

AN EXAMINATION OF THE  
VANCOUVER MONEY MARKET

by

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## ABSTRACT

This study, an examination of the Vancouver money market, addresses itself to the four objectives of providing a description of the overall setting in which the Vancouver money market exists, describing the Vancouver money market, indicating the major peculiarities and imperfections which exist in that market, and providing, where possible, explanations for those peculiarities and imperfections.

Achievement of the first of the above mentioned objectives involves the development of models explaining the behaviour of the three money market participants, the investor, the borrower, and the investment dealer. The basic premise underlying these models is that each participant attempts to maximize his wealth subject to certain constraints. Also involved in outlining the overall setting is a discussion of the market's role of equating the supply of and demand for short-term capital, a brief sketch of its history, and examples of the mechanisms involved in its actual workings. The securities which comprise the market's stock in trade are discussed in abstract terms with particular emphasis being placed on their liquidity characteristics and in more concrete terms where the fourteen main instruments of the market are briefly described.

The three remaining objectives are achieved by

drawing heavily upon information about the local market obtained during interviews with fifteen participants in the Vancouver money market and interpreting this information with reference to the behavioural models which were developed. While the market has recently experienced rapid growth, it continues to be dwarfed by the Toronto-Montreal market. It is concluded that there are four main peculiarities or imperfections in the local market. The low level of dealer inventories of money market instruments, which benefits local borrowers but hinders the achievement of the investors' goals, results from the investment strategy of dealers and such exogenous factors as the centralized cash management by chartered banks and the limited number of local sources of non-bank financing for inventories. Lack of local dealer autonomy results from centralized decision making by investment dealers and the low level of local inventories. This lack of local autonomy and the time zone differential between the Vancouver market and the Eastern market reduce the liquidity of instruments in the Vancouver market while the attractiveness of the locally-issued security is enhanced by its ready availability. Finally, the lack of participant sophistication, which is an attribute of the local market, is regarded as being caused by lack of information and the responsibility for the persistence of this trait and for its future eradication is seen as resting upon the investment dealer.



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## CHAPTER I

### INTRODUCTION

This study, which is an examination of the Vancouver money market, was undertaken in the belief that insights into the phenomenon which is the Vancouver money market might be revealed which would be of interest to both present and potential participants in that market and to students of financial markets. Since financial markets play a central role in the functioning of capitalist economies, the Vancouver money market which is a recent development in the Canadian financial market merits examination. It is hoped that such an examination will contribute to the understanding of the Canadian economic mosaic and by describing the state of the art in this particular segment will contribute in some way to its refinement.

#### Statement of the Problem

This study has four objectives. Those objectives are:

1. To provide a description of the overall setting in which the Vancouver money market exists.
2. To describe the Vancouver money market.
3. To indicate the major peculiarities and imperfections which exist in that market.
4. To provide, where possible, explanations for those peculiarities and imperfections.

## Scope and Methodology of the Study

The literature related to finance and economics was surveyed and provided an overview of financial markets in general and was of substantial assistance in the development of the models of participant behaviour. The literature failed to provide any information about the management of dealers' inventories of money market instruments. Moreover, the literature on money markets has little to say on the Vancouver money market which has only recently materialized. To obtain information about the Vancouver money market, then, it was necessary to turn to primary sources. The picture of the Vancouver money market as it emerges in this study stems from personal interviews with the personnel involved in the money market operations of fifteen local market participants. The participants are listed in Table I. This list is believed to comprise a representative sample of local participants.

## Plan of Thesis

This thesis is divided into six chapters, including an introductory and a concluding chapter, and three appendices.

Chapter II discusses the concepts relevant to the Canadian money market and the functions of that market. Models of participant behaviour are outlined, the nature of the assets traded is discussed, the history of the Canadian money market and its role in monetary policy is outlined, and finally, an

TABLE I  
VANCOUVER MONEY MARKET PARTICIPANTS  
INTERVIEWED FOR THIS STUDY

Ames, E.A., & Co. Limited  
Bank of British Columbia  
Bank of Canada  
Bank of Nova Scotia  
British Columbia Central Credit Union  
British Columbia Packers Limited  
British Columbia Telephone Company  
Burns Bros. & Denton Limited  
Cominco Limited  
Kelly Douglas & Company Limited  
MacMillan Bloedel Limited  
McLeod, Young, Weir & Co. Limited  
Wood Gundy Securities Limited  
Woodward Stores Limited  
Yorkshire Trust Company



example is presented of how the market functions.

Chapter III describes the instruments involved in the Canadian money market which are referred to in Chapter II in a more general and abstract manner. These instruments are ranked according to their major characteristics of risk, liquidity, and yield to maturity.

Chapters IV and V provide a description of the Vancouver money market, outline the major peculiarities and imperfections of the market, and provide explanations for these manifestations where possible. Chapter IV outlines the recent growth of the market and then discusses the low levels of dealer inventories.

Chapter V completes the main body of the thesis by discussing the local dealers' lack of autonomy, pointing out the implications of the East-West time zone differential, and finally by examining the relative lack of local participant sophistication.

Chapter VI provides a summary of the study and suggests areas which warrant future investigation.

## CHAPTER II

### THE CANADIAN MONEY MARKET:

#### CONCEPTS AND FUNCTIONS

This Chapter portrays the many facets of the Canadian money market by describing its purposes and functions, its participants and their interdependencies, and its economic importance and historical background.

#### I. CONCEPTUALIZATION OF THE MONEY MARKET

The money market in Canada can be envisioned as a group of buying and selling institutions, and middlemen who are in communication with one another by telephone, wire, and mail and who transact their operations through these media. The network of communication media brings together (not in a physical sense) those who participate in money market activities which, in essence, are comprised of the issuance of and investment in short-lived financial instruments.

Canada's financial market is comprised of two components: the money market and the capital market.<sup>1</sup> The delineation is dependent upon two aspects of the financial asset

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<sup>1</sup>E. Shapiro, E. Solomon, and W. White, Money and Banking (New York: Holt, Rinehart and Winston, Inc., Fifth Edition, 1968), p. 309.

involved; whether it is debt or equity and if debt, the time to maturity. Transactions in debt instruments with a maturity of under three years are classified as money market transactions while those involving longer-term issues (both debt and equity) are treated as part of the capital market.

By definition financial assets and liabilities originate only in an act of borrowing and are reduced only in an act of debt repayment or default.<sup>1</sup> Lending denotes the purchase of a newly created financial asset (which is a liability to the issuing unit) while borrowing refers to the act of selling a newly created financial asset (which, again, is the liability of the issuing unit). Financial assets (and financial liabilities concurrently) originate as the result of the exchange that takes place in the act of lending and borrowing.

The terms lender and borrower generally correspond with the classification of economic units as surplus spenders and deficit spenders<sup>2</sup> or, alternatively, savings-surplus units and savings-deficit units.<sup>3</sup> A surplus unit is one which spends less than its current income for current output while a deficit unit spends more than its current income. A deficit unit can finance its deficit by selling assets but eventually

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<sup>1</sup>Basil J. Moore, An Introduction to the Theory of Finance (New York: The Free Press, 1968), p. 15.

<sup>2</sup>Ibid., p. 16.

<sup>3</sup>James C. Van Horne, Function and Analysis of Capital Market Rates (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1970), p. 2.

it must resort to the creation of financial assets which, when sold to surplus units, become its liability. A financial intermediary is a type of economic unit which is simultaneously a borrower and a lender and serves the function of matching the needs of surplus and deficit units. It does so by issuing claims on itself to surplus units and purchasing the financial claims on deficit units which may be of different terms and sizes compared to those issued by the financial intermediary.

