

THE IMPACT OF MONETARY POLICY ON HOUSING IN CANADA
AND THE ADJUSTMENT OF THE RESIDENTIAL MORTGAGE
MARKET TO CHANGING CREDIT CONDITIONS

By

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and the Adjustment of the Residential Mortgage
Market to Changing Credit Conditions

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INTRODUCTION

In 1966, housing starts fell substantially below the 1965 level. A complex variety of factors contributed to this development, but most observers of the housing market, including the Economic Council of Canada, attributed the decline in starts to the effect of contractionary monetary policy on the availability and cost of mortgage funds.

The apparent tendency for housing to have become in effect an economic regulator tending to offset excess demand elsewhere in the economy, as in 1966, is well known in Canada. However, while considerable attention has been focused on the general question of the effect of monetary policy on the mortgage-lending institutions, relatively little attention has been given to evaluating the role of institutional rigidities or imperfections in the mortgage market's adjustment to changing credit conditions. Since such imperfections can cause monetary policy to have a greater or lesser impact on mortgage lending, and consequently on housing activity, than otherwise would be the case, the purpose of this study is to evaluate how well the mortgage market has adjusted to changing credit conditions and to determine whether there are any institutional

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imperfections in the mortgage market which tend to distort market responses in a cyclical context.

Chapter 1 examines the problem of short-run fluctuations in housing activity against the background of the role played by residential construction in the economy in the postwar period. Since the impact of monetary policy on housing activity is transmitted through the mortgage market, Chapter 2 briefly describes the salient characteristics of the Canadian residential mortgage market. Chapter 3 examines the demand for, and supply of, residential mortgage funds. Attention is focused in Chapter 4 on the impact of monetary policy on the mortgage market and on housing activity. Finally, Chapter 5 examines the factors which have tended to reduce the sensitivity of mortgage interest rates to changing credit conditions.

CHAPTER 1

The Housing Sector in the Postwar Canadian Economy

1) Expenditures on Residential Construction, 1948-1967

Expenditures on residential construction, apart from meeting the basic social need for shelter, have played a most important role in the Canadian postwar economy. This is indicated by the fact that in constant dollars, they averaged 4.3 per cent of constant dollar Gross National Expenditures in the twenty-year period 1948-1967.¹ The importance of the role played by residential construction in the Canadian economy may be seen in even sharper focus when considered in relation to investment expenditures since the latter play a pivotal role in any economy. In Canada, total constant dollar private and public investment expenditures in the period from 1948 to 1967 averaged 18.2 per cent of G.N.E.² Residential construction expenditures in turn averaged 18.2 per cent of total investment while they averaged 27.3 per cent of business fixed investment and 61.4 per cent of non-residential construction investment.³

The role played by residential construction in terms of its

¹ Computed from data in: Dominion Bureau of Statistics (D.B.S.): National Accounts, Income and Expenditure, By Quarters, 1947-1961, August 1962, Cat. No. 13-519; also National Accounts, Income and Expenditure, Fourth Quarter issues, from 1962 to 1967, volumes 10-16, Cat. No. 13-001.

² Ibid.

³ Ibid.

effects on the over-all level of economic activity and on employment is also further enhanced by the additional expenditures which it induces, notably on consumer durables and on services which are significantly directed toward servicing houses and households (gas, water, etc.). When only the latter are taken into account, the residential construction induced investment multiplier, computed from United States data, has been estimated at about 0.4 to 0.5.⁴ Assuming the same residential service-induced multiplier in Canada, this would imply, even excluding expenditures on household appliances and allowing for time lags, that housing construction affects a volume of induced investment approximately 50.0 per cent of the volume of direct investment in housing itself. This in turn would imply that, in constant dollar terms, expenditures on residential construction and related services averaged about 6.5 per cent of G.N.E. and about 56.0 per cent of all construction in Canada in the period from 1948 to 1967.⁵

The important role played by residential construction in the postwar period was reflected in a substantial rise in both housing starts and in residential construction expenditures. Thus, from 1948 to 1967, housing starts and residential construction

⁴T.M. Mattila and W.R. Thompson, "Residential-Service Construction: A Study of Induced Investment." The Review of Economics and Statistics, November 1956, p. 469.

⁵Calculation based on data in D.B.S., National Accounts, op.cit.

expenditures increased at average annual rates of 3.5 per cent and 3.0 per cent, respectively.⁶ The availability of mortgage funds contributed significantly to this growth in housing activity.

2) The Role of Finance

The crucial role played by the availability of mortgage funds in permitting the growth in housing requirements in the post-war period⁷ to be translated into effective demand is illustrated in Table 1. This table makes the dependence of residential construction on borrowed funds readily apparent. In the period from 1954 to 1967, the only period for which this data is available, funds borrowed from private and public sources ranged from a low of 78.1 per cent to a high of 86.3 per cent of expenditures on new housing, while owner's equity correspondingly varied from a high of 21.9 per cent to a low of 13.7 per cent.

⁶ Rather than implying a decline in average expenditures for a given type of dwelling unit, the more rapid rise in dwelling starts than in residential construction expenditures in this period mainly reflects the rise which occurred in the construction of relatively low unit cost apartments; apartments as a proportion of total dwelling units started increased from 12.8 per cent in 1949 to 45.3 per cent in 1967. Central Mortgage and Housing Corporation (C.M.H.C.): Canadian Housing Statistics, 1967 issue, Tables 1 and 7; Ibid.

⁷ C.M.H.C. has estimated that housing requirements increased from an annual average of 99,200 dwelling units in the period 1951-56 to 132,600 units in the period 1956-61 and then to an annual average of 140,000 units in 1961-65. Requirements in the immediate postwar years were also high because of the rapid growth in population and the backlog of unfilled demand accumulated during the war years. C.M.H.C., op.cit., Table 73; Advisory Committee on Reconstruction, Final Report of the Subcommittee on Housing and Community Planning, Ottawa, 1944; R.G. Lillie, "Twenty Years of Housing", Habitat, Volume IX, Number 3 and 4, and Volume X, Number 2, C.M.H.C.

TABLE 1

EXPENDITURES ON NEW HOUSING BY SOURCE OF FUNDS 1954-1967

(Millions of Dollars)

	Public Funds(1)	Private Funds		Owners Equity(2)	Total	As a percentage of total			
		Institutional	Other			Public Funds	Private Funds Institutional	Other	Owners Equity
1954	113.3	423.2	412.9	266.1	1,215.5	9.0	34.8	34.0	21.9
1955	58.9	705.7	504.1	288.6	1,557.3	3.8	45.3	32.4	18.5
1956	56.0	750.4	427.6	314.7	1,548.7	3.6	48.5	27.6	20.3
1957	108.6	524.8	605.0	209.3	1,447.7	7.5	36.3	41.8	14.5
1958	384.1	683.3	496.4	261.3	1,825.1	21.0	37.4	27.2	14.3
1959	348.8	725.1	348.9	371.5	1,794.3	19.4	40.4	19.4	20.7
1960	307.8	471.6	432.3	260.0	1,471.7	20.9	32.0	29.4	17.6
1961	298.9	638.0	316.2	231.9	1,485.0	20.1	43.0	21.3	15.6
1962	223.1	807.8	247.0	330.2	1,608.1	13.9	50.2	15.4	20.5
1963	181.0	944.9	346.0	264.6	1,736.5	10.4	54.4	19.9	15.2
1964	332.4	1,043.8	412.2	284.4	2,072.8	16.0	50.4	19.9	13.7
1965	365.9	1,101.2	410.1	311.1	2,188.3	16.7	50.3	18.8	14.2
1966	520.8	846.9	367.6	476.0	2,221.3	23.4	38.1	16.5	21.4
1967	811.4	842.9	298.5	445.1	2,397.9	33.9	35.2	12.4	18.6

(1) Includes direct government expenditures, C.M.H.C. and other loans.

(2) Equities in addition to mortgages from public and institutional sources.

Source: C.M.H.C. Canadian Housing Statistics, 1967, Table 22.

The extent to which the availability of mortgage funds was important in facilitating the growth in residential construction in the postwar period is also indicated by the impressive rise in the volume of outstanding mortgage debt in this period, as shown in Table 2 on page 6. Mortgage loans outstanding in 1939 amounted to 15.6 per cent of outstanding long-term debt but because of the low level of construction during the war years and the repayment of mortgages, there was a decline of about \$300 million in the volume of outstanding mortgage loans from 1939 to 1945. There was also a large increase in long-term Federal Government debt in this period, and the ratio of mortgage loans to long-term debt declined to 7.0 per cent. In the following decade, the vigorous demand for mortgage financing generated by an expanding population, rising incomes and a backlog of housing needs generated during the years of depression and war, resulted in a \$5 billion increase in the volume of outstanding mortgage loans; mortgage loans as a proportion of long-term debt outstanding had increased to 24.1 per cent by 1955. The demand for housing remained high in the following decade and the volume of outstanding mortgage debt increased by \$14.5 billion, to constitute 36.1 per cent of all outstanding long-term debt in 1965. In 1965, mortgages had thus become the largest single long-term debt instrument in the Canadian financial system. However, the data in the above table include substantial amounts of mortgage debt secured by commercial and farm property. The outstanding volume of residen-

TABLE 2

LONG-TERM DEBT AND MORTGAGE LOANS OUTSTANDING, 1939-1965
(Millions of Dollars)

	<u>1939</u>	<u>1945</u>	<u>1950</u>	<u>1955</u>	<u>1960</u>	<u>1965</u>
Federal Govt.						
-Bonds ^a	3,478	13,013	11,600	9,008	8,601	8,924
Provincial Govt.						
-Bonds ^b	1,943	1,875	2,748	4,073	6,855	11,889
Municipal Govt.						
-Bonds ^b	1,176	946	1,219	2,203	3,740	5,464
Corporate & Institutional Bonds	2,175	1,738	2,509	2,503	7,456	10,343
Mortgage Loans) Outstanding	<u>1,626</u>	<u>1,330</u>	<u>3,130</u>	<u>6,280</u>	<u>11,349</u>	<u>20,645</u>
Total	10,398	18,902	21,206	26,067	38,001	57,265
Mortgage Loans as Percentage of Total	15.6	7.0	15.2	24.1	29.9	36.1

^aOutstanding market issues, over three-year maturities.

^bDirect and guaranteed bonds.

Source: Bank of Canada, Statistical Summary Supplement, various issues
C.M.H.C., Research Bulletin No. 77 (R)

tial mortgage debt in 1965 was perhaps about \$16 billion.⁸

⁸The Royal Commission on Banking and Finance estimated that of the mortgage debt outstanding held by governments and financial institutions in 1961, some 77 per cent was secured by residential property. Assuming a comparable proportion in 1965, and the same distribution of holdings by other mortgage lenders, then the total outstanding residential mortgage debt in 1965 would have been \$16 billion. Report of the Royal Commission on Banking and Finance, p. 268, Queen's Printer, Ottawa 1964. (Hereinafter cited as the "Porter Commission Report"); C.M.H.C., Research Bulletin, No.77 (R), Ottawa, June 1967.

3) Postwar Cyclical
Fluctuations in Housing Activity

The residential construction sector has, however, experienced marked cyclical fluctuations in the postwar period. As shown in Table 3,⁹ residential construction expenditures moved through eight complete swings and therefore through four complete cycles in the postwar period. The average duration of each cycle was twenty quarters, with the upswings averaging fifteen quarters and the downswings five quarters. With the exception of the 1957-60 cycle, when the downswing exceeded the upswing in duration and there was a net decline in expenditures, the tendency for the duration of the upswings to exceed that of the downswings resulted in net expansion. The duration of the upswing in the most recent cycle (1960-66) was the longest of any cycle in the postwar period but the downswing in 1966 also represented the sharpest absolute decline in residential construction expenditures in this period.

Dwelling units started, which are statistically more reliable and are used more as a guide for short-term housing policy,¹⁰ moved through ten swings and five complete cycles in the period from 1948

⁹The method of identifying cycles used in Table 3 is that used by J.V. Poapst in his study of the mortgage market prepared for the Porter Commission. The turning points up to 1960 are identical with the ones shown in Poapst's study but the dollar values of the changes are different in most cases; presumably this is due to data revisions. J.V. Poapst, The Residential Mortgage Market. Working paper prepared for the Royal Commission on Banking and Finance, Ottawa 1962, Table 4-1, p. 115.

¹⁰Ibid., p. 114.

TABLE 3

CYCLICAL MOVEMENTS IN NEW RESIDENTIAL CONSTRUCTION EXPENDITURES

Seasonally Adjusted at Annual Rates - Millions of 1957 dollars
Quarterly, 1947 Second Quarter to 1968 First Quarter

Period ¹	Movement	Duration Quarters	Change ²	
			\$ mil.1957	% change
1947 2Q to 1950 4Q	Up	15	340	39.2
1950 4Q to 1951 4Q	Down	4	-316	-26.2
1951 4Q to 1956 1Q	Up	17	744	36.3
1956 1Q to 1957 1Q	Down	4	-272	-16.6
1957 1Q to 1958 4Q	Up	7	440	32.3
1958 4Q to 1960 4Q	Down	8	-544	-30.2
1960 4Q to 1966 1Q	Up	21	440	35.2
1966 1Q to 1967 1Q	Down	4	-356	-20.9
1967 1Q to 1968 1Q	Up	4 to date	256	19.0

¹ Quarter after which at least two next following quarterly movements were in same direction and value in third quarter is more than \$100 million different from turning points.

² Change between turning points.

Source: D.B.S. National Accounts, Income and Expenditure, By Quarters, 1947-1961, August 1962, Cat.No. 13-519; also National Accounts, Income and Expenditure, Fourth Quarter issues, from 1962 to 1967, volumes 10-16, Cat.No. 13-001.

to 1968 Q1, as shown in Table 4.¹¹ The average duration of each

TABLE 4
CYCLICAL MOVEMENTS IN DWELLING STARTS, 1948-1967
Seasonally Adjusted at Annual Rates
Quarterly - thousands of dwelling units

Period ¹	Movement	Duration Quarters	Change (000's units)	
			Period	Per Quarter
1948 2Q to 1951 1Q ²	Up	12	24.7	2.1
1951 2Q to 1952 1Q	Down	4	-25.8	- 6.5
1952 2Q to 1956 1Q	Up	16	76.0	4.7
1956 2Q to 1957 1Q	Down	4	-60.0	-15.0
1957 2Q to 1958 4Q	Up	7	76.2	10.9
1959 1Q to 1960 1Q	Down	5	-47.2	- 9.4
1960 2Q to 1962 2Q	Up	9	38.3	4.3
1962 3Q to 1962 4Q	Down	2	- 7.5	- 3.8
1963 1Q to 1965 3Q	Up	11	45.2	4.1
1965 4Q to 1966 4Q	Down	5	-47.9	- 9.6
1967 1Q to 1968 1Q ²	Up	5	79.3	13.9

¹Periods in which quarterly movement is in same direction for two quarters or more, except for period from 1959 1Q to 1960 1Q when two-quarter periods of decline are separated by two-quarter periods of small increase.

²Incomplete

Source: CMHC, Special Supplement to the February 1968 issue of: Canadian Housing Statistics, Monthly Supplement.

¹¹The method used here to identify cyclical turning points is that used by Poapst. However, the turning points, and changes in starts between turning points, shown here differ because of substantial data revisions. Ibid, Table 4-2, p. 116.

cycle was fifteen quarters. The upswings lasted on average for eleven quarters and covered fifty-five quarters while downswings lasted on average for four quarters and covered twenty quarters. With the exception of the 1957-1960 and 1960-1962 cycles, the downswings were much sharper although, on the average, shorter in duration than the upswings.

The cyclical fluctuations experienced in residential construction were similar in magnitude to those experienced in the other components of private investment but it is apparent from Chart 1, on page 11, that they differed significantly in timing, both in relation to fluctuations in general economic activity¹² and in the other components of private investment. This is also shown in Charts 2,3 and 4,¹³ where housing activity, private investment and its other main components are shown over the course of the three cycles in general economic activity experienced since 1953.

Chart 2 shows the business cycle from the second quarter of

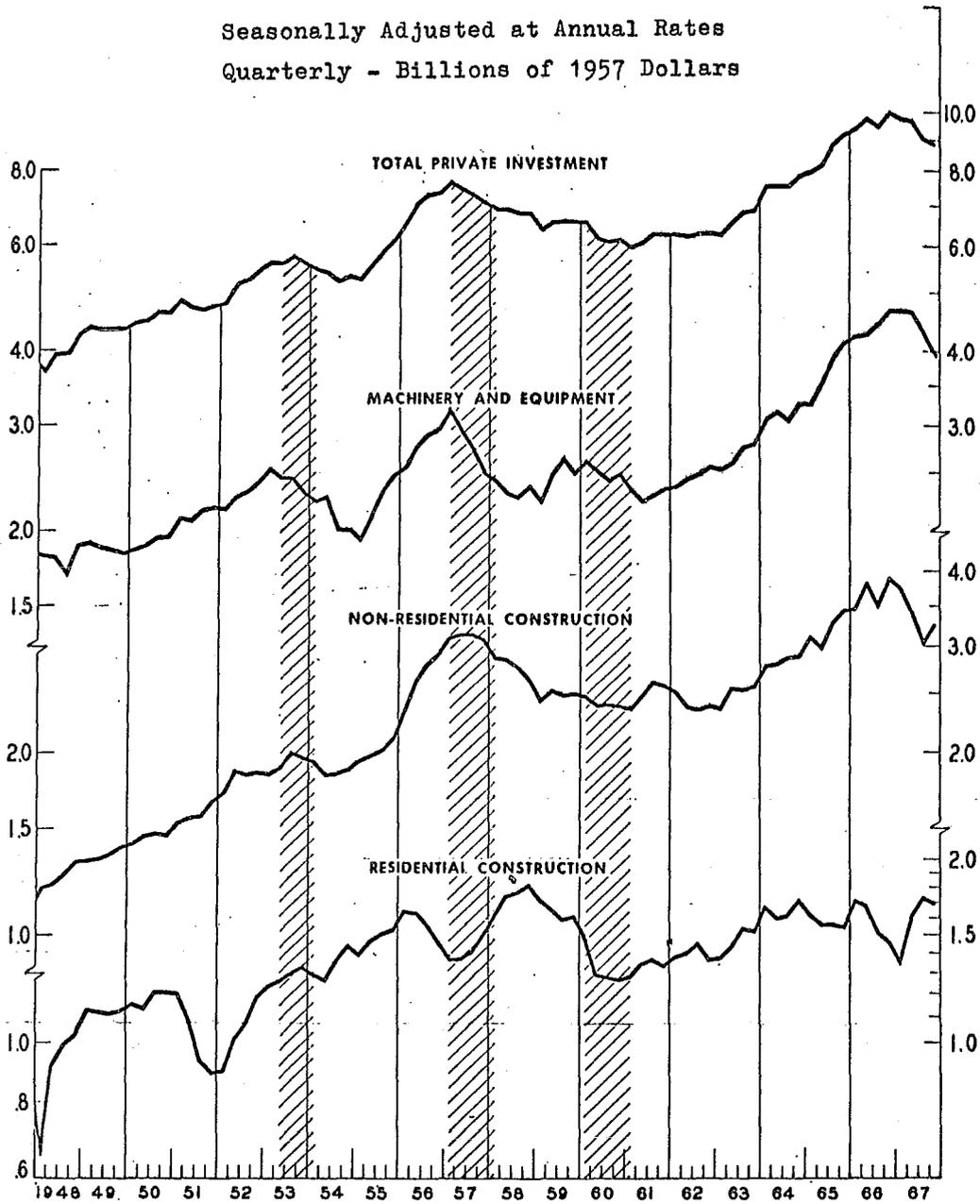
¹²The reference cycle periods used in Charts 1,2,3 and 4 are based on the National Bureau of Economic Research method of determining business cycle turning points. See: A.F. Burns and W.C. Mitchell, Measuring Business Cycles, National Bureau of Economic Research, New York, 1947.

