesis should be accepted. In exactly one half of the twenty four months the school debentures sold at a lower cost than the municipal debentures. It appears reasonable to conclude that in general school authorities borrow as cheaply as do municipal authorities.

Table XXI shows another interesting aspect of borrowing by Quebec municipal and school authorities. It is clear that the total number of issues awarded by public tender generally is greater in any period than the total number of negotiated issues. It is also clear that, taking both types of issues together, the number of issues tends to increase successively from the first to the fourth quarter. These relationships do not hold at all times, however, and it appears that deviations can be attributed to increasing issue costs.

In the last quarter of 1947, and first half of 1948, yield costs rose for the first time after the war and in each quarter of 1948 the number of issues awarded at tender was less than the number of negotiated issues. In 1951 issue costs rose sharply to the fourth quarter; the number of issues awarded at tender was less over the year and also in three of the four quarters than the number of negotiated

TABLE XXI
QUEBEC MUNICIPAL AND SCHOOL BOND ISSUES
NUMBER AND TOTAL PAR VALUE[a]
(Quarterly Totals)

Quarterly period	Public Tender	Mutual Agreement	Total Number	Par Value ($millions)
1947 - 1	14	5	19	$ 67.9
2	23	13	36	7.8
3	27	26	53	9.6
4	33	23	56	6.8
	97	67	164	92.1
1948 - 1	9	23	32	2.0
2	22	30	52	9.6
3	30	34	64	9.0
4	31	60	91	14.1
	92	147	239	34.7
1949 - 1	24	10	34	3.6
2	29	28	57	8.4
3	33	17	50	13.5
4	49	47	96	14.2
	135	102	237	39.7
1950 - 1	13	18	31	3.7
2	39	15	54	7.0
3	36	32	68	11.3
4	57	37	94	19.7
	145	102	247	41.7
1951 - 1	16	26	42	5.3
2	25	24	49	11.5
3	26	33	59	14.3
4	27	61	88	22.6
	94	144	238	53.7
1952 - 1	37	23	60	19.7
2	56	24	80	23.5
3	22	33	55	8.0
4	47	49	96	17.3
	162	129	291	68.5
1953 - 1	43	14	57	15.0
2	50	13	63	16.8
3	35	28	63	12.8
4	72	21	93	16.6
	200	76	276	61.2

TABLE XXI (continued)
QUEBEC MUNICIPAL AND SCHOOL BOND ISSUES
NUMBER AND TOTAL PAR VALUE[a]
(Quarterly Totals)

Quarterly period	Public Tender	Mutual Agreement	Total Number	Par Value ($millions)
1954 - 1	43	14	57	$ 9.8
2	67	10	77	25.4
3	65	15	80	18.0
4	103	33	136	25.1
	278	72	350	78.3
1955 - 1	50	9	60	19.9
2	51	14	65	27.6
3	74	28	102	39.9
4	87	27	114	19.3
	262	78	341	106.7
1956 - 1	41	17	58	30.7
2	53	13	66	20.8
3	48	47	95	21.2
4	26	49	75	25.1
	168	126	294	97.8
1957 - 1	37	53	90	33.3
2	62	20	82	22.8
3	60	19	79	20.4
4	103	34	137	52.3
	262	126	388	128.8
1958 - 1	58	13	71	27.3
2	62	15	77	35.1
3	69	20	89	34.2
4	82	33	115	42.0
	271	81	352	138.6
1959 - 1	50	15	65	41.6
2	69	14	83	38.1
3	44	27	71	25.7
4	74	93	167	42.9
	237	149	386	148.3

SOURCE: Quebec Municipal Commission - annual statements of bond issues.

a Issues sold in Canada.

issues. In 1956 yield costs moved sharply higher, starting in the second quarter and continuing to rise through the first quarter of 1957; in the third quarter of 1956 the number of issues awarded by tender and by negotiation were almost equal but in the fourth quarter of 1956 and the first quarter of 1957 the number awarded by tender was materially less than the number negotiated. Again in 1958 yield costs rose sharply in the third and fourth quarters and through all of 1959; in this period the shift between types of issue did not clearly occur until the last quarter of 1959 although there may have been some shifting in the third quarter also. The explanation would appear to be that the shifting begins at or near the point when yield-costs rise above the previous high level i.e. when borrowers begin to experience costs to which they have not previously become accustomed. This appears to have happened in 1956 also, when the increase in yield costs had taken costs into new high ground before the number of issues awarded at tender actually fell below the number of negotiated issues.