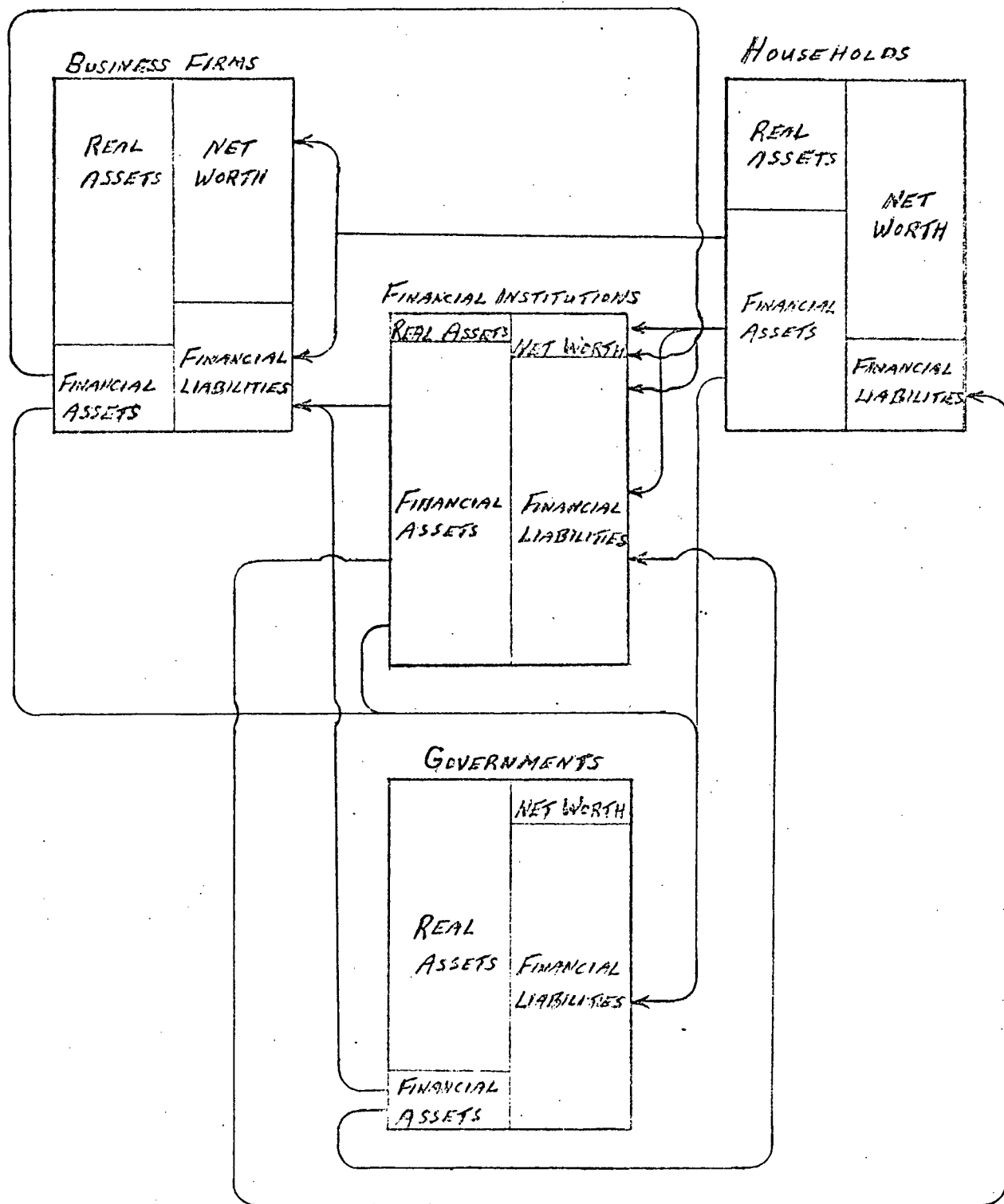
It can be seen from the foregoing that the *raison d'être* of financial markets is the purchase and sale of financial instruments to permit the distribution of current expenditures among economic units to diverge from the distribution of current income received.<sup>1</sup> The distribution of the ownership of financial assets and the utilization of financial liabilities to finance current expenditures among governments, households, business firms and financial institutions is shown graphically in Figure 1. The money market involves only short-term financial instruments and it functions so as to equate the supply of and demand for these. This function is facilitated by the intermediating role of the investment dealer whose operations are outlined in the Investment Dealers' Association Brief to the Royal Commission on Banking and Finance.<sup>2</sup> The money market can be seen as supplementing the

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<sup>1</sup>Moore, op. cit., p. 17.

<sup>2</sup>Investment Dealers' Association of Canada, Brief to the Royal Commission on Banking and Finance, June, 1962, Appendix G, p. 15.

## RELATIONSHIP OF CLAIMS



Source: James C. Van Horne, Function and Analysis of Capital Market Rates (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1970), p. 9.

role of financial intermediaries in enabling individuals, businesses and other entities to alter the composition of their portfolios of assets and liabilities and it helps them to shift from saving in some periods to dissaving in others.

## II. MODELS OF PARTICIPANT BEHAVIOUR

The conceptualization of the Canadian money market as a group of buying and selling institutions and middlemen can be further generalized by viewing the market as the interaction between surplus units, deficit units, and middlemen. In this study this trio is composed of lenders or investors, borrowers or issuers, and investment dealers. (The intermediating or middleman functions of the financial institutions, although in competition with the dealers, have been ignored since the term "money market" in Canada generally refers to that market for short-term funds in which investment dealers, and especially the money market jobbers, play a central role).

While the discussion to this point has outlined the concepts related to the interaction of these three types of money market participants and the basic economic functions which this interaction performs, it is necessary to make explicit the basic behavioural models which in this study are assumed to explain the actions of these participants.

In attempting to formulate models to explain behaviour, one must look first at the basic objectives of those whose behaviour is to be explained. For money market participants the basic objective which appears to be at the root of their activities is the goal of maximizing wealth, although this goal is subject to some constraints. The extent to which the goal of wealth maximization is sought after depends upon the participant's degree of aversion to risk-taking, the availability of opportunities for investment, the availability of funds for investment in the available investment opportunities, and, finally, the constraints of ethical and legal standards. It is assumed that in seeking to attain their goal of wealth maximization, participants adopt strategies which are formulated using profitability criteria for investment decisions. The assumption that such criteria form the bases for strategy formulation by participants is founded in the belief that in allocating funds among investment projects, each is attempting to increase his net worth so as to maximize wealth. The profitability criteria for investment decisions are outlined below prior to the presentation of the participant behaviour models in which these criteria play central roles.

#### Profitability Criteria for Investment Decisions

The criteria assumed to form the bases for strategy formulation by money market participants are the net present value criterion and the internal rate of return criterion.

Both of these concepts are outlined below: first, assuming that all cash flows occur as predicted and subsequently, under conditions of uncertainty.<sup>1</sup>

The net present value (NPV) criterion states that to maximize its net present worth a firm should undertake all investment projects which have a net present value greater than zero and reject all others. An investment's contribution to the firm's net present worth is defined as the net present value of the investment project; that is,

$$NPV = \sum_{t=0}^n \frac{a_t}{(1+k)^t}$$

where  $a_t$  stands for the net cash flow at the end of periods 0, 1, 2, ..., n (before any payments to capital) and  $k$ , the cost of capital, is a constant (the term cost of capital being defined as the price paid by a firm for funds acquired from its capital suppliers).<sup>2</sup>

The internal rate of return (IRR) criterion states that an investment should be accepted if its internal rate of return is above the firm's cost of capital. It requires that investment projects be ranked according to their returns and that the cost of capital serve as a cutoff point in the firm's

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<sup>1</sup>The discussion of the net present value and internal rate of return criteria under conditions of certainty relies heavily on the discussion of these concepts by James C.T. Mao, Quantitative Analysis of Financial Decisions (London: The Macmillan Company Collier-Macmillan Limited, 1969), pp.188-232.

<sup>2</sup>Ibid., p. 371.



investment program. The internal rate of return of an investment is defined as the rate of discount that equates the present value of the entire series of cash flows associated with the project to zero. When  $a_t$  represents the net cash flow at the end of period  $t$ , where  $t = 0, 1, 2, \dots, n$ , the project's IRR,  $r^*$ , is then defined by

$$\sum_{t=0}^n \frac{a_t}{(1+r^*)^t} = 0$$

In the case where  $a_0 < 0$  and  $a_t > 0$  ( $t=1, 2, \dots, n$ ), the above equation can be expressed as

$$-a_0 = \sum_{t=1}^n \frac{a_t}{(1+r^*)^t}$$

The internal rate of return then becomes the rate of discount that equates the present value of future cash receipts to the cost of the project. However, if the cash expenditures of an investment are not restricted to the initial period, the return may vary directly with the cost of capital to the firm.

The internal rate of return and the profitability of an investment are not identical. The internal rate of return of an investment is calculated before the deduction of the cost of funds utilized and therefore the investment is profitable only when its internal rate of return is above the cost of capital to the firm.