¹³These are cycle-on-cycle charts, but instead of showing the behaviour of one variable over different cycles on the same chart, each chart shows the behaviour of different variables over one cycle. The data are on an index basis, with the level of each component at the previous reference cycle peak taken as 100. The reference cycle trough dates are: the second quarter of 1954, the first quarter of 1958 and the first quarter of 1961. In the third chart, only the latter part of the expansion which commenced in 1961 is shown because interest here is largely confined to the decline in housing activity which accompanied the period of contractionary monetary policy experienced in 1965-66. Sources: Same as Tables 3 and 4 above.

CHART 1

PRIVATE INVESTMENT EXPENDITURES

Seasonally Adjusted at Annual Rates
Quarterly - Billions of 1957 Dollars



Shaded areas represent periods of cyclical contraction.

Sources: D.B.S.: National Accounts, Income and Expenditure, By Quarters, 1947-1961, August 1962, Cat.No. 13-519; also National Accounts, Income and Expenditure, Fourth Quarter issues, from 1962 to 1967, volumes 10-16, Cat.No. 13-001.

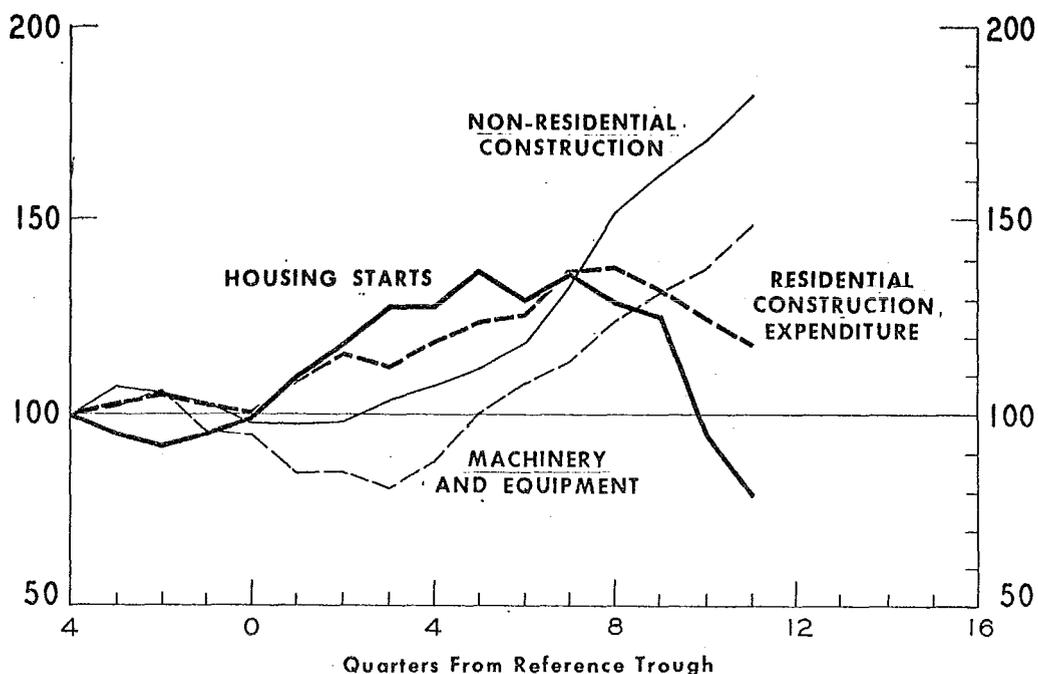
CHART 2

HOUSING AND OTHER COMPONENTS OF PRIVATE INVESTMENT,

REFERENCE CYCLE: 2Q. 1953 TO 1Q. 1957

Seasonally Adjusted

Previous Business Cycle Peak=100



1953 to the first quarter of 1957, with the previous reference cycle peak occurring in the first quarter of 1953 and the reference cycle trough occurring in the second quarter of 1954. As indicated in the chart, housing starts declined for two quarters from their level at the previous reference cycle peak but then increased in the next two quarters while the general level of economic activity declined. Thereafter, for a further period of seven quarters while

the economy was passing through the early stages of cyclical recovery towards rapid expansion, housing starts increased sharply to reach a peak (relative to their earlier reference cycle peak) in the first quarter of 1956. Subsequently, until the reference cycle peak (first quarter of 1957) housing starts declined sharply (by 42.0 per cent) while the level of general economic activity continued to advance strongly. A similar pattern, but with slight difference in the timing of turning points because of lags between changes in starts and in expenditures,¹⁴ is also shown for residential construction expenditures. In contrast, changes in the other components of private investment followed fairly closely the pattern of cyclical changes in the over-all level of economic activity: they declined for a period beyond the reference cycle trough and then continued to rise strongly until the reference cycle peak. In the year prior to the first quarter of 1957, or in the later phases of the expansion experienced from the second quarter of 1953 to the first quarter of 1957, it therefore appears that housing activity fluctuated counter cyclically and consequently played a stabilizing role in the economy.

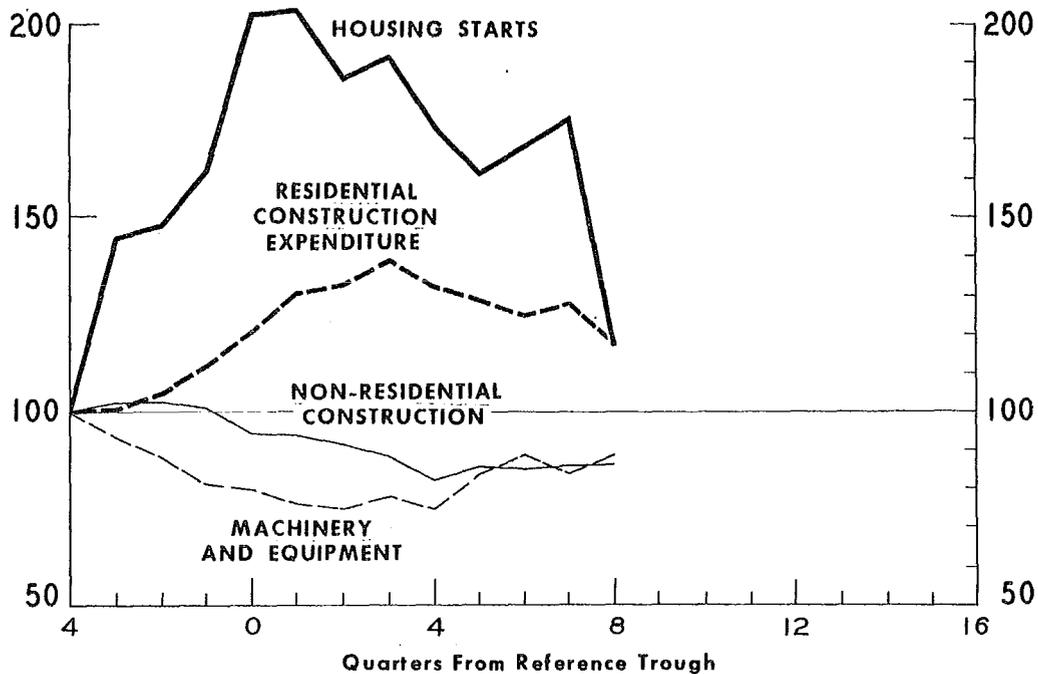
Chart 3, which shows the business cycle from the first quarter of 1957 to the first quarter of 1960, also indicates that

¹⁴It may be estimated that peaks in residential construction expenditures lag peaks in housing starts by three to four months. L.B. Smith, The Postwar Canadian Residential Mortgage Market and the Role of Government, unpublished doctoral dissertation, Harvard University, Cambridge, 1966, p. 205. (Hereinafter cited as "The Residential Mortgage Market").

CHART 3

HOUSING AND OTHER COMPONENTS OF PRIVATE INVESTMENT,
REFERENCE CYCLE: 1Q. 1957 TO 1Q. 1960

Seasonally Adjusted
Previous Business Cycle Peak=100



housing activity increased when the economy experienced a period of cyclical contraction, rose sharply to reach a peak about the middle of the expansion and then fell sharply while the over-all level of economic activity continued to rise strongly.

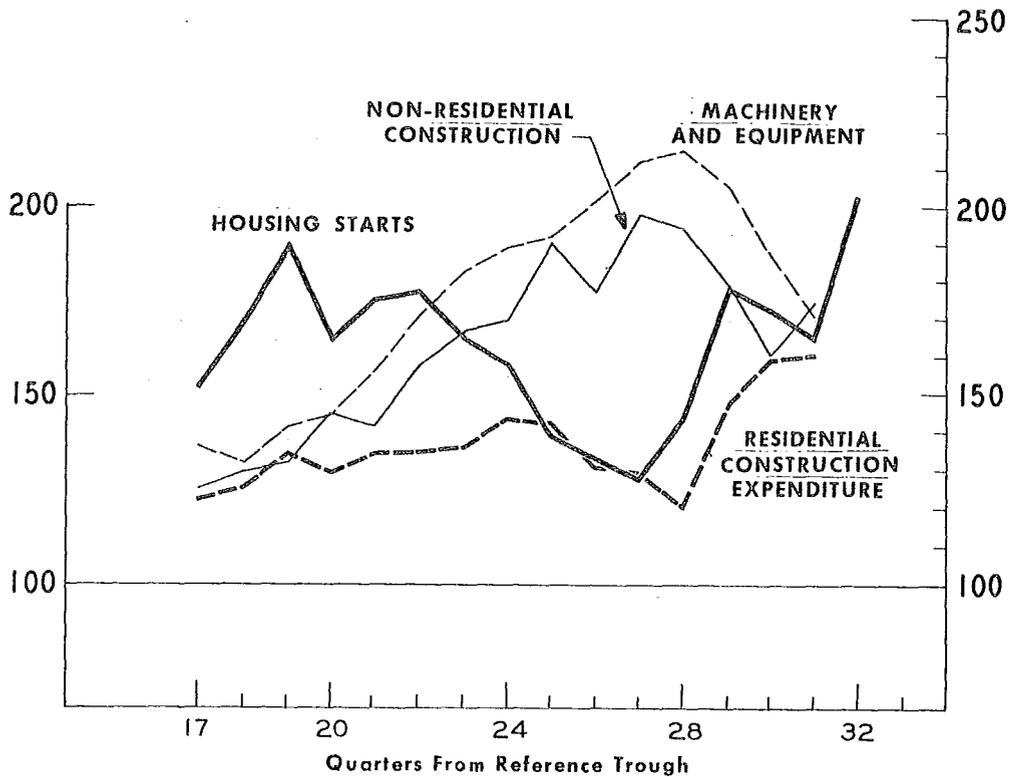
Also during the most recent period of the cyclical expansion

which began in the first quarter of 1961,¹⁵ and which is shown in Chart 4, housing activity fell sharply, while the other components

CHART 4

HOUSING AND OTHER COMPONENTS OF PRIVATE INVESTMENT,
REFERENCE CYCLE: 1Q. 1960 TO 4Q. 1967

Seasonally Adjusted
Previous Business Cycle Peak=100



.1. Data shown from second quarter of 1964.

¹⁵During the period of cyclical contraction experienced from the first quarter of 1960 to the first quarter of 1961, residential construction expenditures declined quite sharply while housing starts increased substantially. D.B.S.: National Accounts: Income and Expenditure, op.cit.; C.M.H.C., Special Supplement to the February 1968 issue of: Canadian Housing Statistics, Monthly Supplement.

of private investment and the over-all level of economic activity continued to rise strongly. Thus during the three business cycles experienced in the last fifteen years, housing activity fluctuated countercyclically and consequently played a stabilizing role in the economy.¹⁶

4) Benefits and Costs of Housing Cycles

Fluctuations in housing activity, which have been widely attributed to the effects of monetary policy on the availability and cost of mortgage funds,¹⁷ have probably not resulted in a lower level of residential construction over the longer-run while they have benefited the economy through their contribution to over-all stabilization policies.¹⁸ However, it is claimed, particularly

¹⁶For a more detailed review of fluctuations in housing activity and their relationship to cyclical fluctuations in general economic activity in the period from 1948 to 1962 see: Poapst, op.cit., pp. 114-120.

¹⁷L. Grebler, "The Housing Inventory - Analytical Concept and Quantitative Change", American Economic Review, May 1951; J.M. Guttentag, "Credit Availability, Interest Rates and Monetary Policy", The Southern Economic Journal, January 1960 (hereinafter cited as "Credit Availability") and "The Short Cycle in Residential Construction", American Economic Review, June 1961 (hereinafter cited as "The Short Cycle"); S.B. Klamann, "Effects of Credit and Mortgage Policy on Real Estate Markets; 1952-1954", Land Economics, August 1956; W.L. Smith, "The Impact of Monetary Policy on Residential Construction, 1948-1958", in Study of Mortgage Credit, Committee on Banking and Currency, Subcommittee on Housing, U.S. Senate, December 1958, 85th Congress, 2nd Session; L. Grebler and S.J. Maisel, "Determinants of Residential Construction, A Review of Present Knowledge" in Impacts of Monetary Policy, Research Studies prepared for the Commission on Money and Credit, Englewood Cliffs, N.J. Prentice-Hill, 1963, p. 477-478; Economic Council of Canada, Fourth Annual Review, p. 25, Queen's Printer, Ottawa, 1967.

¹⁸Guttentag, "The Federal Reserve and the Mortgage Market: Some Perspectives on the "Crisis" of 1966" in Study of Mortgage Credit, Committee on Banking and Currency, Subcommittee on Housing and Urban Affairs, United States Senate, May 1967, 90th Congress, 1st Session, p. 395 (hereinafter cited as "The Mortgage Market in 1966").

by spokesmen for the industry, that this benefit has been achieved at a cost to the residential construction industry itself. Some of the alleged costs have been summarized by the National House Builders Association as follows:

The principal difficulties of the house building industry since 1954 have arisen from the wide year to year fluctuations in the number of houses started... Such fluctuations tax the resources of the industry and attract marginal operators at the peak, and cause unemployment and bankruptcies in the subsequent contraction. The over-all result is poor efficiency, unnecessarily high costs and serious economic disruption.¹⁹

Whether past fluctuations in housing activity have in fact raised the cost of housing and contributed to inefficiency in the residential construction industry - thus providing valid grounds for seeking ways to reduce fluctuations in the availability of mortgage funds - is open to question.²⁰ However, it would appear that an enlarged and sustained flow of mortgage funds will be required if estimates of future housing requirements are to be realized.²¹ This in turn focuses attention on the efficiency of institutional and other arrangements in the mortgage market.

¹⁹The National House Builders Association, Submission to the Royal Commission on Banking and Finance, Ottawa 1962, p. 20, para. 4.15; see also: Poapst, op.cit., p. 150.

²⁰Guttentag, "The Mortgage Market in 1966", op.cit., p. 398.

²¹"Of all the major sectors of the economy, none will have to grow more than housing - at least to 1970, and perhaps even throughout the 1970's. This is a matter of major national importance if a housing shortage is not to become a serious national problem... A large and sustained volume of residential mortgage financing will (also) be required." Economic Council of Canada, op.cit., p. 264.

5) Mortgage Market Imperfections
and Short-Run Housing Activity

If institutional rigidities or imperfections exist in the mortgage market they can be expected to adversely affect the cost and availability of mortgage funds in the long-run and consequently frustrate the objective of achieving the optimum allocation of financial and real resources between the housing and other sectors of the economy. In a cyclical context, institutional rigidities or imperfections can also be expected to prevent the mortgage market from adjusting efficiently to changing credit conditions and thereby cause monetary policy to have a greater or lesser impact on housing activity than otherwise would be the case.

While considerable attention has been focused recently on the general questions of the impact of monetary policy on housing²² and on the mortgage lending institutions,²³ little attention has been given to evaluating the role which institutional rigidities or imperfections in the mortgage market might play in hampering its smooth adjustment to changing credit conditions.²⁴ In view of

²²See, for example: Economic Council of Canada, op.cit., pp. 23-26, 264-266.

²³See, for example: Porter Commission Report, pp. 357-376.

²⁴The adverse effects of legal restrictions on mortgage lending by the financial intermediaries were stressed by the Porter Commission but their effects were viewed in a long-run context rather than from the point of view of their effects on the adjustment of the mortgage market to changing credit conditions. The need for further study of the prerequisites in the economy at large, in the financial markets and the housing market that have made the countercyclical behaviour of residential building possible is also noted by Grebler and Maisel. Porter Commission Report, p. 269; Grebler and Maisel, op.cit., p. 493.

this, the tendency for housing to have become in effect an economic regulator, and the apparent need to ensure a continued growth in the supply of mortgage funds in future, this study examines the impact of monetary policy on housing and attempts to determine whether there are any imperfections in the mortgage market which have accentuated fluctuations in mortgage lending and consequently in housing activity.