An examination of Table XXI shows that costs did not appear to have had any noticeable impact on the total number of issues until 1951; in that year not only did the total drop slightly, but also in each of the last three quarters of the year the number fell below the number in the corresponding quarter in the previous year. In 1956 during the

last two quarters the number of issues again dropped below the totals of the same quarters of the previous year and more significantly in the fourth quarter the number of issues actually fell below the number of the third quarter for the first time. In the first quarter of 1957 there was a sharp rise in the number of issues (apparently issues came out which had been deferred in 1956) but the number of issues was lower in the second quarter and lower again in the third. In the fourth quarter yield costs dropped sharply and the number of issues rose very sharply, by nearly 75%. Rising yield costs in the last half of 1958 and 1959 do not seem to have had any significant effect until the third quarter of 1959 when the number of issues dropped; this deferral appears to have been offset in the fourth quarter when there was a very sharp increase.

The evidence would seem to indicate that, while borrowing may be deferred in the face of high and rising costs, it is not permanently eliminated. It also appears that many of the deferrals have a perverse effect,for the issues are finally brought to market when costs are even higher.

The par value of issues offered in Canada as shown in Table XXI has shown an upward trend throughout the period. The very high par value of the issues in the first quarter of 1947 was due to two issues totalling $66.0 millions by the City of Montreal; extracting these two issues, the par values show annual increments until 1953, when there was a small

decline. There was again a decline in 1956, but in all the other years there were increases. This experience is in keeping with the general trend observable in Table XI (Chapter III) for all municipalities and no doubt has the same origins. One interesting feature is the increase in the average size of the issues, which in 1947 (excluding the two Montreal issues mentioned) was $160 thousand, and in 1959 was $384 thousand. This may account for a relative increase in the number of issues offered at tender compared with the number of negotiated issues, since the former tend to be larger than the latter in average size.

Table XXII gives the annual total of borrowings in the United States, which is also a matter of general interest.

TABLE XXII

BORROWINGS IN THE UNITED STATES MARKET BY QUEBEC MUNICIPAL AND SCHOOL AUTHORITIES

1947	$ 77,811,000	1954	$ 24,907,500
1948	-	1955	42,090,000
1949	-	1956	43,063,500
1950	-	1957	32,260,000
1951	4,663,000	1958	67,093,000
1952	22,372,500	1959	50,633,000
1953	8,245,000		
		Total	$373,138,500

SOURCE: (as for other tables)

There does not appear to be any significant correlation between rising, or high, yield costs and the volume of borrowing in the United States market, which is more likely related to an assessment of the capacity of the domestic market to absorb the issues and to the spread in yields between the United States and Canadian markets. Although over the whole period a total of fifty issues were placed in the United States market, having a total par value of $373.1 millions, eleven issues each of $10.0 millions or more accounted for $308.3 millions of the total. The largest of them, which was for $77.8 millions, was offered in February 1947 when yields were near their lowest levels of the post-war period. The two next largest issues, each of $35.0 millions, were offered in January, 1955 and May, 1958 and in both periods yields were at substantially lower levels than they had been previously. The obvious explanation for the timing of the borrowings in the United States is that they coincide with the need for funds, and are not timed specifically to gain the maximum benefit from yield differentials.

APPENDIX 4

ABSTRACT OF CANADIAN MUNICIPAL DEBT STRUCTURE AND BORROWING 1946 - 1959

The rapid growth of Canada's population since 1945, largely concentrated in urban areas, has led to substantial increases in municipal expenditures. Current revenues have not been sufficient to meet the whole requirements of municipal outlays and there has consequently been a very large increase in municipal debt. The municipal borrowing, in competition with borrowing by corporations, provinces and others, has taken place at increasing cost during the period. It appears that municipalities, in spite of increased borrowing costs, have fared no worse than other borrowers. Some municipalities have, however, exposed themselves to financial losses by issuing an excessive amount of debentures payable in United States funds.

Measures that would improve the position of the municipalities would involve changes enabling an increase in current revenues, improvement in the market for municipal debentures, and increased technical assistance from provincial governments.