For the measurement of profitability the net present

value and internal rate of return criteria result in the same decision regarding acceptance or rejection for simple investments. A simple investment is one whose net cash flow takes the pattern of an initial outlay followed by cash receipts alone. For nonsimple investments whose cash outflows are interspersed with net cash inflows throughout the duration of the investment, the internal rate of return criterion may not provide an unambiguous criterion for measuring profitability. This criterion may prove ambiguous since for nonsimple investments there may not be a rate of return concept independent of the cost of capital to the firm and in some cases a single project may have multiple internal rates of return.

In the event that a firm has limited funds available for investment and more profitable opportunities exist for investment than can be accommodated, the firm then faces the problem of selecting an optimal portfolio of investments. To make such a selection, all competing investments can be ranked in decreasing order according to either their internal rates of return or their net present values. Investments are then accepted in that order until the capital budget of the firm is exhausted.

Under conditions of capital rationing the principle of opportunity cost requires that the net present value of an investment be computed by discounting net cash flows at the firm's marginal investment return instead of the firm's cost

of capital. This implies that funds released by the project can be reinvested at a return equal to the firm's marginal investment return. If a common reinvestment rate is assumed for projects of differing durations, competing investments can be ranked correctly by using the net present value per unit of outlay as a profitability index.

The discussion has, to this point, assumed that investment decisions are made under conditions of certainty which implies that the cash flows associated with an investment are not random variables but fixed quantities. The conditions of uncertainty which exist in the real world require that consideration be given to the risk element of investments. Such risk is comprised of operating risk and financial risk. Operating risk inherent in an investment is embodied in the possibility that actual cash flows will differ from anticipated cash flows. Financial risk is introduced through the use of debt or preferred stock financing of the investment.

The two accepted methods for incorporating risk into investment analysis are the cost of capital method and the certainty-equivalent method.<sup>1</sup>

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<sup>1</sup>The probabilistic approach to investment analysis based on the work of Frederick S. Hillier, "The Derivation of Probabilistic Information for the Evaluation of Risky Investments," Management Science IX (April, 1963), pp.443-457 as outlined in Mao, op. cit., pp. 271-280 and in Van Horne, Financial Management and Policy, pp.131-147 is rejected as being unsuitable. This approach centres around the expected value and standard deviation of the probability distribution of the net present value of an investment. By discounting the expected value of the net cash flows by the risk-free rate of interest, the approach treats these expected cash flows as certain which, since they are not certain, represents a contradiction. Thus, the resulting expected value of the probability distribution of net present value arrived at by this approach appears to be lacking any economic significance.

Under the method of the cost of capital as it is presented by Mao,<sup>1</sup> the net present value of an investment is calculated by discounting the expected cash flows at a rate that allows for the time value of money and for the dispersion present in the cash flow distribution. The investment is profitable if the resulting net present value is greater than zero. Cash flow here is defined as being exclusive of any payments to the suppliers of capital. The discount rate is the weighted average of the costs of debt, preferred stock, and common equity, using as weights their relative proportions in the firm's total financing mix. Since a change in the firm's total financing mix affects the weighted average cost of capital, the use of a constant weighted average cost of capital as the discount rate assumes that the firm will finance in a proportional manner over time. The exclusion of any payments to capital suppliers from cash flows and the use of the weighted average cost of capital as the discount rate have the effect of making the investment decision separate from the decision of how to finance a particular project.<sup>2</sup>

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<sup>1</sup>Mao, op. cit., p. 269.

<sup>2</sup>The use of the weighted average cost of capital as a discount rate presupposes that the risk-premium embodied in the cost of common equity will be unchanged if the project under consideration is accepted. This assumption is justified only if the project has the same degree of risk as the typical existing investment.

Varying the discount rate so that the greater the risk, the higher the discount rate is an approach which recognizes that shareholders' risk-premia are related to the riskiness of the firm's investments. The difficulty in determining the appropriate adjustment for a particular investment in a

Where each cash flow  $a_t$  at the end of period 0,1, ...,n is a random variable with a mean of  $\mu_t$  and a standard deviation of  $\sigma_t$  and where  $k$  is the appropriately weighted cost of capital, the net present value of an investment is given by the following formula:

$$NPV = \sum_{t=0}^n \frac{\mu_t}{(1+k)^t}$$

The analysis may be extended to the internal rate of return of an investment since the net present value of the proposed investment will be positive if and only if the internal rate of return exceeds the discount rate.

The certainty-equivalent method for incorporating risk into investment analysis involves the modification of the expected cash flows discounted in determining the net present value of an investment. The modification is such that the resultant amounts to be discounted can be regarded by the investor as being certain. Since the modified cash flows can be treated as certain, the discount rate to be used in calculating the net present value of the investment does not include a risk-premium. Inasmuch as the financial liabilities of the federal government are regarded as being free from the risk of default which means that the interest payments and principal repayments comprising the cash flows

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consistent and objective manner is the main criticism of the approach cited by James C. Van Horne, Financial Management and Policy, Second Edition (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1971), p. 126.

associated with such liabilities are amounts known with certainty, the interest rate of financial liabilities of the federal government includes no risk-premium. The rate of interest on federal securities is therefore regarded as the risk-free rate of interest and is the appropriate discount rate to be used in calculating the net present value of an investment under the certainty-equivalent method. In the discussion which follows the simplifying assumption is made that the risk-free rate of interest is constant. For such a situation to occur would require that the same interest rate would exist for all maturities for all government securities. In reality, the discount rate used for each period would be the interest rate of a government security maturing in the corresponding period. Therefore, the yield on a Government of Canada treasury bill or bond maturing in fourteen days would be the appropriate rate to use in discounting a certain cash flow which it is believed will occur two weeks in the future while the yield on a Government of Canada bond maturing in two years would be suitable for a certain cash flow expected in two years.

Where the net cash flow,  $a_t$ , at the end of period  $t$  ( $t = 0, 1, \dots, n$ ) is a random variable with a mean of  $\mu_t$  where  $i$  is the risk-free rate of interest and is assumed to be constant, and where  $\alpha_t$  is the certainty-equivalent coefficient, the investment is profitable if the net present

value in the following equation is positive;

$$NPV = \sum_{t=0}^n \frac{\alpha_t \mu_t}{(1+i)^t}$$

The certainty-equivalent coefficient,  $\alpha_t$  is a value between 0 and 1.00 which varies inversely with the degree of risk and is determined by the investor's utility preferences with respect to risk. When the coefficient is multiplied by the expected cash flow, the product would be regarded by the investor as equally desirable to a certain cash flow.<sup>1</sup> That is,

$$\alpha_t = \frac{A_t}{\mu_t} = \frac{\text{Certain Cash Flow}}{\text{Risky Cash Flow}}$$