6) Outline and Summary of Findings

a) Outline

Since the impact of monetary policy on housing is transmitted through the mortgage market, Chapter 2 briefly describes the characteristics and structure of the Canadian residential mortgage market.

Chapter 3 examines the demand for, and supply of, mortgage funds. The chapter begins with a brief analysis of the long and short-run demand for housing, and then goes on to consider the credit variable because of the importance usually attached to changes in credit availability in the theoretical and empirical literature dealing with short-run fluctuations in mortgage lending and in housing activity. There then follows a brief analysis of the demand for mortgage funds, and how it is influenced by changes in mortgage lending terms. The chapter concludes with a brief analysis of the supply of mortgage funds, and how it is influenced by changes in mortgage lending terms.

Chapter 4 examines the impact of monetary policy on housing activity, with particular emphasis on recent developments. The chapter begins with a brief analysis of the relationship between

fluctuations in general economic activity, monetary policy, mortgage lending and housing activity, and finds: firstly, that monetary policy has been mainly responsible for fluctuations in mortgage lending, and secondly, that such fluctuations have in turn been mainly attributable to fluctuations in the mortgage lending of the private financial institutions. Much of the remainder of the chapter is, therefore, concerned with the impact of monetary policy on the mortgage lending of the private financial institutions.

Since it is found in chapter 4 that variations in yield spreads have been responsible for fluctuations in mortgage lending, Chapter 5 examines the factors which have caused mortgage interest rates to be relatively inflexible. Attention is focused in the first part of the chapter on the institutional rigidities or imperfections in the mortgage market which have reduced the flexibility of mortgage interest rates, including the N.H.A. yield ceiling and the absence of a secondary market. The remainder of the chapter examines how other institutional arrangements and market forces have reduced the flexibility of mortgage interest rates and possibly induced lenders to vary the non-price terms of mortgage loans in response to changing credit conditions.

b) Summary of Findings

(i) Since mortgage loans are issued in small amounts and are secured by individual pieces of real estate of widely varying age, quality, type and location, the residential mortgage market is highly decentralized and exhibits important regional differences. Unlike the market for bonds, there is little trade in outstanding mortgage loans. However, large institutional investors supply most

of the funds for new construction channelled through the mortgage market. The terms upon which mortgage funds may be borrowed, and consequently lending policies and practices in the mortgage market, are largely determined by the terms of the National Housing Act.

(ii) The demand for mortgage funds secured by residential property arises mainly to finance new construction. Consequently, the factors which determine the demand for new housing are important determinants of the demand for mortgage funds. In Canada, it appears that the basic underlying conditions throughout the post-war period were such as to create a strong potential demand for new housing. The activation of this potential demand into effective demand was in turn mainly dependent upon the availability of mortgage funds on easy terms. The ability of potential home-owners to borrow and the attractiveness of potential investment in rental dwellings are influenced by the mortgage lending terms. Consequently, changes in the price and non-price terms of mortgage loans can be expected to significantly affect the demand for mortgage funds and thereby the volume of housing construction. The supply of funds is also significantly influenced by the non-price terms of mortgage loans, since changes in such terms affect the liquidity and risk of mortgage loans. Thus changes originating in the mortgage market can be expected to affect housebuilding through the effect of changes in loan terms upon the demand for housing and through changes in the willingness of lenders to supply funds at given terms.

(iii) Changes in financing conditions in the mortgage market have been significantly influenced by general economic activity and by monetary policy. In the period from 1956 to 1967, declining or

slowly growing economic activity, relatively low demand for funds by business, and expansionary monetary policy, have resulted in substantial increases in mortgage lending and in housing activity. Conversely, high and rising economic activity and expanded demands for funds by business have generally checked the growth of mortgage lending, while contractionary monetary policy has resulted in substantial declines in the supply of mortgage funds. Fluctuations in the over-all volume of mortgage lending have in turn mainly reflected changes in the volume of funds supplied by the private financial institutions, including mainly the chartered banks, trust, loan and life insurance companies. Monetary restraint has affected their mortgage lending partly by reducing the growth in the aggregate of funds available to them for all kinds of lending. Much more important has been the allocation effect, that is, reduced lending by the financial institutions resulting from their investing a smaller proportion of available funds in mortgages. This in turn has been attributable to the tendency for mortgage interest rates to rise less than bond yields during periods of monetary restraint.

(iv) Mortgage interest rates have been relatively inflexible partly because of institutional imperfections in the mortgage market. Until recently, the N.H.A. yield ceiling was perhaps the most important such imperfection. The absence of a secondary market has also contributed to the relative inflexibility of mortgage interest rates. However, the inflexibility of mortgage interest rates relative to bond yields has mainly reflected basic differences between the mortgage market and the bond market. The fact that

loan commitments in the mortgage market are entered into some months before funds are disbursed has led to stability of rates, particularly when market rates were rising. The localized and differentiated nature of the mortgage market have also promoted a stable interest rate policy and reinforced the tendency for changes in mortgage interest rates to lag behind changes in other market rates. The inflexibility of mortgage interest rates could have been attributable in part to the tendency for lenders to vary the non-price terms of mortgage loans in response to changing credit conditions. However, relevant data are unfortunately not available to determine the extent to which lenders have varied the non-price terms of mortgage loans. Nevertheless, there is evidence indicating that lenders have relied on non-price rationing to allocate funds.

CHAPTER 2

The Characteristics and Structure of the Canadian Residential Mortgage Market

The potential short-run effects of credit conditions and monetary policy on housing are transmitted mainly through the residential mortgage market. Therefore, to understand both the mechanisms linking monetary policy to housing activity, and the role which institutional arrangements in the mortgage market might play in its adjustment to changing credit conditions, it is necessary to examine the salient characteristics of that market.

1. Size of the Residential Mortgage Market

Comprehensive measurements of the amount of residential mortgage financing are not available but estimates made by Poapst¹ in his study prepared for the Porter Commission clearly indicate that the residential mortgage market is large. Poapst's estimates indicate that in 1960, the amount of funds raised in the market was approximately \$1.7 billion, compared with \$2.6 billion obtained on all types of property

Poapst also compared the estimated volume of the gross flow of residential mortgages in 1960 with new Canadian dollar issues of bonds and stocks, and concluded that:

¹Poapst, op.cit., pp. 21-24, Table 2-1.

Residential mortgage financing exceeded all types of bond and stock financing except gross new issues by the federal government. Excluding the federal government, new issues of all types of bonds combined exceeded residential mortgage financing by just 11 %, and when stocks are added the margin is only 26 %.
The residential mortgage market is clearly a large part of a large market.²

That the mortgage market has continued to be large is indicated by the fact that gross mortgage loans approved by the financial institutions (chartered banks, life insurance companies, trust, loan and other companies, Quebec Savings banks and mutual and benefit societies) in 1967 amounted to \$1.7 billion, compared with \$770 million in 1960.³

2. Characteristics of Mortgage Lending

Residential mortgage loans are usually long-term loans secured by individual pieces of residential real estate of widely varying age, quality, type and location. Such loans are also usually secured by the borrowers' personal covenant to repay, but because the amounts involved are in most cases large in relation to the borrowers' income and other assets, lenders must usually look to the property itself as the security for their funds and must therefore be skilled in appraising building standards and property values. Most mortgages, except those on large apartments, are also issued in relatively small amounts because they relate to individual properties. For example, the average loan for new single

²Ibid, p. 22.

³C.M.H.C., Canadian Housing Statistics, 1967 issue, Table 21.

family dwellings built under the National Housing Act in 1967 was \$15,692, the median income of borrowers was \$7,560 and almost 80 per cent of such loans had an amortization period of 25 years; conventional mortgages registered by the financial institutions in 1966 averaged \$18,032.⁴

As is to be expected, these characteristics of the mortgage lending process do much to determine the nature of the mortgage market itself. Because mortgage loans are "one of a kind", in the sense that they are usually issued in small amounts and are secured by real estate of widely varying characteristics, the market is highly decentralized and consequently exhibits important regional differences.⁵ However, despite this decentralized nature of the market, large institutional investors supply most of the funds channelled through the mortgage market.⁶ These firms have the organization and skills necessary to efficiently appraise properties and to administer mortgage portfolios at a relatively low cost and also have widespread networks of branch offices. Individuals also lend a substantial volume of mortgage funds,⁷ but this tends to be

⁴Ibid, Tables: 54,56,57 and 67.

⁵For a summary of regional differences in the mortgage market see: Porter Commission Report, p. 277.

⁶As indicated above in Table 1, page 4, almost one-half of expenditures on new residential construction in recent years have been financed by funds borrowed from the private financial institutions.

⁷Reliable data showing the volume of outstanding residential mortgage debt held by individuals in Canada are not available. However, the C.M.H.C. has estimated that, in 1965, \$5 billion, or 25 per cent of all outstanding mortgage debt, was held by individuals, unincorporated business and non-profit organizations. C.M.H.C., Economic Research Bulletin No. 77 (R).

limited to cases where the lender has access to relevant information concerning borrowers and where the lender's occupation provides him with skills which are appropriate to mortgage lending. Also, a considerable volume of mortgage lending probably results from the sale of housing where vendors accept a mortgage to facilitate the sale of property or to help to secure a higher price.⁸

Because of the individual nature of each mortgage loan and the resulting decentralized nature of the mortgage market, there is little trade in outstanding mortgages compared with the secondary market turnover in outstanding stocks and bonds.⁹ This also arises in part from the tendency of the large institutional lenders to originate and keep their own loans until maturity.

3. Institutional Characteristics of the Residential Mortgage Market

Borrowers in the mortgage market may obtain two kinds of mortgage loans. One carries a government guarantee of repayment to the lender under the terms of the National Housing Act, and the other is the conventional type of loan where repayment by the borrower is not guaranteed to the lender by the government. Over the decade from 1958 to 1967, 56.0 per cent of new residential

⁸Lenders are often willing to allow a purchaser to assume the liability for an existing mortgage or to arrange a modification of its terms but it should be noted that while such transactions give rise to substantial gross flows of credit, net flows are not changed. Porter Commission Report, p. 269.

⁹See discussions by Poapst, op.cit., pp. 103-113; Porter Commission Report, pp. 279-280; C.M.H.C., Submission to the Porter Commission, op.cit., pp. 54-59; D.B. Mansour, Submission to the Porter Commission, Ottawa 1962, pp. 22-30.

mortgage loans approved by the private lending institutions and by C.M.H.C. were insured under the National Housing Act.¹⁰ Consequently, the structure of the market for new housing finance is largely determined by the terms of the Act. Until recently, loans on existing housing by the private financial institutions were not eligible to be insured under the Act,¹¹ but because of the importance of N.H.A. financing in the mortgage market, the market for mortgages on existing housing was also indirectly influenced by the terms of the Act.

Postwar national housing legislation might be said to have begun with the 1944 Report of the Subcommittee on Housing and Community Planning under the chairmanship of Professor C.A. Curtis.¹² In accordance with a recommendation of the Report, the 1944 National Housing Act was subsequently passed, consolidating all existing housing legislation and providing for federal government loans covering 50 per cent of the cost of municipal slum clearance. The scope and purpose of the Act was indicated in its preamble, which stated that it was intended "... to promote the construction of new

¹⁰C.M.H.C., Canadian Housing Statistics, 1967 issue, Tables: 20, 23 and 25.

¹¹In November 1966, the Act was amended to permit the approved lenders to lend up to a maximum of \$10,000 under the Act for the purchase of existing dwellings. Ibid, 1966 issue, p. 14.

¹²Advisory Committee on Reconstruction, Final Report of the Subcommittee on Housing and Community Planning, op.cit. For details of early federal government housing legislation, see: C.M.H.C., Submission to the Porter Commission, op.cit., pp. 1-2. Lillie, op.cit.

houses, the repair and modernization of existing houses, the improvement of housing and living conditions, and the expansion of employment in the postwar period."¹³ This Act was broader in scope than previous housing legislation and made evident the permanent future involvement of the Federal Government in the housing and planning fields. In 1945, the Central Mortgage and Housing Corporation was established to administer both this Act and the Home Improvement Loans Guarantee Act of 1937, and to be the government's agent and advisor in matters of housing policy. Amendments to broaden the scope of C.M.H.C.'s direct lending powers were introduced in succeeding years but the joint loan, whereby loans were made jointly by the Federal Government and the private financial institutions, remained the principal type of lending under the N.H.A. until 1954.

In 1954, a revised National Housing Act replaced the joint lending arrangement with a system of insuring loans which are made entirely by approved private lending institutions, but provisions for direct lending by C.M.H.C., loans to limited dividend companies, rental guarantees and improvement loans were retained; C.M.H.C. was also empowered to buy and sell insured mortgages.¹⁴ The purpose of this legislation was to increase the flow of mortgage funds from

¹³Lillie, op.cit., volume IX, p. 4.

¹⁴For details of the Act, see: National Housing Loan Regulations, extract from the Canada Gazette, Part II, Vol. LXXXIX, No. 1, January 12, 1955; Queen's Printer, Ottawa 1955.

the private financial institutions. Consequently, the legislation governing the lending activities of the chartered banks and the Quebec Savings banks was amended to permit them to make N.H.A. loans.¹⁵ Whereas insurance of joint lending applied to the institutions' business as a whole, it was applied to each individual loan under this Act and provisions were also made for it to be transferred with the loan.

The terms of N.H.A. lending have changed considerably over the years. There have been a number of increases in the size of loans permitted and in the amortization period, as well as changes in the maximum permissible rate of interest.¹⁶ At present (September 1968), loans to homeowners may be made up to a maximum of \$18,000;¹⁷ in the case of multiple-unit apartment dwellings, loans may also be made up to a maximum of \$18,000 for each unit.¹⁸ The

¹⁵

C.M.H.C., Submission to the Porter Commission, op.cit., p. 5.

¹⁶

For changes in the terms of N.H.A. loans in the period 1935-1961, see: C.M.H.C., Submission to the Porter Commission, op.cit., Appendix A, Schedules 2-3, pp. 63-65; for subsequent changes, see: C.M.H.C., Canadian Housing Statistics, 1962-1967 issues.

¹⁷

The National Housing Loan Regulations were amended in May 1965 to permit the maximum loan for single-family dwellings to be raised from \$15,600 and \$14,900 to \$18,000; the bedroom count as the determining factor in establishing the maximum loan amount was eliminated. The Canada Gazette, Part II, Volume 90, SOR/65 182, May 26, 1965.

¹⁸

The maximum loan for apartment type units was increased from \$12,000 to \$18,000, effective February 1968. C.M.H.C., Builder's Bulletin, No. 197, February 9, 1968.

maximum term for a loan insurable under the Act as at September 1968 was 35 years,¹⁹ and in lending to homeowners, lenders had to ensure that annual payments on the mortgage and property taxes were not in excess of 27 per cent of the borrower's income,²⁰ including 50.0 per cent of a wife's income. Until the end of 1966, the maximum rate of interest that could be charged on N.H.A. loans was set by C.M.H.C. and was changed only infrequently. However, in November 1966, a new maximum rate was set based on a formula which allowed for automatic quarterly adjustments in the rate to a level $1\frac{1}{2}$ per cent above the long-term federal government bond yield average.²¹ This formula was changed in October 1967²² to permit the rate to be set at a level $2\frac{1}{4}$ per cent above the long-term bond yield average, the maximum spread allowed in the Act.²³

N.H.A. loans by the approved lenders could only be made with respect to new housing until November 1966, although C.M.H.C. was empowered under the N.H.A. to make loans secured by existing residential property. However, in November 1966, the Act was amended to permit the approved lenders to lend up to a maximum of

¹⁹National Housing Act, op.cit., Part 1, paragraph (o) of subsection 7.

²⁰National Housing Loan Regulations, op.cit., Section 28, para. (c).

²¹For details of this formula see: C.M.H.C., Builders' Bulletin, No. 182, Nov. 23, 1966.

²²For the Minister's statement announcing the change see: Hansard, September 27, 1966, p. 2576.

²³National Housing Act, op.cit., section 4, subsection 2, para.(d).

\$10,000 under the Act for the purchase of existing dwellings.²⁴

The terms of N.H.A. residential loans are considerably more favourable to borrowers than are those on conventional loans.²⁵ The repayment period on conventional lending has lengthened considerably, as a result of, for example, successful experience with N.H.A. loans, the widespread acceptance of regular amortization schedules, and increased competition among lenders, but the average term is still appreciably shorter than the average for N.H.A. loans.²⁶ According to the Porter Commission,²⁷ in the case of lending by life insurance companies on new property, there is probably not much difference in the amortization periods, with periods of 20 to 25 years being common. Much lending on recently-built houses is made on the same basis but on most existing houses the amortization periods tend to be lower, at 15 to 20 years. Trust and mortgage loan companies also prefer shorter terms on new and existing housing because of their exposure to changes in the cost of borrowed funds. An amortization period of

²⁴C.M.H.C., Canadian Housing Statistics, 1966 issue, p. 14.

²⁵This was particularly true before the change in the method of establishing the N.H.A. maximum rate introduced in November 1966. Prior to that time, changes in the N.H.A. maximum rate were made infrequently and therefore tended to lag behind increases in conventional mortgage rates and other market rates. Ibid, 1967 issue, Table 53.

²⁶The average term of conventional loans made by the financial institutions in 1966 was 12.14 years while conventional loans made by other lenders was 6.8 years; 78.3 per cent of N.H.A. loans in 1966 had an amortization period of 25 years. Ibid, Tables 55 and 67.

²⁷Porter Commission Report, p. 271.

15 to 20 years is common on their loans when secured by new property. Loans made by life insurance companies generally have the same term and amortization period but trust and loan companies tend to prefer a commitment of funds at a specified rate for a period of 5 years, with repayment schedules set to amortize loans over longer periods. This makes it possible to renegotiate the rate of interest if the cost of their funds rises sharply.

Conclusions

The basic characteristics of the residential mortgage lending process and of the mortgage instrument itself do much to determine the structure of the mortgage market. Mortgage loans are issued in small amounts and are "one of a kind", in the sense that they are secured by individual pieces of real estate of varying age, quality, type and location. Consequently, the market is highly decentralized and there is very little trade in outstanding mortgages. (The effect of institutional arrangements in the mortgage market on the flexibility of mortgage interest rates is examined in Chapter 5.) However, because of the importance of the mortgage market in the financial system and the dependence of residential construction on borrowed funds, it can be expected to play an important role in transmitting the effects of monetary policy to the housing sector. In order to better understand this role, the next chapter examines the demand for, and supply of, mortgage funds.