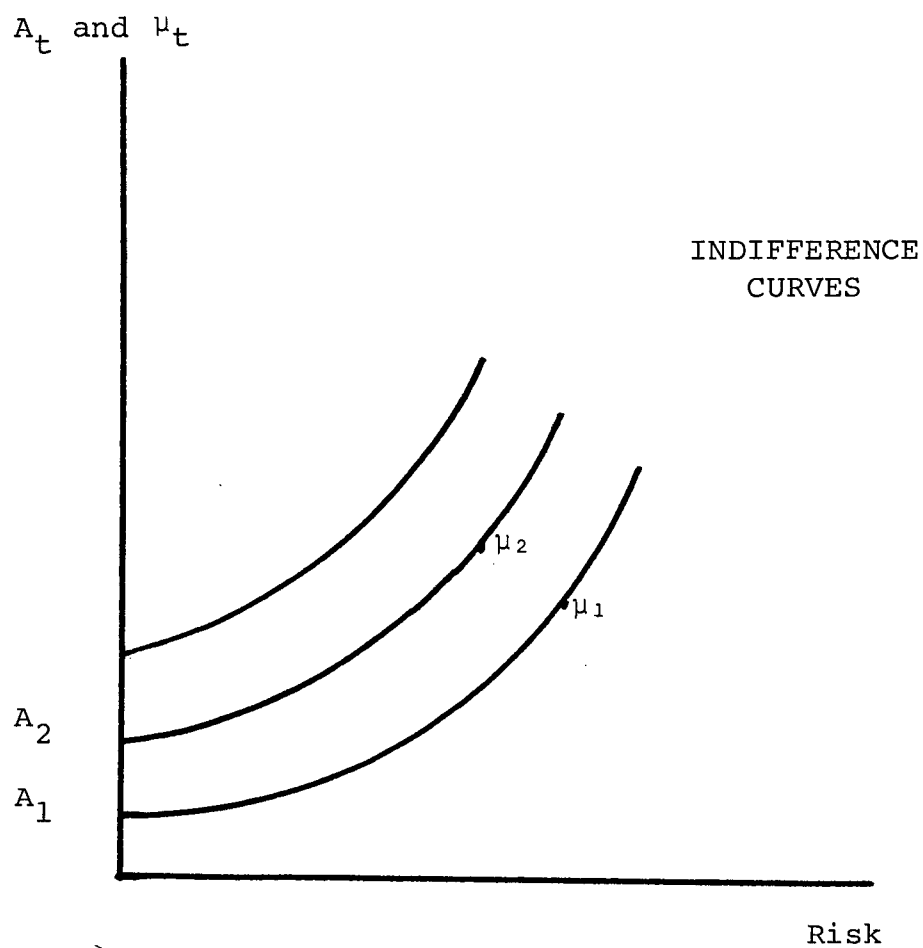
In effect the investor is simply saying that he would be indifferent in period  $t$  between  $\alpha_t \cdot \mu_t$  equal to  $A_t$ , an amount known with certainty, and the expected but uncertain amount,  $\mu_t$ . Figure 2 shows a series of indifference curves between certain returns and progressively more risky expected returns such that  $A_1$  is equivalent to  $\mu_1$ . The factors which determine the riskiness of an investment to an investor are: the dispersion of the subjective probability distribution assigned to the possible cash flows, the form of this distribution, and the extent to which random variations in the cash flows are correlated with the variations in the cash flows of other investments. The larger the certain-equivalent coefficient,  $\alpha_t$  the lower the dispersion, the more attractive to the investor the form of the distribution, and the more random variations

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<sup>1</sup>Van Horne, Financial Management, p. 127.

FIGURE 2

THE USE OF INDIFFERENCE CURVES FOR DETERMINING  
CERTAINTY EQUIVALENT VALUES





in cash flows tend to cancel out with the variations in the cash flows of other investments undertaken.<sup>1</sup>

It should be noted that, unlike the cost of capital approach, under the certainty-equivalent approach the net cash flows are affected by financing costs. The cash flows would be net of risk premia which are reflected in financing costs. Adjustments for these premia should be included in the certainty-equivalent coefficient,  $\alpha_t$ .

This concludes the discussion of the profitability criteria for investment decisions under conditions of certainty and uncertainty. The models which have been presented will be used to discuss the bases for strategy formulation by money market participants.

#### A Behavioural Model of the Money Market Investor

The assumption that profitability criteria for investment decisions provide the bases for the strategy of money market participants will be most readily granted in the case of the money market investor. This participant exchanges funds for income-earning financial assets. Such investment income is usually only a supplementary source of income. Unlike an investment in many types of physical assets, an investment in financial assets generally involves a cash outflow

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<sup>1</sup>Alexander A. Robichek and Stewart C. Myers, Optimal Financing Decisions (Englewood Cliffs, New Jersey: Prentice-Hall Inc., 1965), pp. 79-81.

in only the initial period with subsequent cash flows being inflows. Investment in financial assets is typically simple investment as the expression is used in the previous discussion of profitability criteria.

Since the investor is attempting to maximize his net present worth under conditions of uncertainty, the basic behavioural model which is assumed in this study to determine the investor's behaviour can be stated as follows: an investor attempts to maximize the net present value of the net cash flows associated with an investment as calculated under the certainty equivalent approach. That is, where  $i$  is the risk-free rate of interest and  $a_t$ , the net cash flow associated with the investment at the end of period  $t$  ( $t = 0, 1, \dots, n$ ), is a random variable with a mean of  $\mu_t$  and  $\alpha_t$  is the certainty-equivalent coefficient, the investor's aim is to maximize the net present value as depicted by the following formula:

$$NPV = \sum_{t=0}^n \frac{\alpha_t \mu_t}{(1+i)^t}$$

The investor's aim can be rephrased as seeking that investment opportunity which offers the highest net present value for any planned outlay.<sup>1</sup> The investment decision rule as stated in the previous section outlining the profitability criteria for

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<sup>1</sup>Presumably the more NPV per \$1 of outlay that can be obtained, the more interest an investor would have in reducing further his cash balances in favour of money market instruments. In this connection a profitability index such as NPV/OUTLAY might be useful to reflect the possible existence of elasticity of investment outlays with respect to NPV per \$1 of outlay.

investment decisions demands that only investments with a positive net present value be accepted. This decision rule is modified in the case of the money market investor who it is assumed is faced with the alternatives of investing in a money market instrument or in cash which has a negative net present value since it neither appreciates nor earns interest. Therefore, since money market investments with a net present value greater than the negative net present value of an equal investment in cash will be regarded as being certain to increase the investor's wealth, all others will be rejected. As a result of this modification of the investment decision rule, a money market investment may have a negative net present value.

In the case of the money market investor, since the funds utilized are ultimately intended for other purposes and since the cost of such funds is to be borne by the project for which they were either retained or obtained, the money market investment should not be expected to bear any of the costs of such funds.<sup>1</sup>

The cash flows associated with a money market investment typically involve an outlay of funds by the investor in the initial period followed by net cash receipts in subsequent periods. Included in the outlay are the actual purchase price of the security, any information costs incurred to

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<sup>1</sup>Alternatively, the investor may see the money market investment and the project as one investment.

determine the credit worthiness of the issuer, and any transaction costs associated with the purchase such as dealer commissions or transfer fees (usually no such charges are involved in money market purchases). Net cash receipts are comprised of principal repayments and interest received less any information costs incurred to monitor the credit worthiness of the issuer, and any transaction costs incurred when the investment is terminated. (Usually no such charges are involved if the investment is sold before maturity, such sales being on a net basis, and none is involved if the security is held to maturity).

Where the possibility exists that an investment may be terminated sooner than anticipated, the degree of liquidity possessed by the instrument must be considered by the investor. By definition a highly liquid security has a high probability that a high proportion of the present market value can be obtained on short notice.<sup>1</sup> Under the certainty-equivalent approach the calculation of the net present value of a highly liquid security would not require a reduction of the certainty-equivalent coefficient to allow for the risks embodied in low liquidity. Lack of liquidity can increase the riskiness of an investment by widening the dispersion of the subjective probability distribution assigned to the possible cash flows and by affecting the form of this distribution in a manner deemed undesirable by the

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<sup>1</sup>The concept of liquidity is discussed in detail in Part III of this chapter.

investor. The two characteristics of an asset which stand out as the most important aspects of the liquidity of an asset are marketability and capital certainty. Marketability refers to the proportion of its present market value that can be realized in cash at different time intervals after the decision to sell while capital certainty refers to the predictability with which its expected market value at future dates is anticipated. Both marketability and capital certainty of an asset can affect the dispersion and form of the subjective probability distribution assigned to the possible cash flows. The certainty-equivalent coefficient will vary directly with the proportion of the present market value of the asset that can be realized immediately and with the rate at which that proportion approaches unity. With lower capital certainty the amount which can be realized from the future sale of an asset becomes less predictable and therefore the certainty-equivalent coefficient varies directly with the capital certainty of an asset. A lower level of liquidity results in a lower certainty-equivalent coefficient to adjust the expected net cash inflows to a lower level of certain cash flows and this results in a lower net present value of the investment. The greater the probability that an investment will be terminated sooner than anticipated, the greater the level of liquidity possessed by securities that will be required by a money market investor or the lower the certainty-equivalent coefficient,  $\alpha_t$ . If the probability of an early termination of the investment is

zero, the coefficient will not be affected by the liquidity characteristics of a security.

In summary, the money market investor is herein assumed to seek the maximum net present value per unit of outlay of the cash flows associated with an investment which are regarded as being certain as calculated under the certainty-equivalent approach.

#### A Behavioural Model of the Money Market Borrower

The money market operations of the borrower can also be analyzed in terms of profitability criteria for investment decisions. The market provides a means of financing the investment projects of the borrower and the cost of such financing affects the profitability of the projects undertaken. Whether the borrower uses the net present value criterion or the internal rate of return criterion does not alter the fact that the profitability of an investment varies inversely with the cost of financing such projects. Furthermore, the risk premia associated with such costs are allowed to reduce cash flows under the certainty equivalent approach and all such costs are so incorporated in the cost of capital and do not affect net cash flows in the cost of capital approach.

The cost of capital has been defined previously as the price paid by a firm for funds acquired from its capital suppliers. Obtaining short-term funds from the money market

suppliers involves expenses which may be regarded as the cost of short-term capital. In the cost of capital approach to investment evaluation, the cost of short-term capital would be incorporated into the firm's total cost of capital in proportion to the share of total financing derived from short-term borrowing. It should also be noted that although short-term borrowing appears on a balance sheet in the current liabilities section, many firms continually have such liabilities outstanding and regard them as a permanent part of the capital structure.

Borrowing in the money market as an alternative to bank borrowing or issuing long-term debt may have an adverse effect on the total cost of capital. The evidence available indicates that a higher risk-premium is required by investors for short-term instruments due to the "crisis-at-maturity" problem.<sup>1</sup> This problem arises because refinancing and meeting the final redemption payment may create financial crises and make short maturities riskier than long maturities. Therefore, it is logical to assume that the greater the proportion of a firm's debt which is in short maturities, the smaller the debt-equity ratio acceptable to both share-holders and long-term debt-holders. The risk-premia demanded by these investors may in fact be increased sufficiently to raise the costs of equity and long-term debt to the extent that they may more than offset the savings achieved by issuing short-term instruments and therefore, raise the firm's cost of capital.

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<sup>1</sup>Van Horne, Function and Analysis, pp. 116-118.

Assuming that the borrower attempts to maximize investment profitability, the goal of minimizing the cost of short-term capital provides the basis for the borrower's money market activities. The cost of short-term capital may be viewed as that discount rate which equates the net present value of payments to the suppliers of such funds to the proceeds received by the borrower. That is, where  $k_s$  is the cost of short-term capital, the borrower attempts to minimize  $k_s$  in the following equation:

$$\text{Proceeds to Borrower} = \sum_{t=1}^n \frac{\text{Payments by Borrower}}{(1+k_s)^t}$$

The proceeds to the borrower are comprised of the gross amount received for the instrument issued less the following: any commissions charged by the investment dealer handling the transaction, the costs incurred in drawing up and issuing the instrument or charges by an agent issuing the instrument, and expenses involved in providing information to dealers and lenders. The payments by the borrowers which are discounted by the cost of short-term capital are interest payments which occur during the life of the instrument and/or at its maturity date and repayment of principal which occurs at the maturity date.<sup>1</sup>

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<sup>1</sup>An example (in which taxes are ignored) is shown here of the calculation of the cost of short-term capital. A 10% interest-bearing instrument maturing in two periods having a face value of \$100,000 is sold at par. Commission charges of 1/4 of 1% totalling \$250 are borne by the issuer who also incurs issuing expenses of \$100 and information provided to the dealer and investor costs \$100. Net proceeds to the issuer total \$99,550.



The following all have the effect of lowering  $k_s$ , the cost of short-term capital:

1. An increase of the proceeds to the borrower, given the schedule and level of payments.
2. A decrease in interest payments, given the amount of proceeds and the amount and timing of principal repayment and the timing of interest payments.
3. A decrease in principal repayment, given the timing of payments and the amounts of interest payments and proceeds.
4. An increase or lengthening of the payments schedule, given the amount of payments and the level of proceeds.

Both the credit worthiness of the borrower and the liquidity of the instruments he issues will affect the cost of short-term capital to the borrower. Investors can not be expected to exhibit much interest in an instrument issued by a borrower with a poor credit rating or if the instrument possesses little or no liquidity. Investors can be expected to exhibit more interest in an instrument under either of these circumstances

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The cost of short-term capital to the issuer of approximately 10.3% is found by solving the following equation:

$$\$99,550 = \frac{\$10,000}{(1+k_s)^1} + \frac{\$110,000}{(1+k_s)^2}$$

It can be seen from the above that the proceeds to the issuer being lower than the gross amount realized from the issue results in a higher cost of short-term capital. Had the net proceeds to the issuer been the full \$100,000,  $k_s$  would have been 10% which is the nominal interest rate of the security.

if the interest payments are increased given that the variance of expected returns is unchanged. Higher interest payments would then increase the level of expected returns and the security's net present value. Higher costs of short-term capital would result from the higher interest payments made by the borrower to increase the attractiveness of his security.

In the event that the instruments possess low levels of liquidity but are otherwise acceptable to an investor, the investor may demand that the borrower provide an alternative to the limited demand existing in secondary markets for the instruments. That is, the investor may require the option of a call privilege allowing him to present the instruments to the borrower for principal repayment before the maturity date. The call privilege overcomes the problem of limited liquidity only if the borrower is able to honour the request for early repayment. If the borrower's credit standing is such that early repayment is unlikely to prove difficult, the call privilege virtually assures the investor of being able to terminate his investment prior to the maturity date of the instruments involved. To overcome the increased cost such a contraction of the payment schedule involves, the borrower may agree to the call privilege on the condition that interest payments will be reduced if the option is exercised.

The financial and operating risks involved in the project being undertaken by the borrower are not incorporated into the behavioural model presented above but rather, are included in the particular criterion utilized by the borrower to

evaluate the profitability of the project. Minimization of the cost of short-term capital as described by the model is consistent with profitability criteria for investment decisions and is assumed in this study to provide an explanation of the behaviour of borrowers participating in money market activities.

### A Behavioural Model of the Investment Dealer

In fulfilling the role of middleman or intermediary between the lenders and borrowers utilizing the money market, the investment dealer allocates resources to the performance of this function in anticipation of making a profit. The allocation of resources by the dealer represents an investment on his part. This allows the dealer behaviour model to be based on the profitability criterion for investment decisions which is assumed to determine the dealer's strategic actions.

In carrying out money market operations, a dealer acts as an agent in some transactions and as a principal in others. When possession of the instrument involved passes directly from the issuer to the investor, the dealer is acting as an agent. In such a case the dealer responds to an investor's request for an investment opportunity by locating an issuer who will supply an acceptable instrument to the investor. Alternatively, the dealer may be responding to an issuer's request for funds by locating an investor who regards the instrument as

suitable for his investment needs. In any event the dealer does not take title to the security but merely acts as an agent in matching the issuer's and investor's needs. In rendering this service the dealer incurs expenses involved in the search for participants with matching needs, in obtaining data concerning the issuer's credit worthiness, and in the transmission of these data to the investor. Cash inflows to the dealer resulting from such transactions are mainly comprised of commissions of from  $1/8$  to  $1/4$  of 1% per annum of the par value of the instruments involved. Such commission charges are levied only on the issuer of the security with none being levied on the investor. Other less easily quantifiable benefits to the dealer resulting from good customer relations established through money market operations are the fees, service charges, and commissions for other dealer services ranging from portfolio management to underwriting which money market participants may utilize.

To perform money market operations on an agency basis the dealer must allocate resources to that function in the form of personnel and facilities. It should be noted that such allocation, which represents an investment in money market operations by the dealer, is one which is easily reversed. That is, such personnel and facilities are generally quite easily adapted to other dealer activities in the event that money market operations prove unprofitable. The model assumed

to explain the behaviour of the dealer acting as an agent can be stated as follows: the dealer attempts to maximize the net present value of the expected cash flows associated with money market operations discounted by the dealer's cost of capital. Where  $k$  is the dealer's cost of capital, and the cash flow  $a_t$  at the end of period  $t$  ( $t = 0, 1, \dots, n$ ) is a random variable with mean  $\mu_t$  and standard deviation  $\sigma_t$ , the dealer attempts to maximize NPV in the following equation:

$$NPV = \sum_{t=0}^n \frac{\mu_t}{(1+k)^t}$$

Assuming the cost of capital to be given, the dealer attempts to maximize the net present value by:

1. Allocating personnel and facilities to the money market function only to the extent required to handle the anticipated volume of transactions.
2. Using the most efficient means of matching issuers and investors while restricting search and information gathering and transmission activities to the lowest acceptable levels.
3. Promoting money market participation by issuers and investors to increase market activity by making them aware of the advantages of such participation.