CHAPTER 3

The Demand for, and Supply of, Residential Mortgage Funds

This chapter examines the demand for, and supply of, residential mortgage funds in order to better understand the factors underlying short-run fluctuations in housing activity. Since the demand for mortgage funds arises mainly to finance new construction, this chapter begins with a brief analysis of the long and short-run demand for housing. Because the demand for housing in the short-run is found to be mainly dependent on the availability of mortgage funds, the next section examines the credit variable in greater detail. The third and fourth sections examine the demand for mortgage funds to finance the construction and sale of rental and home-ownership dwellings, and how these demands are influenced by changes in the mortgage lending terms. Attention is focused in the concluding section on the supply of mortgage funds; in this section, the factors which influence the supply of mortgage funds, including the mortgage lending terms, are discussed briefly.

I. The Demand for Housing

Before discussing the demand for housing and the demand for mortgage funds to finance new residential construction, it is necessary to distinguish between housing needs or requirements and

the effective or market demand for housing.¹ The need for additional new housing is determined mainly by the number of families or households to be accommodated² and is measured by the gap between the desired and the existing housing stock. However, the extent to which this gap generates a market demand for housing, or results in actual construction, depends upon a complex variety of economic forces, including changes in incomes and employment, consumer asset holdings, prices of housing, occupancy costs, consumer tastes and preferences, and vacancy rates.³ In this chapter, primary concern is with the demand for housing, rather than with the need for housing. It is also necessary to distinguish between the long and short-run demand for housing and between the demand for owner-occupied and rental dwellings,⁴ and therefore, between the demand for mortgage funds for these varied purposes.

A. The Long-Run Demand for Housing

Most statistical studies have focused attention on a small number of the variables which influence the long-run demand for housing, including: incomes, population, rents, prices and costs,

¹The Role of the Trust and Loan Companies in the Canadian Economy; study prepared for the Trust Companies Association of Canada for submission to the Porter Commission; Department of Economics and the School of Business Administration of the University of Western Ontario, London, Ontario, 1962, pp. 111-1, 111-2.

²For a discussion and estimates of housing requirements in Canada to 1970, see: W.M. Illing, Housing Demand to 1970, study prepared for the Economic Council of Canada, EC 22 1/4, Ottawa 1964, p. 2.

³Grebler and Maisel, op.cit., pp. 476-477.

⁴Ibid., pp. 477-478.

and the stock of housing. When used, the statistical significance of these factors has varied, but in most studies they appear to have had an important influence on the long-run demand for housing.⁵ The credit variable, which is designed to measure the availability and cost of mortgage funds, does not appear as an explanatory variable in most models examining the long-run demand for housing; when used, it does not appear as being statistically significant.⁶

With respect to published econometric studies of the postwar demand for housing in Canada, these are few in number but widely varying results have been found regarding the significance of the abovementioned explanatory variables. Oksanen⁷ in his study of the demand for housing in Canada from 1947 to 1962 found that the income and housing stock variables were significant while the price and credit variables tended to perform poorly.⁸ Johnson and Winder⁹ also examined some of these variables and found that housing starts

⁵The factors which influence the demand for housing also potentially affect the supply of housing but most of the analytical work on the housing market to date has been concerned with demand because it is usually assumed that, in the long-run, real resources for residential construction are potentially available in such volume that their supply will meet effective demand at current prices. Consequently, on the supply side, it is usually considered that there are no significant problems other than price. Ibid, p. 479.

⁶Ibid, p. 536.

⁷E.H. Oksanen, "Housing Demand in Canada, 1947 to 1962: Some Preliminary Experimentation", The Canadian Journal of Economics and Political Science, August 1966, pp. 302-315.

⁸Ibid, pp. 311-312.

⁹H.G. Johnson & J.W.L. Winder, Lags in the Effects of Monetary Policy, Working paper prepared for the Royal Commission on Banking and Finance, Ottawa 1962.

depended, in a statistically significant sense, only upon N.H.A. approvals, while housing expenditures depended upon N.H.A. loan approvals, existing housing stock and current disposable per capita income.¹⁰ Similarly, L.B. Smith¹¹ concluded that:

... Except where average dwelling costs were significantly influenced by personal disposable income, personal disposable income and price variables were insignificant at the 10 % level ... Only the variables reflecting the availability of mortgage financing and the dummy variable representing changes in mortgage lending terms were significant.¹²

A detailed consideration of the significance of the results obtained in these studies is outside the scope of this study because primary interest here is in short-run fluctuations in housing activity. Suffice it to note that, while there is econometric evidence to indicate that the long-run demand for housing is dependent on income, demographic factors, the stock of housing, construction costs and rents, it can be argued, given the strength of the underlying demand for housing in Canada throughout the post-war period, that it has been the availability of mortgage funds which has played the dominant role in setting limits on new housing construction.¹³

¹⁰ Ibid, pp. 205-206.

¹¹ L.B. Smith, "The Residential Mortgage Market", op.cit., pp. 45-46.

¹² Ibid, p. 46. In a later study, the author similarly found that single dwelling starts were significantly affected by both the cost and availability of mortgage funds while multiple starts were affected by the cost of mortgage funds. A Bi-Sectoral Model of the Canadian Housing and Mortgage Markets, a paper presented at the Canadian Economics Association annual meetings in Calgary, Alberta, June 5, 1968, p. 29.

¹³ Ibid, p. 46; C.M.H.C., Annual Report, 1959, p. 8.

B. The Short-Run Demand for Housing

Most studies of short-run fluctuations in the demand for housing using United States data,¹⁴ while differing in emphasis and detail, generally attribute the fluctuations to the effect of credit conditions upon the availability of mortgage funds.¹⁵ The effects of the non-financial determinants of the demand for housing, such as household formation, income, employment, and prices, are assigned an insignificant influence on short-run fluctuations. In these studies, changes in credit conditions have been linked to general business cycles and it is generally observed that periods of high and rising economic activity were accompanied by an expanded demand for funds from business tending to reduce the availability of funds for housing. When there was slack in the economy, and the supply of funds was ample relative to demand, these studies found that mortgage funds became more readily available, with the result that fluctuations in residential construction showed a counter-cyclical tendency.

Changes in the terms and availability of mortgage funds are, in turn, considered to affect the volume of new residential construction through their effect on the demand for mortgage funds. The supply of mortgage funds, which basically depends on the relative attractiveness of investment in mortgages compared with alternatives, is also partly dependent on the non-price terms of mortgage funds,¹⁶ as shown below.

¹⁴See above, footnote 17, p. 15.

¹⁵These studies usually note that the dominant effects of credit on the cyclical behaviour of residential construction may hold only for periods in which the longer-term demand forces were favourable to high levels of residential construction and in which general business cycles were moderate and of relatively short duration. Grebler and Maisel: op.cit., p.491.

¹⁶Guttentag, "Credit Availability," op.cit., p. 220.

II. The Role of "Credit Availability" in the Adjustment Process in the Mortgage Market

While most studies of short-run fluctuations in housing activity agree that such fluctuations have resulted mainly from changes in credit conditions, the relevant changes in financial conditions themselves have been variously labelled as "ease of borrowing", "availability of mortgage funds" or "supply of mortgage credit". On the one hand, Guttentag¹⁷ has presented a view of credit rationing which, when applied to the mortgage market, suggests that credit availability is the primary determinant of short-run changes in housing construction. Under this "credit-rationing" or "multiple-term" hypothesis, the demand for, and supply of, mortgage funds is considered to be functionally related to a number of mortgage lending terms, including the minimum down-payment and maximum maturity as well as the rate of interest. On the other hand, Muth¹⁸ rejects this thesis and develops a model which implies that the only relevant credit term is the rate of interest. These opposing views are clearly relevant to our empirical examination of the effect of monetary policy on housing and are therefore worth examining in greater detail.¹⁹

¹⁷Guttentag, "The Short Cycle," and "Credit Availability," op.cit.

¹⁸R.F. Muth, "Interest Rates, Contract Terms and the Allocation of Funds", Journal of Finance, XVII (1962) pp. 63-80.

¹⁹For a brief summary of these views see: Oksanen, op.cit., pp. 307-308.

Guttentag argues that mortgage yields, other (non-price) mortgage terms, and the relative importance of federal government financing are the principal indicators relevant to drawing inferences about the determinants of fluctuations in residential construction. Where changes in the demand for housing are the principal determinant of changes in construction, then: mortgage yields and the volume of construction would be expected to move in the same direction, and other mortgage lending terms would be expected to be associated with an increase in the volume of construction. Moreover, the volume of construction and the importance of federal government financing should move in the opposite direction. Conversely, where changes in the supply or availability of mortgage funds are the chief determinant of short-run fluctuations in housing activity, changes in mortgage yields and construction should move in opposite directions, an increase in construction should be associated with the liberalization of lending terms, and residential construction and the importance of federal government financing should move in the same direction. Guttentag's data for the United States postwar period appear to substantiate the latter set of implications. He also suggested that the rigidity of interest rates, and the differential between long-term bond yields, and what in Canada would be the N.H.A. rate, had also contributed to short-run fluctuations in housing activity.

Muth rejects the hypothesis that lenders "ration" funds on the basis of terms such as down-payment and maturity, and argues that the only relevant credit term is the rate of interest. The essence of his

argument is that:

an explanation for the co-variation of mortgage interest rates and average contract terms can be found in explicit consideration of the fact that mortgages with different downpayments and maturities are really qualitatively different debt instruments and carry different contract interest rates.²⁰

In his model, for a given capital expenditure, each borrower is assumed to be able to choose an optimal combination of equity and borrowed funds, and is also assumed to be able to choose an optimal rate of debt retirement through use of marginal cost and marginal returns schedule for the rate of debt retirement. On the supply side, it is assumed that some lender is prepared to make any kind of loan provided his gross yield is big enough.

As the multiple-term hypothesis predicts, if the "pure" rate of interest (the yield on government bonds, plus a risk premium, plus an administrative charge) falls, then average downpayments will fall and average maturities will lengthen. This is because the fall in the interest rate will lower the costs of all kinds of loans and consequently attract new borrowers into the market who were previously excluded by prevailing maturity and downpayment requirements. However, unlike the multiple-term hypothesis, Muth's analysis implies that the contract rate of interest may rise while downpayments may decline and maturities lengthen, provided the impetus for change arises from a shift in the marginal returns schedule for borrowers. (The shift might

²⁰Muth, op.cit., p. 64

result from changes in income, the price of housing, or the rate of property taxation.)

From this brief discussion, it is impossible to conclude on a priori grounds that either hypothesis should be accepted as totally relevant to Canadian experience. Unfortunately, adequate data relating to the non-price terms of mortgage loans are not available to test empirically the validity of the hypotheses. However, it is noteworthy that, in a recent study, L.B. Smith²¹ found that a proxy variable designed to catch the effects of "credit rationing" suggested that both the cost and availability of private mortgage credit appear to exert a (statistically) highly significant influence on single-housing starts, while only the cost of this credit appears to influence the volume of multiple dwelling starts.²² Moreover, as shown below, short-run changes in the non-price terms of mortgage loans can be expected on theoretical grounds to exert a significant influence on the demand for mortgage funds and consequently on residential construction. Explicit recognition should therefore be given to the role of both price and non-price factors in our analysis of the demand for mortgage funds and in our subsequent discussion of the effect of monetary policy on housing.

²¹"A Bi-Sectoral Model of the Canadian Housing and Mortgage Markets", op.cit., p. 10.

²²The proxy variable used to represent non-price mortgage lending terms was the yield differential between mortgages and bonds; this was used "... because meaningful measures of these variables are not available in Canada." Ibid, p. 9; also see: pp. 10-11.

III. The Demand for Residential Mortgage Funds

The demand for residential mortgage funds arises to finance the construction and sale of new housing, and for the repair, renovation and transfer of existing property, as well as for a variety of purposes not directly related to the construction and sale of housing.

Data are not available to indicate the magnitude of these separate sources of demand for mortgage funds in the economy but their relative importance is indicated by the available data relating to the mortgage-lending of the principal lending institutions.²³ This data shows that almost 75 per cent of the residential mortgage loans approved by C.M.H.C. and the private lending institutions in the period 1957-67 were secured by new residential property²⁴ and were therefore used for the construction or sale of new housing. The remaining 25 per cent of their lending was secured by existing property but published data are not available to indicate how much of this was used to facilitate the exchange of real estate and how much was used for other purposes.²⁵

²³In 1965, for example, 50.1 per cent and 15.5 per cent of all outstanding mortgage debt was held by the private financial institutions and by governments and government agencies, respectively. C.M.H.C., Supplement to Economic Research Bulletin No. 77 (R).

²⁴C.M.H.C., Canadian Housing Statistics, 1967 issue, Tables: 20, 23, and 25.

²⁵It is of interest to note in this connection that the Porter Report indicated that, in recent years, increasing use had been made of mortgages to obtain funds for non-housing purposes. Porter Commission Report, p. 268.

Data indicating the annual volume of mortgage funds borrowed from other sources are not available. However, it may be deduced from available data on housing starts and construction expenditures by source of finance that a substantial proportion of these funds are also used for the financing of new residential construction.²⁶ Thus the largest source of demand for residential mortgage funds, and consequently the most important in its effects on employment and economic activity, is that for new construction. The factors which influence the demand for housing are accordingly important determinants of the demand for residential mortgage funds.

A. Demand for Mortgage Funds for Rental Dwellings

Under favourable demand conditions, the volume of rental construction will importantly depend upon the availability and terms of mortgage financing, because changes in the latter will significantly influence the amount of equity funds invested in, and consequently the opportunity cost of, such projects.²⁷ The most important terms

²⁶Housing starts and new construction expenditures by type of financing cannot be directly related to mortgage loan approvals because of the lag between approvals and the commencement of construction. However, data relating to these variables suffice to give an impression of the proportion of mortgage funds from these other sources used for new residential construction and for other purposes. According to C.M.H.C.'s Research Bulletin No. 77(R), in 1965, the non-institutional private sector increased its holdings of mortgages by \$400 million. If it is assumed that repayments on outstanding mortgages amounted to about \$150 million, then the gross volume of mortgage lending from this source in 1965 amounted to about \$550 million. Applying the average loan amounts per dwelling unit shown in Table 38 of the 1966 issue of Canadian Housing Statistics to the data on starts by type of financing shown in Table 18, then about \$300 million of this volume of gross lending would have been used for financing new residential construction.

²⁷C.M.H.C., Submission to be Royal Commission on Banking and Finance, p. 13.

of mortgage financing which influence the opportunity cost, and therefore the demand for mortgage funds for rental dwellings, are discussed briefly below.²⁸

1. Loan-Value Ratios. - Changes in loan-value ratios primarily affect the desirability of investing in rental dwellings through their effect on the opportunity costs of such investments. Given a particular project which will yield a specific net return, and abstracting from risk considerations, the higher the loan-value ratio of the mortgage loan used to finance the project, the less is the use made of equity funds. Consequently, the lower the opportunity costs of the project, and the more likely to be undertaken, because the funds obtained on the security of the project could not be used in any other manner. Conversely, the lower the loan-value ratio of a mortgage loan used to finance a project, the greater the opportunity cost of the project and the less likely to be undertaken.²⁹ Because of the importance of the opportunity costs involved in the use of equity funds, it can also be readily seen that the sensitivity of the attractiveness of an investment to changes in the loan-value ratio increases as the yields obtainable on alternative investments increase.

²⁸This and the next section draw heavily on the succinct summary of the effects of mortgage lending terms on the demand for mortgage funds contained in L.B. Smith's study, "The Residential Mortgage Market," op. cit., pp. 24-31.

²⁹For arithmetic examples illustrating these propositions see: Ibid, pp. 25-26.

2. Term to Maturity. - Changes in the term of mortgage financing alter the desirability of prospective projects by influencing the time-path of the flows of funds associated with them. Generally, the shorter the term to maturity of mortgage loans, the greater the likelihood that net rental revenue will fall below loan repayments, thereby raising the opportunity costs of projects and making them less profitable undertakings. Conversely, the longer the term to maturity of mortgage loans, the less likely is the use of equity funds, the lower the opportunity costs of projects and consequently the more likely to be undertaken.

3. Interest Rates and Repayment Privileges. - The higher the interest rates on mortgage loans the less desirable to borrowers are investments financed by mortgage funds. Consequently, abstracting from the effects of interest rates on the supply of mortgage funds, the lower will be the volume of both rental construction and the demand for mortgage financing. The possibility of early repayment would also influence the desirability of an undertaking because it would enable refinancing of any of the above-mentioned costs if terms were expected to improve. Generally, the earlier the possible repayment date, the more readily will projects be undertaken, while in the absence of such favourable provisions, companies might delay commitments until expected improvements in terms actually occurred.

From this brief discussion of the effect of lending terms on the demand for rental mortgage funds, it is apparent that if demand conditions relative to the available supply of rental dwellings were such that investment with favourable financing were attractive, then both the short-run volume of rental construction and the demand for

associated mortgage funds would be expected to fluctuate with changes in the availability and terms of mortgage financing.

B. The Demand for Mortgage Funds for the Financing of Owner-Occupied Dwellings

The demand for owner-occupied dwellings may be partly determined, at least in the longer-run, by demographic factors, income, consumer assets, relative prices and rents. However, because of the dependence of most new residential construction on borrowed funds, the demand for mortgage financing must usually be satisfied before the desire for new housing can be translated into effective demand.³⁰ Consequently, because of their influence on the ability of potential home-owners to borrow, and therefore on the demand for mortgage funds, the availability and terms of mortgage financing play a vital part in determining the demand for owner-occupied dwellings. The most important factors affecting the ability of potential home-owners to borrow mortgage funds for owner-occupied housing are discussed briefly below.

1. Downpayment. - Generally, the lower the loan-value ratio, the less likely it will be that a family will be able to afford a new home simply because the downpayment and minimum liquid savings required will be higher. Increases in downpayment requirements

³⁰Data reported in the Consumer Survey of the Porter Commission indicate that if a net worth-mortgage debt ratio of 2:1 was assumed as being the minimum required for a family to have been able to obtain their home without mortgage financing at the time of the survey, then 61 % of mortgage debtors could not have purchased their homes without mortgage financing. If a 3:1 net worth-mortgage debt ratio was assumed then 82 % of mortgage debtors could not have purchased their homes without mortgage financing. Royal Commission Consumer Survey, Appendix Volume, Table 69, p. 54. Also cited in: L.B. Smith, The Residential Mortgage Market, op.cit., pp. 33-34.

emanating from declines in loan-value ratios can therefore be expected to have a fairly substantial impact on the demand for mortgage funds and on the demand for residential construction,³¹ for marginal households would be excluded from the market and others would have to decrease their housing expenditures concomitantly with the increase in liquid savings requirements. Downpayment requirements are usually reduced by increasing loan-value ratios, but this means that the resulting increase in monthly payments will have an offsetting effect upon demand unless the amortization term is also increased.