While it would seem that the price of the service (the commission charges) would be varied so as to maximize profits under

a marginal revenue--marginal cost approach, this is not done. Such behaviour is not unusual given the noncompetitive nature of the schedules of fees and commission charges adhered to by members of the investment dealer community.

It can be seen from the above that the investment in money market operations by a dealer acting as an agent has relatively little risk involved since the investment can be easily reversed and such risk as does exist can be minimized by increasing the accuracy of forecasts of the future volume of money market activity.

When the dealer acts as principal in a money market transaction, rather than merely arranging the change of ownership of a security from issuer to investor with the concurrent exchange of funds, instruments are either being purchased by the dealer for his own inventory or being sold by the dealer from his inventory. The essential difference between a transaction in which the dealer is acting as an agent and one in which he acts as principal is that in the former case the dealer does not at any time acquire the ownership of the security involved while in the latter case he does.

The motivation for a purchase of a money market instrument by a dealer differs from that involved in a similar purchase by a money market investor. The investor regards such an instrument as an income earning store of wealth. The dealer regards such a purchase as an investment in his money

market operations in the same sense as his allocation of resources to this function as embodied in personnel and facilities is an investment in his money market operations. Generally, a dealer does not purchase a security with the intention of holding it until it matures and collecting the interest and principal payments. Rather, he intends to sell it to an investor at a price which exceeds the purchase price by an amount which represents a return sufficient to justify his investment in such operations.

The evaluation of the profitability of such operations involves the same approach as that used in the case where the dealer acts as an agent. If the net present value is positive when the expected future cash flows are discounted by the firm's appropriately weighted cost of capital, the investment in money market operations increases the dealer's net worth. However, unlike the operations on an agency basis, the cost of capital is no longer constant. Since the financing of the investment in money market instruments is composed of short-term borrowing in the form of call loans and day-to-day loans and since this is the major part of investment in money market operations by dealers, the weighted average cost of capital used as a discount rate can be approximated by the interest rate on such loans and will vary directly as these rates vary. Furthermore, since the interest rate on such loans can be expected to vary in accordance with changes in the level of interest rates of money market instruments and since the

price change of a financial asset is inversely related to a change in the level of interest rates, and since the rates on such loans are adjusted daily, a rise in interest rates results in the dealer incurring higher costs in financing an investment in inventory which is declining in market value. Conversely, falling interest rates allow the dealer to enjoy lower financing costs for an investment in inventory with an appreciating market value.

It can be seen from the above that greater financial risk is involved in the dealer's investment in money market operations when he acts as a principal. In addition, as well as having to forecast the volume of money market activity, the dealer must make forecasts of the market prices which will prevail in the future. The difficulties encountered in accurately forecasting changes in interest rates which affect both financing costs and security prices encourages the dealer to maintain low levels of inventory and to minimize the length of time an instrument is intended to be held in inventory. The difficulties in accurately forecasting interest rate changes should not deter the dealer from holding some inventories. Even if it is equally probable that interest rates will either fall or rise, the expected value of the change in security prices is still positive. This downside protection results from the fact that the capital gains and capital losses resulting from equal absolute or equal proportionate decreases and



increases in yield are asymmetric; that is, a decrease in yields raises security prices more than the same increase in yields lowers prices.<sup>1</sup> Since the yield of outstanding money market instruments can be expected to change as the current interest rates in the market change, the dealer can expect to enjoy this downside protection.

Motivation for holding high levels of inventory arises from the dealer's desire to minimize profits foregone by being unable to provide instruments demanded by investors. This motivation prompts the dealer to promote money market participation by issuers and investors. When a dealer is temporarily unable to locate an investor willing to purchase the instruments offered by an issuer and when an issuer offers securities on a net basis to the highest bidder, the dealer will purchase the securities and later sell them to an investor when demand materializes. Such action by the dealer may result in lower cash receipts to the dealer in the short run, but by facilitating the borrowing activities of the issuer, is expected to promote future utilization of the money market by the issuer and thus increase the probability of future cash receipts for the dealer. To encourage investor participation, the dealer may purchase securities when early termination of an investment is sought by an investor and another investor

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<sup>1</sup>Burton Gordon Malkiel, The Term Structure of Interest Rates (Princeton, New Jersey: Princeton University Press, 1966), p. 55.

willing to purchase the instrument cannot be located. Such activity by the dealer increases the liquidity of money market instruments thereby reducing the risk to the investor of money market participation and thus encourages participation by the investor. Such participation is desired by the dealer since it results in cash inflows to him.

In summary, whether the dealer acts as an agent, as a principal, or both in his money market operations, the behaviour of the dealer is assumed herein to be explained by his attempts to maximize the net present value of the expected cash flows discounted by the firm's appropriately weighted cost of capital. The greater the dealer's investment in money market instruments for his inventory, the closer the weighted average cost of capital to the weighted average cost of day loans and call loans used for financing such investments. Consistent with this goal is the preference for operations on an agency basis with the lower associated levels of risk. Involvement in operations requiring inventories of instruments results from the dealer's desire to obtain the cash benefits which can be realized from such operations and to promote money market participation by issuers and investors which can be expected to result in increased future cash inflows to the dealer.

### A Further Aspect of Participant Interaction

A phenomenon which is consistent with the behavioural models outlined above but which represents an aspect of the interaction between the participants involving a conflict of interest should be mentioned here. Transactions costs are viewed by both investors and borrowers as detrimental to their profitability objectives since these costs respectively reduce the net present value of the investment and increase the cost of short-term capital borne by these participants. Inasmuch as transaction costs accrue mainly to the investment dealer, such costs as are incurred enhance the dealer's profitability as they represent cash inflows.

It may be recalled from the example showing the calculation of the short-term cost of capital to the money market borrower that the dealer's commission charges were the main factor in causing the effective interest rate to be greater than the nominal rate. If no charges were levied by the dealer on the investor, the nominal interest rate would be identical to the yield return to the lender to maturity. The greater the difference between the effective yield cost to the issuer to maturity and the yield return to the lender to maturity, the lower the level of operational efficiency of the money market.<sup>1</sup>

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<sup>1</sup>J. Ross Peters, Economics of the Canadian Corporate Bond Market (Montreal: McGill-Queen's University Press, 1971), p. 51.

Therefore, the lower the dealer's commission charges, the greater the operational efficiency of the money market.

The motivation for the dealer to increase transaction costs is dampened by the knowledge on his part that the resultant lower profitability of borrowers and/or investors may cause them to cease to participate in money market operations. Similarly, the motivation for borrowers and investors to threaten withdrawal in order to force the dealer to lower transaction costs is tempered by the argument that without the intermediating function of the dealer induced by profits arising from such transaction costs, a borrower would face higher costs of short-term capital and investors would have difficulty in locating suitable investment opportunities. If issuers and investors forced the dealer to set charges at a level just profitable enough to keep the dealer from leaving the industry, the optimal in operational efficiency in the money market would be achieved with regard to the dealer commission component of total transactions costs.

Thus, it can be argued that an awareness on the part of the participants of their interdependencies and a familiarity with the basic behaviour models explaining participant behaviour are necessary to ensure the endurance of the money market.

### III. THE NATURE OF THE MARKET'S STOCK-IN-TRADE

#### Tangible Assets Versus Financial Assets

As the money market is concerned with financial rather than tangible assets, and since this implies that these two types of assets differ, greater insight into the nature of the money market may evolve from a survey of some of the properties of tangible and financial assets.

1. Tangible assets are material things which are highly specific in form and use while in contrast financial assets are predominantly generalized claims against current production.
2. Tangible assets are held primarily for the physical services that they yield directly while financial assets are held primarily as an attractive income-earning store of purchasing power.
3. Tangible assets are highly complementary and (except for consumer durables) can be made to yield their services in saleable form only with the cooperation of other productive factors. Financial assets are largely supplementary, being much less dependent on the presence of other cooperative factors.
4. Tangible assets can be increased only slowly by net real investment while financial assets can be created or destroyed virtually instantaneously by the act of borrowing or repayment.
5. Tangible assets are less liquid than financial assets, where liquidity characterizes the ease of converting an asset into money.<sup>1</sup>

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<sup>1</sup>These aspects of tangible and financial assets are outlined in Moore, op. cit., pp. 11-12.