2. Monthly Payments. - When downpayment requirements are met, then the size of the monthly payment needed to service the mortgage acts as the constraint upon the size of the mortgage which a family can afford, and therefore upon the family's housing demand. For example, in the Porter Commission Consumer Survey 40-50 per cent of those families which financed their purchases with mortgages would have been forced, at the least, to reduce their purchases if monthly payments had been increased by 10 %.³²

³¹The findings of the Consumer Survey conducted for the Porter Commission indicated that 15 % of home-owners with mortgage debt would have been unable to purchase a home or would have been forced to buy a cheaper home if downpayment requirements had been raised, even if monthly payments had been reduced by 10 % at the same time. Porter Commission, Appendix Volume, Table 132, p. 100.

³²Ibid.

3. Maturity Term and Mortgage Interest Rates. - As the term of a mortgage is extended, other things being equal, the monthly payments decrease. However, since the total interest cost of the loan increases with the term, the decrease in the required payment is not proportionate to the increase in the length of the loan contract, with the result that the effect of additional extensions of term in moderating the debt service burden diminishes as the term increases. Reductions in the interest rate also reduce monthly servicing costs, but less than proportionately because the principal component of the amortization payments remain unchanged. However, as the term of the loan increases, reductions in the interest rate have an increasing effect in reducing debt service because the interest rate portion of payments increases as the term is lengthened.

IV. The Supply of Residential Mortgage Funds.

The supply of non-equity funds for new residential construction and for the renovation and transfer of existing residential property originates primarily from private financial institutions, government agencies and corporations, and individual lenders. A complex variety of factors determines the volume of funds supplied by these principal lenders,³³ but suffice it to note here that the volume of funds emanating from the financial institutions largely depends on the attractiveness of investment in mortgages relative to alternatives, such as bonds. The volume of funds supplied by governments depends on economic considerations as well as on social priorities, while

³³For a discussion of the determinants of the investment flows of private mortgage lending institutions see: L.B. Smith, The Residential Mortgage Market, op.cit., Chapter 3, pp. 82-113.

the volume of mortgage funds supplied by individuals depends on numerous personal considerations.

In 1965, the private lending institutions, governments and government agencies, and private or individual lenders, held 50.1, 15.5, and 33.8 per cent,³⁴ respectively, of mortgage loans outstanding in Canada. Thus the financial institutions are currently the largest single holders of outstanding mortgage debt and the largest suppliers of mortgage funds.³⁵ The mortgage market therefore largely centres on these institutions, and it is readily apparent that their lending policies and practices have an important bearing on the efficiency of financial markets in general and in particular on the mortgage market. If institutional rigidities or imperfections exist, they can be expected to affect adversely the cost and availability of mortgage funds in the long run, thereby frustrating the objective of achieving the optimum allocation of financial and real resources between the housing and other sectors of the economy. In a cyclical context, institutional rigidities and imperfections can also be expected to prevent the mortgage market from adjusting smoothly to changing credit conditions and thereby cause a greater impact of monetary policy on housing than otherwise would be the case.

³⁴C.M.H.C., Supplement to Economic Research Bulletin, No. 77(R).

³⁵For example, almost 52 per cent of housing starts in 1967 were financed by funds borrowed from the private financial institutions. C.M.H.C., Canadian Housing Statistics, 1967 issue, Table 14.

The lending policies and practices of governments and government agencies, and private or individual lenders, can also be similarly expected to affect the long-run efficiency of the mortgage market and its adjustment to changing credit conditions because of their importance as suppliers of funds for new construction.³⁶

The volume of funds supplied by the financial institutions depends mainly upon their particular investment needs and preferences and upon the attractiveness of mortgages compared with alternatives. However, the volume of mortgage funds supplied by the financial institutions in the short-run also depends upon the non-price terms of mortgage loans because such terms directly affect the risk or liquidity of mortgage loans.³⁷ To the extent that the volume of funds supplied by governments and government agencies, and by private or individual lenders, are based on economic criteria, their lending is also related to the non-price mortgage terms. The potential effects of the lending terms discussed briefly below are, however, probably applicable only to the private financial institutions because of the importance of personal considerations and social priorities in determining the volume of funds supplied by the other lenders.

³⁶In 1967, for example, 20 and 28 per cent of total housing starts were financed by funds borrowed from private or individual lenders, and from governments and government agencies, respectively. Ibid.

³⁷Guttentag, "Credit Availability," op.cit., p. 220.

1. Equity-Debt Ratio. - Because most mortgage loans are large in relation to the borrower's incomes, it is usually the borrower's equity which provides lenders with protection against loss from default.³⁸ Generally, the larger the borrower's equity relative to his borrowed funds, the less the risk to the lender that the value of the collateral will fall below the outstanding principal and thus lead to default. Consequently, the supply of mortgage funds can be expected to be a positive function of equity-debt ratios. As already indicated, the demand for mortgage funds can be expected to be a negative function of these ratios because of the presence of marginal borrowers for whom downpayment requirements represent an effective constraint on borrowing.

2. Maturity. - Generally, the supply of mortgage funds is a negative function of loan maturity because risk is usually considered to be greater at longer maturities due to the greater possibility that adverse circumstances can lead to the value of the collateral falling below the outstanding principal. A shorter maturity may also be preferred by some lenders because of its liquidity. For the reason indicated earlier, the demand for mortgage loans is greater at longer maturities.

³⁸Lenders are insured against default on their N.H.A. lending under the terms of the Act but the basic disincentive to borrowers to default on repayment of such loans is the loss of their downpayment, which is usually fairly large in relation to borrowers' incomes. For example, in 1967 the average downpayment on N.H.A. financed homes was \$4,312 and the average income of borrowers was \$8,143. C.M.H.C., Canadian Housing Statistics, 1967 issue, Tables: 61 and 66.

3. Income-Debt Service Ratio. - The supply of mortgage funds is a positive function of the income-debt service ratio because risk is smaller when mortgage repayments are amply covered by the actual or anticipated income of borrowers. However, the demand for mortgage funds is a negative function of this ratio because of the existence of some borrowers for whom debt service requirements represent an effective constraint on mortgage borrowing.

From this brief discussion of a few of the important mortgage lending terms, it is apparent that where the supply of mortgage funds is a positive function of a loan term, the demand will be a negative function of that term, and vice-versa. This in turn implies that the mortgage market affects housebuilding, firstly, through the effects of changes in loan terms upon the demand for new housing, and secondly, through changes in the volume of funds which lenders will provide at given terms. The next chapter therefore examines the effect of credit conditions and monetary policy on the mortgage market.

CHAPTER 4

The Impact of Monetary Policy on Housing

- Recent Experience

This chapter examines the impact of monetary policy on housing activity, with particular emphasis on developments in the 1965-66 period. The chapter begins with a brief analysis of the relationship between general economic activity, monetary policy, and fluctuations in mortgage lending and in housing activity in the period from 1956 to 1967. Attention is then focused on fluctuations in housing activity by source of finance. Since fluctuations in mortgage lending by the financial institutions have been mainly responsible for fluctuations in the over-all supply of new residential mortgage funds, the remainder of the chapter examines the impact of monetary policy on the mortgage lending of the financial institutions.

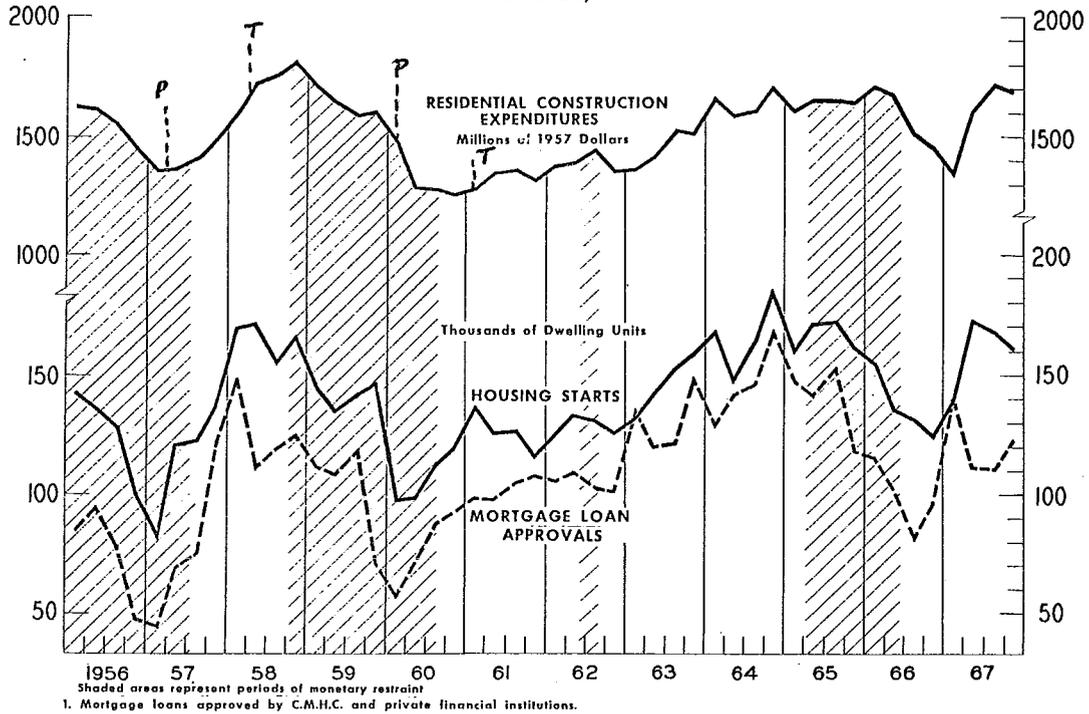
I. Economic Activity, Monetary Policy, Mortgage Lending, and Fluctuations in Housing Activity, 1956-1967

In recent years, the availability of mortgage funds, and consequently the level of housing activity, has been significantly influenced by general economic activity and monetary policy. As shown in Chart 5, and in Table 5 (page 56), periods of declining

CHART 5

RESIDENTIAL CONSTRUCTION AND MORTGAGE LENDING

Seasonally Adjusted at Annual Rates
Quarterly



Sources: D.B.S., National Accounts, Income and Expenditure, By Quarters, 1947-1961, August 1962, Cat. No. 13-519; National Accounts, Income and Expenditure, Fourth Quarter issues, from 1962 to 1967, volumes 10-16, Cat. No. 13-001; C.M.H.C., Special Supplement to the February 1968 issue of: Canadian Housing Statistics, Monthly Supplement.

or slowly growing economic activity,¹ expansionary monetary policy and relatively low demand for funds from business and governments, have resulted in substantial increases in the supply of mortgage funds²

¹The reference cycle peaks (P) and troughs (T) shown in Chart 5 are those identified earlier. See above, page 9, footnote 13.

²In Chart 5, only the volume of mortgage loans approved by C.M.H.C. and the private financial institutions are shown because data relating to the volume of mortgage loans approved by other lenders are not available. C.M.H.C.

TABLE 5

MORTGAGE LENDING AND THE DEMAND FOR FUNDS
FROM BUSINESS AND GOVERNMENT, 1956 - 1967

Millions of dollars

	Mortgage Loan Approvals ¹	Net New Issues of Securities		
		Governments ²	Business ³	Total
1956	857	-2	1,492	1,490
1957	667	756	1,473	2,229
1958	1,017	2,213	984	3,197
1959	867	1,593	508	2,101
1960	770	1,064	535	1,599
1961	1,086	2,151	614	2,765
1962	1,221	1,739	785	2,524
1963	1,468	2,123	654	2,777
1964	1,805	1,857	1,127	2,984
1965	1,971	940	1,772	2,712
1966	1,236	2,443	1,536	3,979
1967	1,756	3,524	1,290	4,814

¹Mortgage loans approved on new and existing residential property by: chartered banks, trust, loan and life insurance companies, Quebec Savings banks and fraternal and mutual benefit societies.

²Net new issues of bonds and bills by the federal, provincial and municipal governments.

³Corporate bonds and stocks.

Sources: Bank of Canada, Statistical Summary, 1967 Supplement, pp. 86-87; Central Mortgage and Housing Corporation, Canadian Housing Statistics, 1967 issue, Table 20.

and in housing activity. Conversely, periods of contractionary monetary policy,³ rapidly expanding economic activity and relatively high demand for non-mortgage funds have resulted in substantial declines in the volume of mortgage lending and in housing activity.⁴

II. Fluctuations in Housing Activity, by Source of Finance

The effect of monetary policy on the availability of mortgage funds has in turn mainly been the result of its effects on the volume of funds supplied by the financial institutions, as shown in Table 6. In the five years in which total housing starts declined by more than one thousand dwelling units, declines in starts financed by the private financial institutions (life insurance companies, chartered banks, trust and mortgage loan companies, Quebec savings banks, fraternal and mutual benefit societies) accounted for the entire decline in three years (1956, 1957, 1966) and for about half the decline in the remaining

³Periods of contractionary monetary policy are indicated by the shaded areas in Chart 5. The periods of contractionary monetary policy experienced from August 1955 to August 1957 and from October 1958 to August 1960 are those characterized as being contractionary in the study prepared for the Porter Commission by Professors Johnson and Winder. The subsequent periods of monetary restraint, from June to September of 1962 and from April 1965 to June 1966, are based on the Bank of Canada's description of monetary policy in these periods. Johnson and Winder, op.cit., p. 16, Table 2. Bank of Canada, Annual Reports: 1962, pp. 4-5, 43-44; 1963, p. 3; 1966, pp. 4-5.

⁴There were lags involved between changes in credit conditions and changes in residential construction. Estimates of these lags vary but mortgage commitments appear to lag changes in credit conditions by one or two months; housing starts also lag changes in mortgage commitments by one or two months and peaks in residential construction activity lag peaks in housing starts by three to four months. L.B. Smith, "The Residential Mortgage Market," op.cit., pp. 201-205.

TABLE 6

Annual Changes in Housing Starts and New Residential Construction Expenditures Financed by Private Lending Institutions¹, 1956-67

(Starts thousands of dwelling units; expenditures and approvals, millions of dollars)

Period	Expenditures			Starts			(3) Mortgage Loans Approved
	Private Institutions	All Other ⁽²⁾	Total	Private Institutions	All Other ⁽²⁾	Total	
1955*	705.7	851.6	1,557.3	99.1	39.2	138.2	874
1955/56	-101.2	+92.6	- 8.6	-23.3	12.3	-11.0	-194
1956/57	-225.6	124.6	- 101.0	-18.9	14.0	- 4.9	-163
1957/58	158.5	218.9	377.4	30.5	13.7	42.2	292
1958/59	61.8	-92.6	- 30.8	-15.6	-7.6	-23.2	-158
1959/60	-235.5	-81.7	- 322.6	-12.8	-19.8	-32.6	-102
1960/61	166.4	-153.1	13.3	14.6	2.1	16.7	237
1961/62	169.8	-46.7	123.1	12.4	-7.8	4.6	75
1962/63	137.1	- 8.7	128.4	14.5	4.1	18.6	176
1963/64	98.9	239.4	336.3	10.7	6.3	17.0	127
1964/65	57.4	58.4	115.5	1.7	-1.8	- 0.1	59
1965/66	-254.3	277.3	23.0	-45.3	13.1	-31.2	-458
1966/67	- 4.0	190.6	186.6	17.9	11.9	29.8	335

* Actual levels.

(1) Includes: life insurance companies, trust and mortgage loan companies, chartered banks, Quebec savings banks, fraternal and mutual benefit societies.

(2) Includes expenditures and starts financial by: public funds, owners' equity and all other sources.

(3) Gross mortgage loans approved by the financial institutions secured by new residential property.

Source: Central Mortgage and Housing Corporation: Housing in Canada, and Canadian Housing Statistics, various issues.

two years (1959, 1960).⁵ In the eight years in which total housing starts increased in the period from 1956 to 1967, most or all of the increase was attributable to increases in starts financed by the

⁵ Starts financed by the private financial institutions would have accounted for the entire decline in total starts in 1960 if starts financed by C.M.H.C. had not declined sharply, from 35,229 dwelling units in 1959 to 13,788 units in 1960. C.M.H.C., Canadian Housing Statistics, 1963 issue, Table 50.

private financial institutions.⁶

In order to better understand the impact of contractionary monetary policy on housing activity the following discussion, therefore, focuses attention on analysing its impact on the mortgage lending of the private financial institutions, with particular emphasis on developments in the 1965-66 period. Before doing so, it should be noted however, that there were also factors other than monetary policy influencing the demand for housing in this period.

Partly as a result of the general inflationary pressures which emerged in 1965⁷ but mainly because of a shortage of housing,⁸ housebuilding costs and the prices of new houses increased substantially in the period from 1965 to 1967, as shown in Table 7. This rise in prices in turn resulted in substantial increases in the average downpayments required to purchase N.H.A. houses, and in the average incomes needed to service N.H.A. loans.⁹ Since the annual

⁶As shown in Table 6, the contribution of changes in expenditures financed by funds borrowed from the private financial institutions to the year-to-year changes in total residential construction expenditures do not appear as significant, mainly reflecting the lags between changes in mortgage loan approvals, starts and residential construction expenditures.

⁷"In the latter part of 1965 and the early part of 1966 demand pressures in the economy became particularly intense..." Bank of Canada: Annual Report, 1966, p. 5.

⁸Despite the increase in housing construction from 1961-66 "...the rate of growth was clearly not adequate to meet the nation's needs. By 1966, a severe housing shortage was developing in many parts of the country. Costs of rental accommodation were advancing, and the price of new housing was rising even more rapidly." Economic Council of Canada, op.cit., p. 23.

⁹Data relating to the incomes of borrowers of conventional mortgage loans and average downpayments on dwellings financed with such loans are not available. C.M.H.C.