These attributes of tangible and financial assets indicate that each type is sought for the specific service it provides. Financial assets are sought as income-earning stores of purchasing power. In addition to being held as a form of wealth, financial rather than physical assets are held by nonfinancial business firms for transactions and precautionary purposes.<sup>1</sup> While the financial assets involved in the capital market are both liquid and tradeable, it is the money market which provides the greatest liquidity. Since liquidity is an important aspect of the money market's functions it would be appropriate at this time to elaborate on this rather complex concept.

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<sup>1</sup>The three motives for holding cash outlined by John Maynard Keynes, The General Theory of Employment, Interest, and Money (New York: Harcourt, Brace & World, Inc., 1936), pp. 170-174 are the transactions motive, the precautionary motive, and the speculative motive. The transactions motive is the need for cash to meet payments arising in the course of business such as purchases, wages, taxes, and dividends. The need to maintain a cushion or buffer to meet unexpected contingencies provides the precautionary motive for holding cash. The more predictable the cash flows of the business, the less precautionary balances are needed.

The speculative motive relates to the holding of cash in order to take advantage of expected changes in security prices. When interest rates are expected to rise and security prices to fall, this motive would imply that the firm should hold cash until the rise in interest rates ceases to avoid a loss in security value. Conversely, when interest rates are expected to fall, cash may be invested in securities since the firm will benefit from any subsequent fall in interest rates and rise in security prices.

Although Keynes presented these motives as being the bases for holding cash, they would be more appropriately used as the bases for holding highly liquid assets including both cash and all near-money assets. It would seem reasonable to

## Liquidity

In the simplest terms liquidity may be defined as the ability to realize value in money.<sup>1</sup> To portray the complex aspects of the concept of liquidity, however, it is necessary first to state precisely the following five definitions.<sup>2</sup>

1. The market value of an asset may be defined as the maximum amount of money obtainable from the sale of the asset, net of selling costs, after all useful prior preparations for the sale have been made.
2. The capital certainty of an asset refers to the predictability with which its expected market value at future dates is anticipated.
3. The marketability of an asset refers to the proportion of its present market value that can be realized in cash at different time intervals after the decision to sell. In perfect markets there are always buyers ready to purchase assets offered at the

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expect that a portion of a firm's transactions and precautionary balances would be held in the form of marketable securities.

For the most part, nonfinancial business firms do not hold cash for the purpose of taking advantage of expected changes in interest rates and this results in the exclusion of speculative purposes as a reason for holding financial assets here.

<sup>1</sup>This simple definition of liquidity is that utilized by Van Horne, op. cit., p. 14.

<sup>2</sup>These definitions and the ensuing discussion of the concept of liquidity are based on a discussion on the topic of liquidity by Moore, op. cit., pp. 12-14.

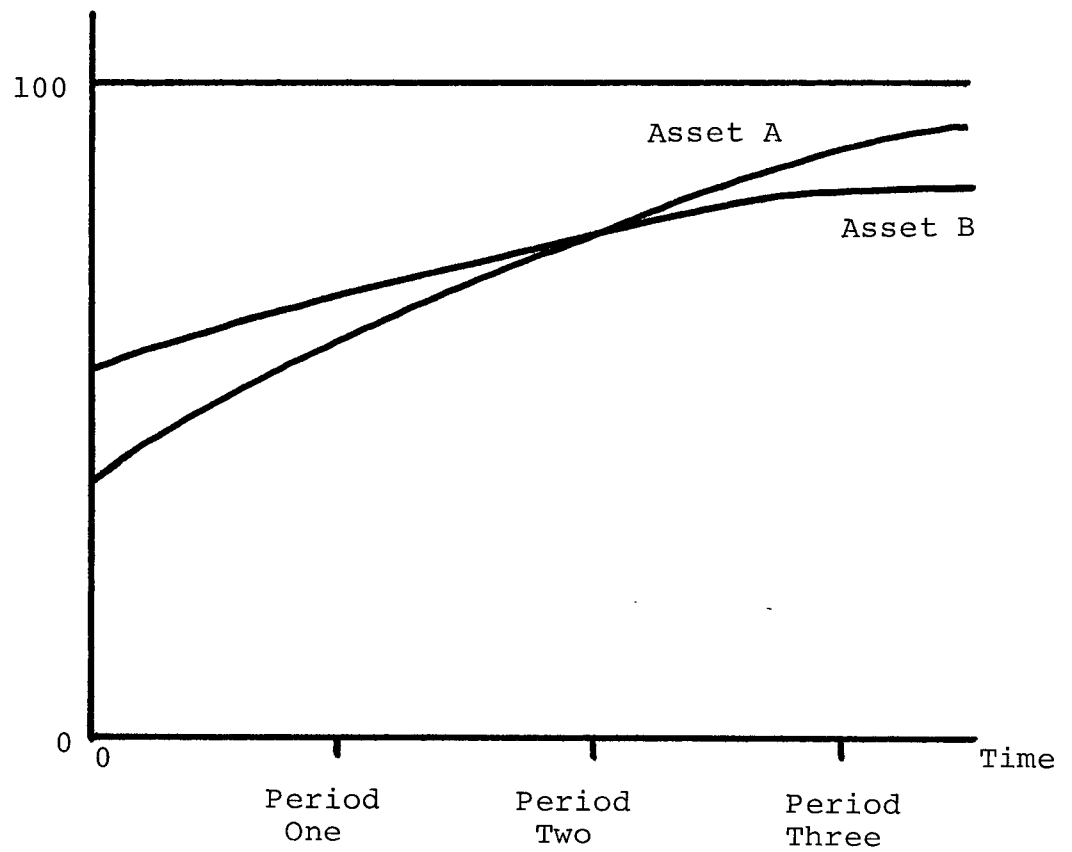
present market price. In imperfect markets, however, a search may have to be affected to locate buyers who will make purchases at present market prices. As the length of notice given for the sale is increased and the duration of the search activity is extended, buyers willing to make purchases at prices approaching the present market value will be located. Since marketability is governed by the price received (net of all costs incurred in effecting the sale) relative to the length of notice given, it is a functional relation as depicted in Figure 3 below. Differences in the duration of search activity required for different assets result in differences in marketability among assets which, as indicated in Figure 3, make impossible a simple unique ordering of assets by marketability.

4. The realizability of an asset may be defined as the proportion of its value that can be realized in cash after some short period of time. Assets can be ordered uniquely in terms of their realizability.
5. The reversibility of an asset may be defined as its market value as a per cent of its cost of acquisition at the same time.



FIGURE 3  
MARKETABILITY

Percentage of Present  
Market Value Realized



Source: Basil J. Moore, An Introduction to the Theory of Finance, (New York: The Free Press, 1968), p.13.

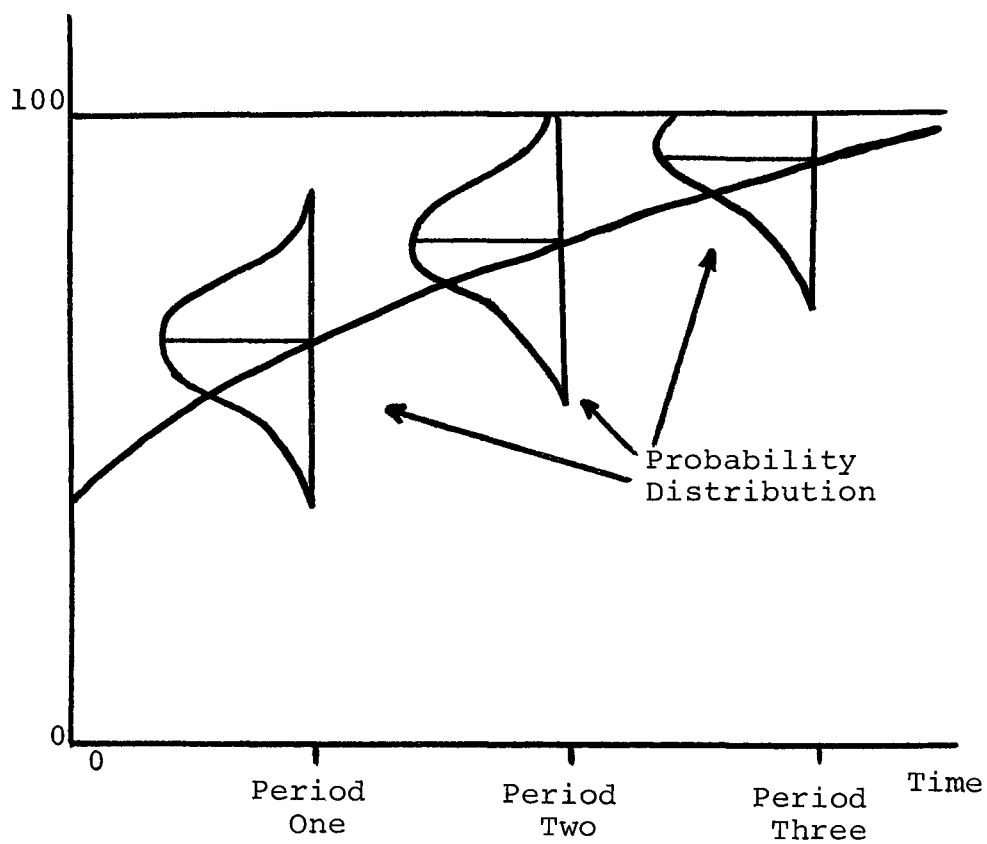
By using these definitions it is possible to express more precisely what is meant by the term liquidity. An asset which can be converted into money quickly, conveniently and at little cost combines the distinct characteristics of high marketability and high capital certainty. Liquidity then indicates the degree to which assets combine the two properties of marketability and capital certainty. The financial assets traded in the money market tend to be very liquid in that they possess both high marketability and high capital certainty. Their liquidity results from their high quality (they are virtually default-free), shortness of term to maturity (little response to changes in interest rates), and the fact that a broad market exists for most of the instruments involved.