TABLE 7

HOUSING COSTS, AVERAGE DOWNPAYMENTS AND INCOMES OF BORROWERS

Annual percentage changes - selected years

Dwelling and Shelter Costs

Period	Dwelling Costs(1)			Shelter Costs(2)		
	Land Cost	Const. Cost per sq. ft.	Average Dwelling Cost(3)	Rent	Home-Ownership	Total
1964/60*	1.7	1.1	2.5	0.2	3.0	1.8
1965/64	0.1	5.5	4.5	0.7	4.1	2.6
1966/65	6.7	8.1	8.6	1.7	4.4	3.2
1967/66	5.0	3.8	8.3	3.4	5.7	4.7

Prices of New Houses, Downpayments and Incomes

Period	Average Prices of New Houses(3)	Average Down-Payments(3)	Average Incomes of N.H.A. Borrowers(3)	Average Incomes Under \$10,000(4)
1964/60*	2.5	-2.4	3.2	2.5
1965/64	4.5	11.1	4.4	3.8
1966/65	8.6	18.2	9.5	3.8
1967/66	8.1	21.7	9.9	3.2(5)

* Average annual rates of change.

1) Bungalows financed under N.H.A.

2) Consumer Price Index

3) All new housing financed under N.H.A.

4) Change in mean disposable income of taxpayers with incomes of less than \$10,000.

5) Estimate based on 1967 percentage change in personal disposable income on a National Accounts basis.

Sources:

C.M.H.C., Canadian Housing Statistics, 1967 issue, Tables: 66, 80, 81, 85.

D.B.S., Canadian Statistical Review, October 1968, Catalogue No. 11-003, Table 11. Taxation Statistics, annual issues, 1960-68, Department of National Revenue, Ottawa.

increases in the latter exceeded the rise in the disposable incomes of individuals with incomes of less than \$10,000, who represent the majority of potential borrowers of N.H.A. funds, it is apparent that these developments significantly reduced the demand for mortgage funds and consequently the demand for new housing.

III. The Impact of Monetary Restraint
on the Mortgage Market - Recent Experience

When monetary restraint results in a reduced rate of growth in the aggregate volume of funds in the economy, the volume of mortgage lending may be affected in one or more of the following ways. Firstly, the effect of limiting credit growth on interest rates may result in disintermediation or in a shifting of funds away from claims against financial intermediaries toward investment in direct financial instruments if rates of return on the latter become relatively more attractive. This would result in financial institutions having less funds available for investment in both mortgages and in other investments. Secondly, the rise in interest rates can be expected to have a varied impact on different credit instruments depending on their interest rate flexibility and related characteristics - which determines the allocation of institutional funds among such investments. The relative importance of these factors in contributing to the decline which occurred in the volume of mortgage lending by the private financial institutions in 1966

is considered below.¹⁰

a) Impact of Monetary Policy on
Growth of Mortgage Lending Institutions

1) Trust and Loan Companies - As shown in the following charts and tables, the growth of the trust and loan companies' liabilities and therefore their ability to invest in mortgages and in other instruments has been "...decisively affected by the level of their rates relative to those on competing instruments, and ... the companies have been affected by monetary policy through its influence on their ability to pay rates sufficiently high to attract funds."¹¹

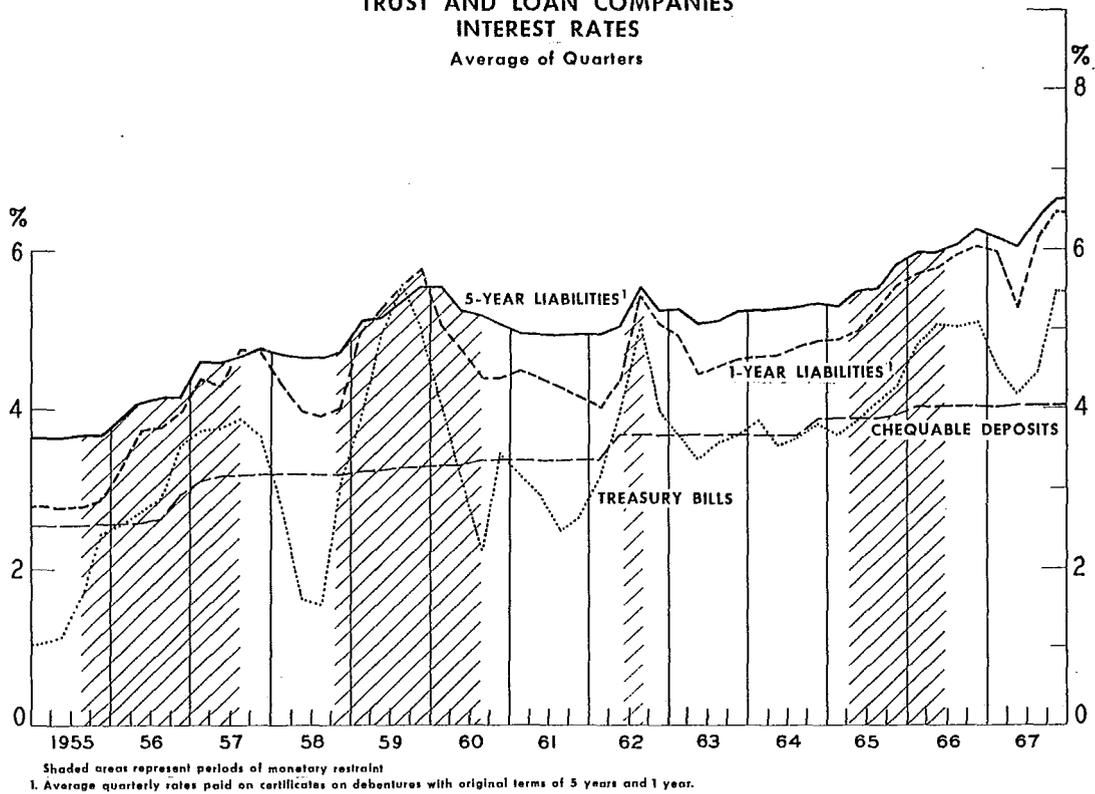
As shown in Chart 6, the rates of interest paid by the trust and loan companies on their deposits increased gradually in the period from 1955 to 1967 but they were not generally responsive to changes in short-term rates associated with changes in credit conditions,¹² as indicated by the widening difference between treasury bill rates and their deposit rates during periods of

¹⁰Discussion of the impact of monetary policy on the chartered banks is not considered here since the banks were not active lenders in the mortgage market in this period. The chartered banks virtually ceased lending when the N.H.A. rate was raised above the 6.0 per cent ceiling on bank lending rates in December 1959; thereafter, until the 1967 Bank Act Revisions, they approved mortgage loans amounting to less than \$2 million. C.M.H.C., Canadian Housing Statistics, 1967 issue, Table 20; Poapst, op.cit., p. 31.

¹¹Porter Commission Report, p. 184.

¹²Comments by spokesmen for the industry to the Porter Commission indicate that the companies adjust their rates only after the general level of rates had shifted and new levels appeared to have been established. Ibid, p. 184.

CHART 6
TRUST AND LOAN COMPANIES
INTEREST RATES
Average of Quarters



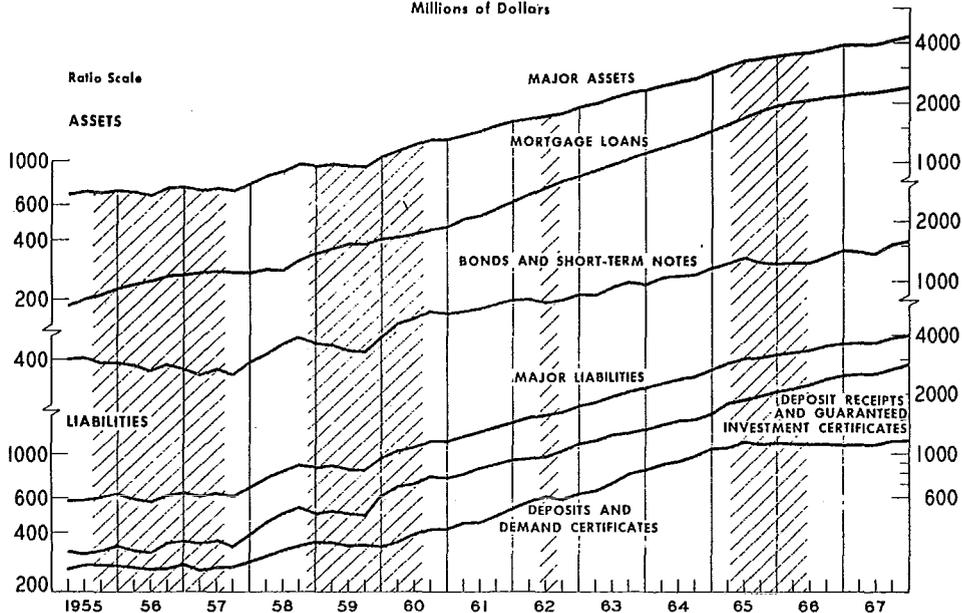
Sources: Porter Commission, Appendix Volume, Appendix E, p.230; Bank of Canada, Statistical Summary Supplement, various issues.

monetary restraint.¹³ As a result, the deposits and demand certificates of the trust and loan companies increased much less rapidly or actually declined during the periods of contractionary monetary policy experienced in 1956-57, 1959, 1962 and 1965-66, as shown in Chart 7, and in Table 8 on page 65. The decline which occurred in the rate of growth of their deposits and other liabilities in 1965

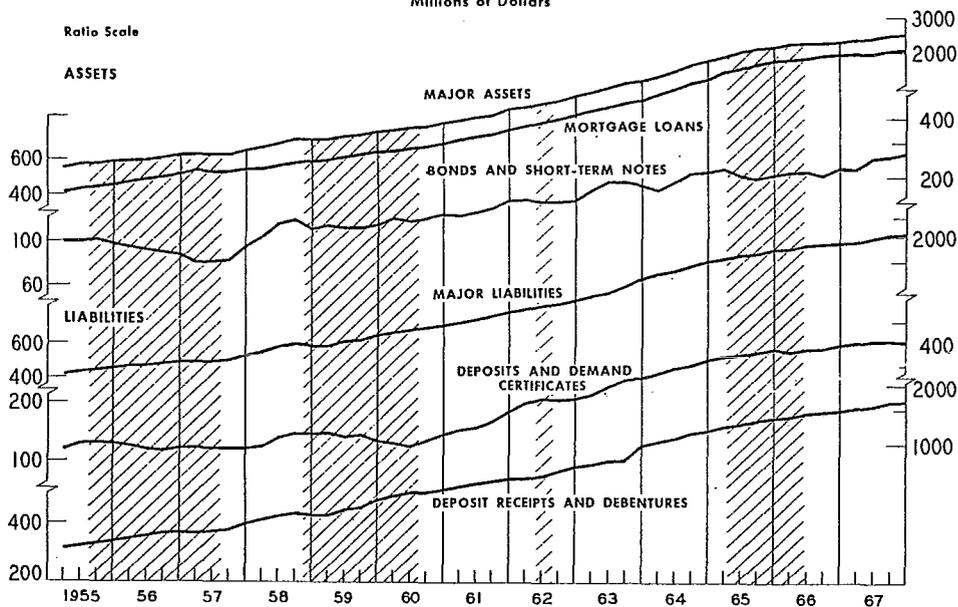
¹³The 91-day treasury bill rate is used here only to illustrate changes in the general level of short-term rates. It is not intended to suggest that treasury bills and trust and loan company deposits are close substitutes.

CHART 7

TRUST COMPANIES
 Seasonally Adjusted at Annual Rates
 Quarterly
MAJOR ASSETS AND LIABILITIES
 Millions of Dollars



MORTGAGE LOAN COMPANIES
 Seasonally Adjusted
 Quarterly
MAJOR ASSETS AND LIABILITIES
 Millions of Dollars



Shaded areas represent periods of monetary restraint.

Source: Bank of Canada, Statistical Summary, 1967 Supplement, p. 108.

TABLE 8

TRUST AND MORTGAGE LOAN COMPANIES
ANNUAL PERCENTAGE RATES OF CHANGE OF MAJOR LIABILITIES, 1956-67

Period	Trust Companies			Mortgage Loan Companies		
	Deposits and Demand Certificates	Deposit Receipts & GIC's	Total Major Liabilities	Deposits & Demand Certificates	Deposit Receipts & Debentures	Total Major Liabilities
1955/56	0.7	5.5	3.4	-4.8	11.5	7.0
1956/57	2.2	7.5	5.2	-0.8	11.1	8.2
1957/58	26.4	27.6	27.1	17.0	10.8	12.2
1958/59	-5.2	23.5	11.4	-9.5	18.8	12.1
1959/60	21.8	24.0	23.2	8.9	12.6	11.9
1960/61	27.0	22.9	24.4	31.9	13.2	16.7
1961/62	19.1	22.1	21.0	15.2	14.5	14.7
1962/63	32.8	18.7	23.8	4.9	30.1	29.4
1963/64	29.4	19.4	23.2	23.5	18.8	19.8
1964/65	6.4	29.4	20.1	13.7	16.1	15.6
1965/66	-1.7	20.9	12.5	5.2	8.3	7.7
1966/67	6.0	12.9	10.8	2.9	11.2	9.5

Source: Bank of Canada; Statistical Summary, 1967 Supplement, p. 108.

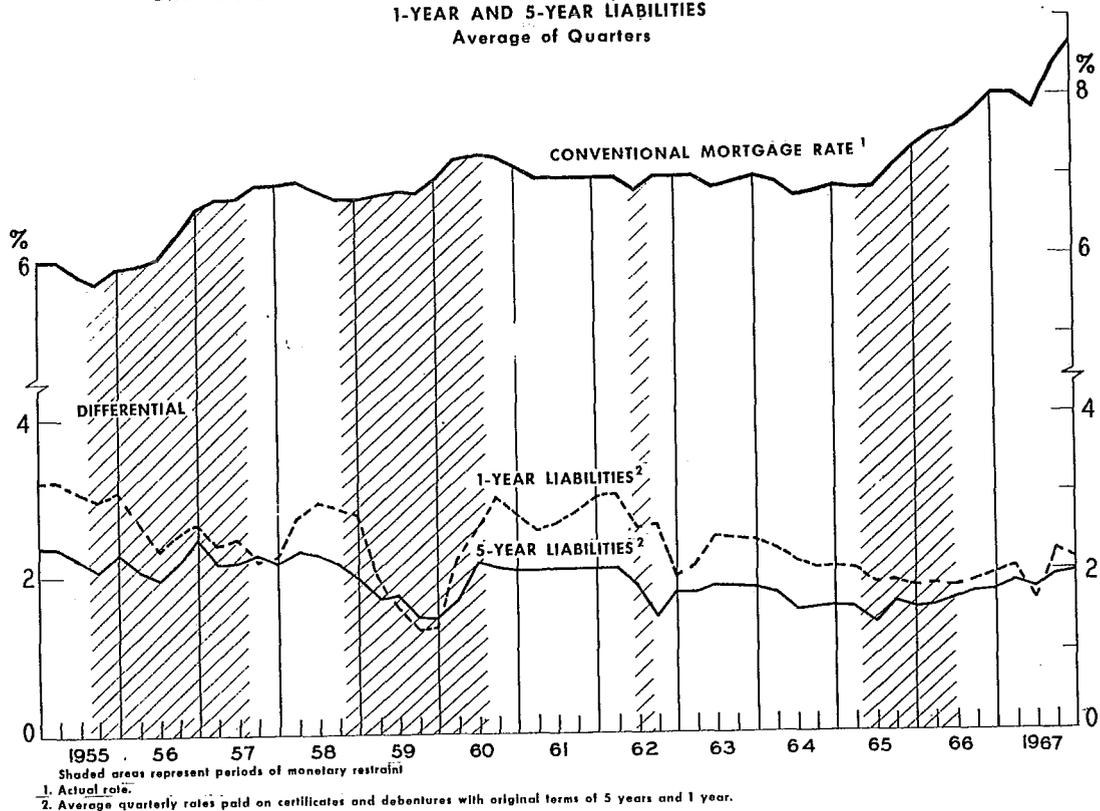
was also partly attributable to the loss of confidence in these institutions which resulted from developments associated with the failure of Atlantic Acceptance in June of that year.¹⁴

The rates of interest paid by the trust and loan companies on their debentures and guaranteed investment certificates have been more responsive to changing credit conditions (Chart 6) but they have not generally risen to sufficiently high levels to maintain the growth of these obligations during periods of monetary restraint, as evidenced by their slower growth in 1956-57, 1959, 1962 and 1965-1966 (Table 8, Chart 7). As credit conditions became tighter in

¹⁴Bank of Canada: Annual Report, 1965, p. 1, pp. 29-32.

these periods, the ability of the trust and loan companies to pay higher rates on those obligations was limited by the progressive narrowing in the spread between rates earned on mortgages - their main earning asset¹⁵ - and rates paid on their longer-term obligations, as shown in Chart 8. Although contractionary monetary policy

CHART 8
TRUST AND LOAN COMPANIES
DIFFERENTIAL BETWEEN CONVENTIONAL MORTGAGE RATE AND RATES PAID ON
1-YEAR AND 5-YEAR LIABILITIES
Average of Quarters



Sources: Porter Commission, Appendix Volume, Appendix G, Table IV;
Bank of Canada.

¹⁵At the end of 1966, for example, the mortgage holdings of the trust and mortgage loan companies as a proportion of their total assets amounted to 55.4 per cent and 75.7 per cent, respectively. C.M.H.C., Canadian Housing Statistics, 1967 issue, Table 48.

has tended to have a greater impact on the trust than on the loan companies (Table 8, and Chart 7), when interest rates rose to very high levels in 1966, the loan companies were less successful than the trust companies in competing for longer-term funds, probably because a larger proportion of their assets consisted of mortgages bearing yields that had largely been fixed earlier when mortgage rates were lower. In 1966, however, the rate of growth of the assets of the trust and loan companies, which represented the change in the volume of funds which they potentially had available for mortgage investment, decreased substantially, from 18.4 per cent in 1965 to 11.0 per cent in 1966.¹⁶ The funds potentially available to the trust and loan companies for investment in mortgages were also reduced in 1966 by the decline which occurred in mortgage loan repayments to the companies.¹⁷

2) Life Insurance Companies - The growth of the life insurance companies' assets, and therefore the funds which they potentially have available for investment in mortgages, is usually not significantly influenced by monetary policy since about two-thirds of their funds emanate from contractual obligations.¹⁸ However,

¹⁶Bank of Canada: Statistical Summary, 1966 Supplement, pp. 98-101.

¹⁷Mortgage loan repayments to the trust and loan companies declined by \$94 million in 1966. Canadian Housing Statistics, 1967 issue, Table 48.

¹⁸"Changes in financial policy and interest rate levels do not significantly affect the growth of their assets." Porter Commission Report, p. 245.

a number of factors reduced the volume of funds which the companies had available for potential investment in mortgages in 1966. Firstly, the inflow of funds to the companies from mortgage loan repayments declined by \$113 million,¹⁹ probably reflecting a drop in voluntary accelerated repayments²⁰ because of the disincentive to borrowers to make such payments when interest rates are at high levels. Secondly, under the credit conditions prevailing in 1966, the undertaking of the life insurance companies to lend to policy holders at a maximum rate of interest of 6.0 per cent led to a heavy demand for policy loans; such loans increased from \$7.8 million in 1965 to \$29.7 million in 1966.²¹ Finally, the inception of the Canada Pension Plan also reduced cash flows to the life insurance companies, firstly, by sizeable encashments of group policies, which not only required funds to repay the pensions built up with the companies but also reduced premium income, and secondly, by the diversion of contributions out of private plans. As a result of these factors, the total assets of the life insurance companies increased by 5.3 per cent in 1966, compared with 7.4 per cent and 7.6 per cent in 1965 and 1964, respectively.²²

¹⁹C.M.H.C., Canadian Housing Statistics, 1967 issue, Table 48.

²⁰Data are not available to determine the relative importance of voluntary and contractual loan repayments. C.M.H.C.

²¹Bank of Canada: Statistical Summary, July 1968 issue, p. 519.

²²Ibid.

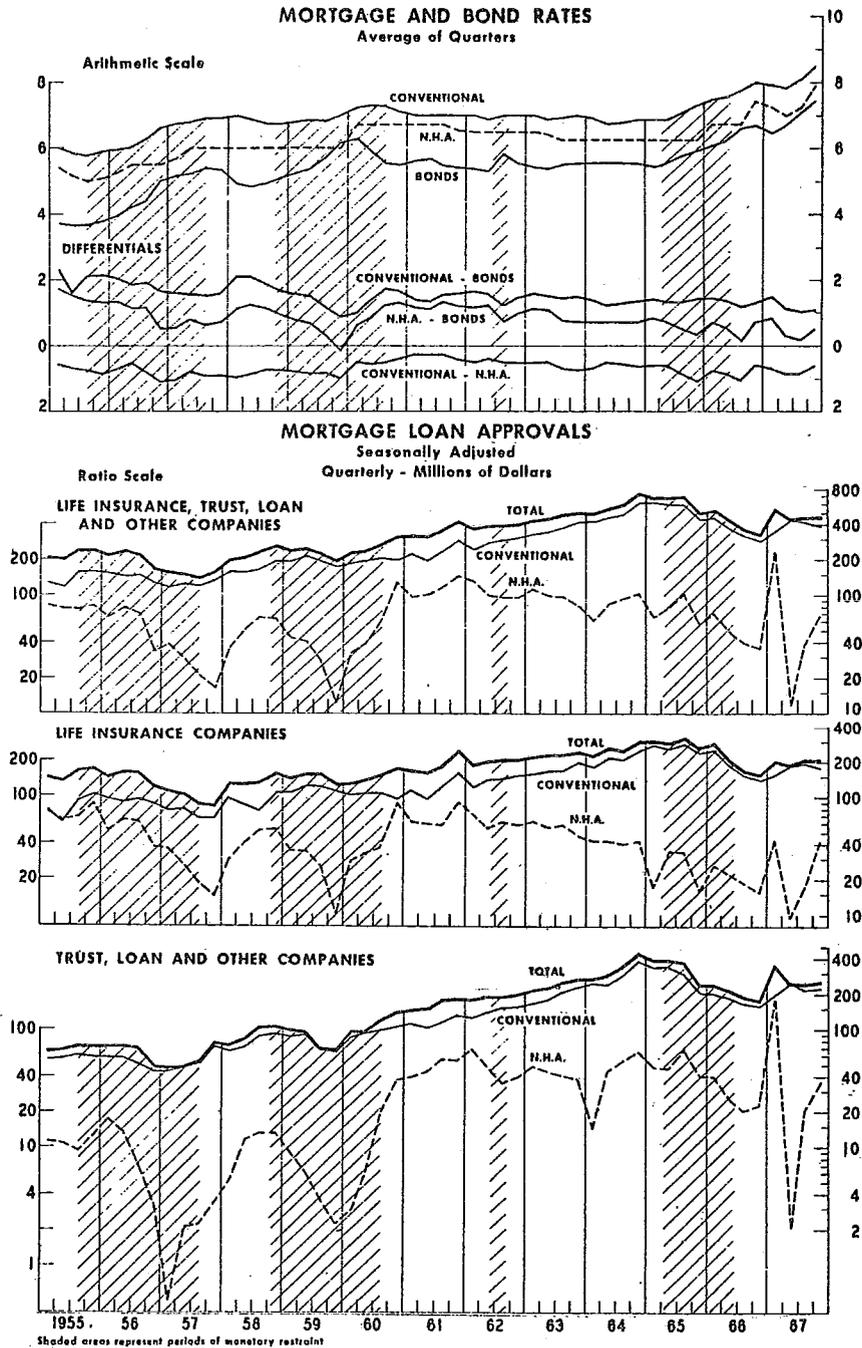
b) Impact of Monetary Policy on
Mortgage Lending of Financial Institutions

1) Mortgage loan approvals - The decline which occurred in the volume of mortgage loans approved by the financial institutions in 1966, as during earlier periods of monetary restraint, was attributable only in part to the effect of monetary policy and special factors on the aggregate of funds available to them for all kinds of lending.²³ Much more important was the allocation effect, that is, reduced lending by the institutions which resulted from their investing a smaller proportion of available funds in mortgages. This in turn would have reflected in part institutional preferences for non-mortgage investment arising from considerations not directly measured by yields, such as the value placed on borrower-lender relationships. However, it mainly reflected the tendency for yields on non-mortgage investments to rise more than mortgage interest rates during periods of monetary restraint. As shown in Chart 9, as a result of the relative inflexibility of mortgage interest rates, investment in mortgages has tended to be relatively unattractive to lenders during periods of credit restraint when

²³The decline in their mortgage lending was considerably more pronounced than the slow-down in the rate of growth of their assets. The growth in the total assets of the trust and loan companies, the Quebec Savings banks and mutual benefit and fraternal societies declined from 19.8 per cent in 1965 to 9.3 per cent in 1966 but they reduced their loan approvals and their net investment in mortgages in 1966 by 41.3 per cent and 56.5 per cent, respectively. The growth of the life insurance companies' assets declined from 7.4 per cent in 1965 to 5.3 per cent in 1966 but their mortgage loan approvals decreased by 30.6 per cent. C.M.H.C., Canadian Housing Statistics, 1967 issue, Tables 48 and 49. Bank of Canada: Statistical Summary, various issues.

CHART 9

INTEREST RATES AND MORTGAGE LENDING



Sources: Basic data: Porter Commission, Appendix Volume, Appendix G, Table IV; C.M.H.C., Canadian Housing Statistics, Fourth Quarter issues from 1955 to 1960, annual issues from 1961 to 1967; Bank of Canada.

competing demands for funds were high and when yields on competing instruments were rising, and relatively attractive during periods of expansionary monetary policy when other rates were declining or rising less rapidly. As a result, when the differential between the conventional mortgage interest rate and the long-term bond yield average narrowed substantially during the periods of contractionary monetary policy experienced in 1956-57, 1959-60, and 1965-66, the financial institutions sharply curtailed their volume of mortgage lending. When the differential between mortgage interest rates and other long-term rates widened, the institutions increased their volume of mortgage lending, as shown in Chart 9. Most of the fluctuations in the mortgage lending of the institutions in recent years occurred in their lending insured under the NHA. This mainly reflected the greater inflexibility of the NHA rate than either conventional mortgage rates or other long-term rates, as shown in Chart 9.

II) Net Mortgage Investment

Since the process of financing residential construction usually requires a mortgage commitment by lenders in advance of the actual disbursement of funds, the decline in the volume of mortgage loans approved by the financial institutions in 1965-66 had a fairly immediate impact on housing starts but only showed up later in a reduced rate of increase in their mortgage holdings. This lagged portfolio adjustment by the trust and loan companies to the credit conditions prevailing in 1965-66 may be seen from Table 9.

TABLE 9

TRUST AND MORTGAGE LOAN COMPANIES - GROWTH OF
ASSETS AND LIABILITIES IN 1966

Seasonally Adjusted - Millions of Dollars

Period	Major Assets				Major Liabilities	
	Mortgage Loan	Bonds, Bills & Short-term Notes	Total Major Assets ⁽¹⁾	Mortgages as % of total Major Assets	Deposits & Demand Certificates	Term Certificates
1965-Dec.	3,758	1,447	5,619	66.9	1,490	3,450
1966-March	3,841	1,466	5,712	67.2	1,489	3,250
June	3,937	1,448	5,774	68.2	1,482	3,341
Sept.	4,007	1,513	5,954	67.3	1,485	3,519
Dec.	4,107	1,653	6,170	66.6	1,476	3,991
<u>Annual Rates of Growth</u>						
1965-4Q	18.4	3.6	15.2		4.4	61.2
1966-1Q	8.8	6.0	6.4		-0.4	-23.2
2Q	10.0	-4.8	4.4		-2.0	11.2
3Q	7.2	18.0	12.4		0.8	21.2
4Q	10.0	37.2	14.4		-2.4	53.6

(1) Fixed assets and investments in subsidiary companies are not included.
Source: Bank of Canada, Statistical Summary: 1966 Supplement, p. 102.

While the annual rate of growth of their assets declined fairly sharply in the first half of 1966, the companies maintained their net mortgage investment at a relatively high level, mainly reflecting the disbursement of loans which had been approved earlier. The companies found it necessary, however, to reduce their holdings of bonds in order to meet such disbursements,²⁴ and as a result of these factors, their holdings of mortgages increased as a proportion of their total assets, from 66.9 per cent at the end of 1965 to 68.2 per cent at the end of the second quarter of 1966. In the

²⁴This was also the case during earlier periods of monetary restraint, as shown in Chart 7, page 64 above.

second half of 1966, when the adjustment to their earlier high level of approvals had been completed and their assets increased at a higher rate, the companies increased their holdings of bonds, reflecting their desire to improve their liquidity. As a result, the proportion of mortgages to total assets held by the trust and loan companies declined from 68.2 per cent at the end of the second quarter to 66.6 per cent at the end of the fourth quarter of 1966.

Although the life insurance companies substantially reduced their volume of mortgage loan approvals in response to the widening rate differentials between mortgages and alternatives in 1966, their net mortgage investment remained at about the same level as in 1965. This mainly reflected the continued high level of disbursements by the companies following the large increase in their approvals in 1965.²⁵

²⁵As shown in the following table, in contrast to the trust and loan companies - whose disbursements declined much more than their repayments - the disbursements of the life insurance companies only declined by about the same amount as their repayments. As a result of this and the slow-down in the growth of their assets, the mortgage holdings of the life insurance companies increased as a proportion of their assets; the mortgage holdings of the trust and loan companies declined as a proportion of their assets.

Annual changes - millions of dollars

	<u>Trust Cos.</u>		<u>Loan Cos.</u>		<u>Life Ins. Cos.</u>	
	<u>1965</u>	<u>1966</u>	<u>1965</u>	<u>1966</u>	<u>1965</u>	<u>1966</u>
Disbursements	215	-192	106	-180	135	- 91
Repayments	49	- 39	75	- 55	102	-111
Net mortgage investment	478	234	335	115	568	577
Mortgages as percentage of total assets	56.0	55.4	75.3	75.7	48.4	50.7

Source: Canadian Housing Statistics, 1967 issue, Tables 48 and 49.

Conclusions

In 1966, as during earlier periods of monetary restraint, it was the change in the mortgage lending of the trust, loan and life insurance companies that was mainly responsible for the decline in mortgage lending. The decline in mortgage lending by these institutions was partly attributable to the impact of monetary policy on the aggregate of funds available to them for all kinds of lendings. More important, however, was the tendency for the institutions to allocate a lower proportion of their funds to mortgage investment in response to the more rapid rise which occurred in yields on competing instruments than on mortgage interest rates. This suggests that monetary restraint has had a particularly severe impact on the availability of mortgage funds because of the relative inflexibility of mortgage interest rates.

The next chapter therefore examines the reason for the sluggishness and small amplitude of change in mortgage interest rates.

CHAPTER 5

Factors Underlying Short-Run Changes in Mortgage Interest Rates

This chapter examines the factors underlying short-run changes in mortgage interest rates in order to determine the extent to which their relative inflexibility has been attributable to institutional rigidities or imperfections on the one hand, and to market forces on the other. The first part of this chapter focuses on institutional imperfections which have tended to reduce the flexibility of mortgage interest rates, including the N.H.A. interest rate ceiling and the absence of a secondary market. The second part examines some of the basic differences between the mortgage market and the bond market which tend to reduce the flexibility of mortgage interest rates and induce lenders to vary the non-price terms of mortgages in response to changing credit conditions.

I. The Impact of Institutional Rigidities

A. The N.H.A. Interest Rate Ceiling

The rigidity of the N.H.A. rate between 1954 and 1966 was attributable to government policy, since the rate could have been changed by the Governor-in-Council as frequently as desired.¹

¹National Housing Act - 1954, Office Consolidation, Queen's Printer, Ottawa, 1964, Section 4, pp. 4 and 5.

1. Effect on N.H.A. Lending

As shown in Chart 9 (page 70), and as indicated earlier, changes in the N.H.A. maximum rate have tended to lag changes in other long-term rates, with the result that the differential between the N.H.A. rate and the conventional rate and between the N.H.A. rate and bond yields, has tended to fluctuate with changing credit conditions. These changes in yield differentials have in turn resulted in pronounced fluctuations in the volume of N.H.A. lending by the private financial institutions.

2. Effect on Total Mortgage Lending

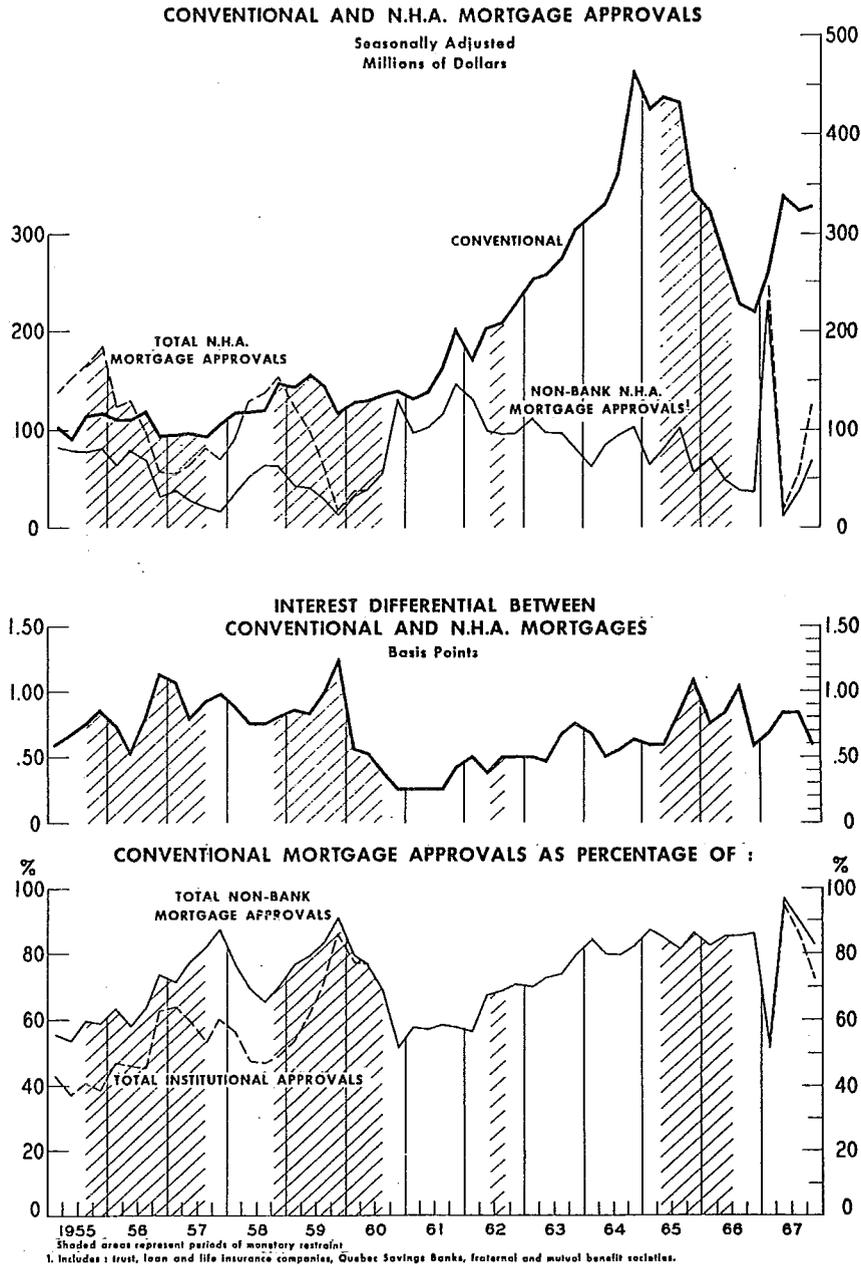
The N.H.A. interest ceiling has had a less pronounced impact on total mortgage lending than on N.H.A. lending since it has reduced instability in the conventional sector.² This may be seen from Chart 10 (page 77), where the proportion of conventional to total residential loan approvals is compared with the differential between conventional and N.H.A. mortgage rates. During periods of rising interest rates, conventional mortgages became relatively more attractive than N.H.A. mortgages and the proportion of conventional to total lending consequently increased. Thus, to the extent that fluctuations in N.H.A. lending were caused by variations in the yield spread between N.H.A. and conventional mortgages, these fluctuations would not have been transmitted to

²L.B. Smith, "On the Economic Implications of the Yield Ceiling on Government Insured Mortgages", The Canadian Journal of Economic and Political Science, August 1967, p. 422. (Hereinafter cited as "The Yield Ceiling on Government Insured Mortgages".)

CHART 10

RESIDENTIAL MORTGAGE LENDING OF FINANCIAL INSTITUTIONS
AND THE CONVENTIONAL - N.H.A. INTEREST DIFFERENTIAL

Average of Quarters



Sources: basic data: C.M.H.C., Canadian Housing Statistics, Fourth Quarter issues, 1955-60, Annual issues, 1961-67; Porter Commission, Appendix Volume, Appendix G, Table IV.

the mortgage market as a whole.³ However, since N.H.A. lending was also influenced by the yield spread between N.H.A. mortgages and bonds,⁴ the yield ceiling increased instability in the N.H.A. sector more than it reduced instability in the conventional sector and consequently accentuated fluctuations in total residential mortgage lending.⁵

The effective removal of this important institutional rigidity in 1967,⁶ as recommended by the Porter Commission in 1964,⁷ would therefore seem desirable. However, for the reasons noted below, the freeing of the N.H.A. rate is likely to moderate rather than eliminate fluctuations in mortgage lending.

B. Conventional Interest Rates

Conventional interest rates have fluctuated less than yields

³It should be noted, however, that an increase in N.H.A. lending resulting from freeing the N.H.A. rate would not necessarily have been offset by a corresponding reduction in conventional lending, because it is possible that the rigidity of the N.H.A. rate lessened the flexibility of conventional rates. To the extent that it did, and to the extent that higher conventional rates would have resulted in increased conventional lending, total lending would have been larger under a free N.H.A. rate even if N.H.A. lending had been exclusively dependent on the N.H.A.-conventional yield spread.

⁴Johnson and Winder, op.cit., p. 197.

⁵It has been estimated that "...the interest rate ceiling increased the sensitivity of non-bank financial institutional mortgage lending to variations in bond yields and monetary policy by approximately 25 to 30 per cent." L.B. Smith, "The Yield Ceiling on Government Insured Mortgages," op.cit., p. 426.

⁶The rate was effectively freed in September 1967 when it was set at a level 2.25 per cent above the average yield on long-term bonds; market rates have since been below the maximum rate. C.M.H.C., Canadian Housing Statistics, 1967 issue, Table 53; Canadian Housing Statistics, Monthly Supplement, January to July 1968 issues; Hansard, September 27, 1967, p. 2576.

⁷Porter Commission Report, p. 285.

on long-term bonds despite the fact that they are free to vary and that changes in the demand for conventional funds produced by changes in the supply of N.H.A. funds could have been expected to magnify changes in conventional rates.⁸ This may be seen from Chart 9 (page 70), and is also shown in Table 10, where cyclical

TABLE 10

BOND YIELDS,¹ AND PRIME RATES ON CONVENTIONAL MORTGAGE LOANS OF LIFE INSURANCE COMPANIES,² AT TURNING POINTS, QUARTERLY 1951-68

Rates - Average of Quarters

Turning ³ Point	Bonds		Yields		Change in Yield	
	Period	Lag ⁴	Bonds	Mortgages	Bonds	Mortgages
Low	1951 1Q	-	3.47	5.00	-	-
High	1953 3Q	1	4.46	6.08	0.99	1.08
Low	1955 2Q	1	3.65	5.75	-0.81	-0.33
High	1957 3Q	1	5.40	6.98	1.85	1.23
Low	1958 2Q	-	4.80	6.75	-0.60	-0.23
High	1960 1Q	-	6.26	7.30	1.46	0.55
Low	1960 4Q	-	5.49	7.00	-0.77	-0.30
High	1961 2Q	-	5.67	7.00	0.18	-
Low	1963 2Q	-	5.38	6.88	-0.29	-0.12
High	1968 2Q	-	7.83	9.23	2.45	2.35

1 Mc Leod, Young and Weir Limited, 40 bond yield average

2 Average prime residential rate on new approvals by six life insurance companies.

3 Based on movements persisting for two quarters or more.

4 Lag of changes in mortgage rates behind changes in bond yields.

Sources: Bond yields: J.V. Poapst, The Residential Mortgage Market, table A-11, p. 163 and Mc Leod, Young and Weir. Conventional interest rates: Porter Commission, Appendix Volume, appendix G, table IV; Bank of Canada.

⁸ Poapst, op.cit., p. 121.

changes in conventional rates and long-term bonds in the period from 1951 to 1968 are compared.⁹ Conventional mortgage rates rose less than bond yields in every period when the latter increased, except in the period 1951-53, and also declined less in every period when bond yields were falling. In the period from 1951 to 1957, turning points in mortgage rates also lagged one quarter behind turning points in bond yields. In recent years, however, conventional interest rates have been more flexible, as evidenced by the decline in the difference between the amplitude of fluctuations in mortgage and bond yields and by the tendency for the lag between such changes to lessen. Nevertheless, in the period from 1963 to mid-1968, as during earlier periods of rising interest rates, conventional interest rates rose less than yields on long-term bonds.

1. The Impact of the N.H.A. Interest
Rate Ceiling on Conventional Rates

Although the rigidity of conventional rates may be partly attributable to market forces, the tendency for conventional rates to fluctuate within a fairly narrow range above the N.H.A. maximum rate (as shown in Chart 9, page 70), seems to suggest that the N.H.A. rate has been used by lenders as a bench-mark for setting conven-

⁹The prime conventional rate series used here underestimates changes in basic mortgage rates since it neither reflects changes in the willingness of lenders to lend at the prime rate nor changes in the proportion of loans of prime quality which are transacted at the prime rate. The bond yield series used here is also biased, but in the same direction, since it relates to the secondary market where rates are reportedly less sensitive to market conditions than yields on most new issues. Poapst, op.cit., pp. 121, 122; L.B. Smith, "The Residential Mortgage Market", pp. 15-16.

tional rates.¹⁰ This in turn indicates that the N.H.A. interest rate ceiling may have been partly responsible for the relative inflexibility of conventional interest rates.¹¹

2. The Absence of Secondary Market and the Flexibility of Conventional Interest Rates

Since a secondary market usually provides "...a forum in which prices are continually adjusted to shifting demand and supply pressures from buyers or sellers anxious to take advantage of very small yield differentials,"¹² the absence of such a market in mortgages has probably tended to reduce the flexibility of mortgage interest rates. To the extent that it has, it also would have accentuated fluctuations in mortgage lending since such fluctuations have been mainly caused by variations in yield spreads. It is usually considered, however, that the development of a secondary market would contribute more directly and significantly to reducing fluctuations in mortgage lending through its effects in encouraging more lenders, such as those who are responsible for investing pension funds, to enter the mortgage market. Such lenders would be less influenced by changes in credit conditions than would

¹⁰D.B. Mansur, Submission to Porter Commission, Ottawa, 1962, p. 20.

¹¹For statistical evidence of the influence of the N.H.A. rate upon the conventional rate, see: L.B. Smith, A Bi-Sectoral Model of the Canadian Housing and Mortgage Markets, pp. 24-27.

¹²Porter Commission Report, p. 282.

existing lenders.¹³

II. Other Institutional Arrangements and Market Forces Affecting the Flexibility of Mortgage Interest Rates

Although the N.H.A. yield ceiling and the absence of a secondary market have reduced the flexibility of mortgage interest rates, their inflexibility relative to long-term bond yields largely reflects basic differences between the mortgage market and the bond market.¹⁴ The main institutional factors peculiar to the mortgage market which have tended to reduce the flexibility of mortgage interest rates and possibly induced lenders to vary the non-price terms of mortgage loans are considered below.¹⁵

1. Institutional Factors

Mortgage loans are usually issued in small amounts to numerous borrowers who lack information to bargain closely over terms. Consequently, fine gradations and frequent changes in interest rates have been uncommon because such changes can cause ill-will for lenders.¹⁶

¹³Mansur, op.cit., pp. 18, 25-26; Mortgage Bankers Association of America, "Study of Mortgage Credit in 1966" in A Study of Mortgage Credit, Subcommittee on Housing and Urban Affairs of Committee on Banking and Currency, United States Senate, 90th Congress, May 22, 1967, pp. 249, 253; Federal Home Loan Bank Board, "Cycles in Mortgage Credit Availability and the 1966 Experience", Ibid, pp. 32-33.

¹⁴Porter Commission Report, p. 282; Poapst, op.cit., p. 124; Federal Home Loan Bank Board, op.cit., p. 24; L.B. Smith, "The Yield Ceiling on Government Insured Mortgages," op.cit., p. 428; S.B. Klamann, The Postwar Residential Mortgage Market, National Bureau of Economic Research, Princeton University Press, Princeton, 1961, p. 77.

¹⁵This section draws heavily on the explanations given for the rigidity of mortgage interest rates in: Porter Commission Report, p. 282; Poapst, op.cit., pp. 124-129; L.B. Smith, "The Residential Mortgage Market", pp. 5-10; Klamann, op.cit., pp. 75-77.

¹⁶Poapst, op.cit., p. 125.

Until recently, lenders seldom changed contract rates by less than one quarter or one-half of a percentage point.¹⁷ Moreover, lenders have tended to make such changes only after the general level of rates had shifted and new levels appeared to have been established. This has caused changes in mortgage interest rates to lag behind changes in other security yields.

The widespread use of the forward commitment procedure in the financing of residential construction has also reinforced the tendency for changes in mortgage rates to lag behind changes in other market rates and has also promoted a stable interest rate policy. Since mortgage loans are usually not disbursed until some time has elapsed from the time of initial approval, requests can be expected for reductions in rates on undisbursed commitments when interest rates are declining. Such requests are usually granted because borrowers can go elsewhere and obtain the more favourable current terms. Moreover, there is an incentive to lenders to reduce interest rates on loan commitments to merchant builders for the construction of yet unsold houses because lower interest rates on competing houses increase builders' marketing problems and consequently increase the risk for lenders.¹⁸ However,

¹⁷The greater degree of flexibility introduced into the N.H.A. maximum rate in the period since September 1967 has, however, resulted in smaller and more frequent changes in the N.H.A. maximum rate. N.H.A. market rates have also changed frequently and in small amounts in this period. Although conventional rates also changed relatively frequently in this period, most prime rates changed by 0.25 per cent. C.M.H.C., Canadian Housing Statistics, Monthly Supplement, October 1967 to July 1968 issues.

¹⁸Porter Commission Report, p. 282; Poapst, op.cit., p. 125.

when interest rates rise, commitments remain binding on lenders. Thus the retroactive effect of a reduction in the interest rate, together with the inability to recover it when rates rise, promote a stable interest rate policy.

2. Localized Nature of Market

Although the major institutional lenders operate over a widespread area, loan origination usually takes place at the local level under decentralized authority. This tends to make interest rates relatively inflexible since such operations are reportedly easier to conduct when changes in loan terms are made relatively infrequently.¹⁹ The large volume of mortgage lending done by private individuals and local institutions also tends to reduce the sensitivity of mortgage rates to capital market conditions since local consideration often hamper the free flow of funds between different segments of the market.

3. Differentiated Nature of Market

Few markets are characterized by more "one-of-a-kind" transactions than the mortgage market, where numerous contract terms other than price are subject to individual negotiation, including down-payment requirements, amortization provisions, contract maturities and non-interest costs.²⁰ All of these terms, as was indicated earlier, change the cost to the borrower and the yield, for a given degree of risk, to the lender. Consequently, to the extent that lenders have relied on adjusting the non-price terms of mortgage loans to changing credit conditions, mortgage yields can be expected to vary less and to

¹⁹ Poapst, op.cit., pp. 125-126.

²⁰ Klaman, op.cit., p. 77; also cited in Poapst, op.cit., p. 124.

respond more slowly to market conditions than yields in other sectors of the capital market where non-price terms show less variability.²¹

The extent to which the non-price terms of mortgage loans have actually varied in response to changing credit conditions is therefore examined briefly below.

III. Short-Run Changes in the Non-Price Terms of Mortgage Loans

It has been observed from United States data that changes in the non-price terms of mortgage loans have been more responsive than interest rates to changes in credit conditions.²² However, it is difficult to determine conclusively whether this has been the case in Canada. The only published data available relating exclusively to the non-price terms of residential mortgage loans²³ is unsatisfactory for observing short-run changes in such terms since it is only available on an annual basis and relates to the N.H.A. market where lenders are merely free to decide the extent of their participation;²⁴ it excludes the conventional market where the life insurance companies, trust and loan companies have been free to decide the extent of their lending, the amortization periods and

²¹This of course assumes that changes in the non-price terms of mortgage loans would be less favourable to borrowers during periods of credit restraint and more favourable during periods of monetary ease.

²²Klaman, op.cit., p. 78.

²³Annual data relating to some of the main non-price terms of N.H.A. loans are published by C.M.H.C. in their annual publication, "Canadian Housing Statistics"; see, for example, 1967 issue, Tables: 66 and 67.

²⁴C.M.H.C., Submission to the Porter Commission, p. 12.

the size of loans²⁵ up to three-quarters of the mortgaged property. Although less satisfactory, an impression of the role of changes in the non-price terms of mortgage lending in the market adjustment process may be gained from statements by lenders.

The views of lenders are not unanimous on the question of whether mortgage funds have been allocated on the basis of the rate of interest as well as on the basis of other terms. Poapst²⁶ reports that statements by officers of two major lending institutions indicated that, in the short run, the focal point of change was in the rate of interest. In support of this view, Poapst suggests that reducing the size of loans in periods of monetary restraint would be to the disadvantage of lenders since it would raise the lenders' administrative costs, create a demand for second mortgages and, in the case of loans to builders, reduce the marketability of unsold houses and consequently raise the risk for both builders and lenders. With respect to the easing in conventional loan terms which has occurred in the postwar period, Poapst states that:

...these changes reportedly comprised a one-way, long-term movement which was necessary to offset the effects of higher interest rates upon monthly payments and to otherwise maintain the demand for conventional loans in the face of competition from N.H.A. loans.²⁷

On the other hand, it has been said that lenders tend to reduce the size of loans relative to property value during periods of monetary restraint,²⁸ and that at such times, the size of loan could

²⁵Ibid.

²⁶Poapst, op.cit. pp. 127-128.

²⁷Ibid, p. 128.

²⁸See, for example, Ibid; Porter Commission Report, p. 282.

be a more important factor in competition than the rate.²⁹ The main reason given by lenders for rationing funds in this manner, rather than by raising interest rates more sharply during periods of monetary restraint, has reportedly been the fear that too many potential borrowers would be deterred by higher rates. This view in turn appears to be based on a belief by lenders that it would be "inappropriate" for them to raise the rate of interest above a specific level, even if it were the economic rate, and that borrowers were, in any event, reluctant to pay interest rates above such a level.³⁰

This brief review of comments by lenders, which appears to be the only relevant information available, is clearly inadequate to reach any firm conclusion regarding the extent to which the burden of adjustment in the mortgage market has focused upon the non-price terms of mortgage loans. However, lenders were reportedly more stringent in the selection of borrowers and properties in the period from 1966 to mid-1968.³¹ This did not necessarily imply a tightening in downpayment requirements, amortization provisions and contract maturities, but it did indicate that lenders relied on non-price credit rationing to allocate funds while mortgage interest rates rose more frequently, and to higher levels, than in any period since 1951. Since this

²⁹Porter Commission: Hearings, Vol 48, Ottawa, October 16, 1962, p. 5852; Porter Commission Report, p. 282.

³⁰Porter Commission: Hearings, op.cit., pp. 5876, 5882, 5886.

³¹See, for example, A.E. LePage Limited, Mortgage Market Conditions, Toronto, January 1966 to June 1968 issues.

greater stringency by lenders in the selection of properties and borrowers reduced their risk exposure,³² it may also be assumed that it lessened their incentive to raise mortgage interest rates because lenders can raise the effective yield of mortgage loans either by raising the interest rate for any given degree of risk, or by reducing the risk for any given interest rate. At the same time, it also would have reinforced the effect of changes in interest rates upon the quantity of borrowed funds demanded, because some borrowers would have been unable to obtain funds for the purchase of certain kinds of dwellings.

Conclusions

In recent years, the responsiveness of mortgage interest rates to changing credit conditions has been importantly influenced by institutional arrangements in the mortgage market. However, it would appear that few such arrangements may be considered as imperfections or rigidities. Among the latter, the N.H.A. maximum yield ceiling was perhaps the most important. The infrequency with which it was changed until 1967 reduced the flexibility of mortgage interest rates in the important N.H.A. sector of the market and consequently resulted in substantial fluctuations in the volume of N.H.A. lending. Fluctuations in N.H.A. lending were not entirely offset by the changes in conventional lending induced by the N.H.A. yield ceiling. The N.H.A. yield ceiling also hampered the smooth adjustment of the mortgage market to changing credit conditions and

³² Klamon, op.cit., p. 95.

thereby further accentuated fluctuations in the overall volume of mortgage lending by reducing the flexibility of conventional interest rates. This important institutional imperfection was however removed in 1967 when the N.H.A. rate was effectively freed. Another mortgage market imperfection which remains is the absence of a secondary market. The proposal to develop such a market is usually offered as a way of increasing the overall supply of mortgage funds but it would also be helpful in a cyclical context since it would widen the base of mortgage lending and increase the sensitivity of mortgage interest rates to market conditions.

The inflexibility of mortgage interest rates relative to yields on competing non-mortgage instruments has, however, mainly reflected basic differences between the mortgage market and the bond market. Among such differences, perhaps the most important is the commitment-disbursement procedure widely used in the residential mortgage market. The fact that loan commitments are entered into some months before funds are disbursed has led to stability of rates, particularly when market rates were rising. The localized and differentiated nature of the mortgage market, although probably less important, has also promoted a stable interest rate policy and reinforced the tendency for changes in mortgage rates to lag behind changes in other market rates. Since mortgage rates are only one of the many terms of mortgage loans which are negotiated between lenders and borrowers, the incentive for lenders to change interest rates, and consequently the flexibility of such rates, could have been importantly influenced by their willingness and ability to change the non-price terms of mortgage loans. Because of the lack of data,

it is unfortunately not possible to determine whether mortgage lenders have changed the non-price terms of mortgage loans rather than interest rates in response to changing credit conditions. However, in 1966-68, it may be concluded that lenders allocated funds partly on the basis of non-price rationing, which took the form of greater stringency in the selection of borrowers and properties.

The important role of basic institutional factors in contributing to the inflexibility of mortgage interest rates, together with the extreme dependence of housebuilding on borrowed funds, suggest that residential construction will probably continue to be especially vulnerable to monetary restraint. However, the development of an efficient secondary market would probably assist in reducing the severity of fluctuations in mortgage lending and consequently in house building activity.

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