An attempt to graphically portray the concept of liquidity is shown in Figure 4 below. This diagram combines the concepts of marketability of an asset as it refers to the proportion of its present market value that can be realized in cash over time and that of capital certainty as the probability distribution which can be assigned to such realizable proportions of present market value. It should be noted that the probability distribution representing the concept of capital certainty may diverge significantly from the symmetrical form of a normal distribution. In the case of a highly liquid asset the distribution would be skewed toward the higher levels of present market value realizeable. The distribution would be skewed toward the lower levels in the case of an illiquid asset having a substantial probability of having low levels of the present market value realized.

FIGURE 4

## THE RELATIONSHIP BETWEEN MARKETABILITY AND CAPITAL CERTAINTY

Percentage of Present  
Market Value Realized



#### IV. THE HISTORY OF THE MARKET AND ITS ROLE IN MONETARY POLICY

##### Creation of the Canadian Money Market

The Canadian money market was in fact deliberately created by the monetary authorities. Although the implementation of monetary policy via the market receives considerable attention today, the market was created to provide a source of government financing. An account of the development of the market by J.S.G. Wilson<sup>1</sup> indicates that the first step to create a market might be said to have occurred in March 1934, when arrangements were made to sell Treasury Bills by tender. The next major development came in January 1953, when the monetary authorities in Canada decided to grant "limits" to certain dealers for the purpose of securing accommodation on the basis of a sale of Treasury Bills under an agreement to repurchase. By this means, it was hoped to increase non-bank holding of Treasury Bills. The next step, an important one which facilitated the holding of inventories of Treasury Bills by dealers, occurred in April 1954 when the Bank of Canada invited the chartered banks to make available to the dealers the facilities for borrowing on a day-to-day basis. In November 1955 the Bank of Canada got the chartered banks to agree to maintain on a daily average basis a 15 per cent minimum ratio

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<sup>1</sup>J.S.G. Wilson, Monetary Policy and the Development of Money Markets (London: George Allen & Unwin Ltd., 1966), pp. 271-88.

of liquid assets to deposits, including the mandatory 8 per cent in cash. This had the result of ensuring that an appropriate amount of activity was maintained in the short-term money market, by requiring the banks to hold at least a minimum total amount of Treasury Bills and day-to-day loans.

### Monetary Policy

Subsequently the money market has become an important vehicle for the implementation of monetary policies. Via the market the Bank of Canada attempts to contract or expand the money supply by the sale or purchase respectively of Treasury Bills and occasionally short-term Government bonds. Monetary policy has been used as an instrument to achieve the sometimes-conflicting objectives of price stability, maintenance of full employment, adequately rapid economic growth, and management of balance of payments problems. There have been suggestions that the monetary policies of the Bank of Canada have been far from satisfactory and that alternative guiding principles for the use of monetary policy should be considered.<sup>1</sup> In any event, the market still continues to play the role of a vehicle for monetary policy implementation.

In its open market operations the Bank of Canada is primarily attempting to affect the size of the money supply. Since short-term interest rates can change without corresponding

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<sup>1</sup>For a discussion of the objectives of Canadian monetary policy, see Harry G. Johnson, Essays in Monetary Economics (London: George Allen & Unwin Ltd., 1967), particularly pp. 53-54 and 196-97.

changes in the long term rates in the capital market<sup>1</sup> and since open market operations inevitably affect the interest rate levels of the instruments being traded, the Bank carries out its operations in the short end of the market--in the money market, that is. The policy to restrict operations to the short-term money market has come to be known as the "bills only" policy. The primary argument for such a policy is that interference with the financial market is at a minimum when open market operations are restricted to short-term issues where price fluctuations are small and trading volume is large.<sup>2</sup>

#### V. FUNCTIONS OF THE MONEY MARKET: AN EXAMPLE

It has been said that the money market provides borrowers with short-term accommodation that may be difficult or more expensive to obtain elsewhere.<sup>3</sup> That this is possible may be shown by the following hypothetical situation.

Consider an economic unit which wishes to either become a deficit spending unit or to increase its deficit position if it is already a deficit unit. Assuming that this unit's suppliers or potential suppliers refuse to extend trade credit to

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<sup>1</sup>This phenomenon is discussed by Van Horne, op. cit., p. 77.

<sup>2</sup>A discussion of the "bills only" argument is presented in G. Walter Woodworth, The Money Market and Monetary Management (New York: Harper & Row, Publishers, 1965), pp.258-59.

<sup>3</sup>Douglas H. Fullerton, The Bond Market in Canada (Toronto: The Carswell Company Limited, 1962), p. 172.

the unit and that it is unable to locate a willing lender among the other economic units it is able to contact, it must turn, in the absence of a money market, to the banking community. However, the banks may be unable to grant a loan to the unit if the banks are in a fully loaned position. Simultaneous to the deficit unit being denied a loan there undoubtedly exists in the banking system a depositor or surplus unit which could be induced to exchange all or part of his savings for the deficit unit's promissory note or similar debt instrument. Access to this surplus unit when a money market exists is provided via an investment dealer carrying out money market operations who will, for a fee, locate a surplus unit willing to make such an exchange. Moreover, if the dealer is temporarily unable to locate such a surplus unit but either has sufficient available funds of his own or is able to locate a surplus unit willing to lend funds to him (assuming the dealer is unable to obtain a bank loan), he may purchase the deficit unit's instrument himself. The existence of a money market facilitates the financial transaction sought by the deficit unit and also prevents the disturbance to the banking community from being serious. The funds obtained by the deficit unit would be exchanged for goods or services and would eventually be redeposited in the banking system by the suppliers of these goods and services.

Part of the disturbance that the banks would experience, however, would be a readjustment of total reserves caused

by any change of the distribution of total deposits between the time and demand forms. Supposedly the time deposit holders being less liquidity-oriented and more interest-income-oriented, would respond more than demand deposit holders to the higher rates offered by money market borrowers. If the funds obtained by the deficit units were predominantly from time deposit holders and returned to the banking community in the predominant form of demand deposits, the composition of total bank deposits will have changed. Since a higher level of reserves must be maintained by banks against demand deposits, the total bank reserves would have to be increased.

If the funds were not deposited in the bank from which they were withdrawn by the surplus unit, the bank which was the original depository would suffer a shortage of reserves and the new depository would have excess reserves (assuming all banks were originally fully loaned that is, held no excess reserves). The money market permits the imbalance to be quickly overcome. Overcoming such an imbalance involves the intermediating or middleman participant of the money market, the investment dealer. The banks have outstanding day-to-day loans which have been made to the dealer. The dealer utilizes such loans to purchase money market instruments for his own trading inventory to ensure a ready supply of such securities to meet the demand for them by surplus units and also to facilitate the deficit unit's borrowing activities when suitable surplus units cannot be immediately located. The bank with in-

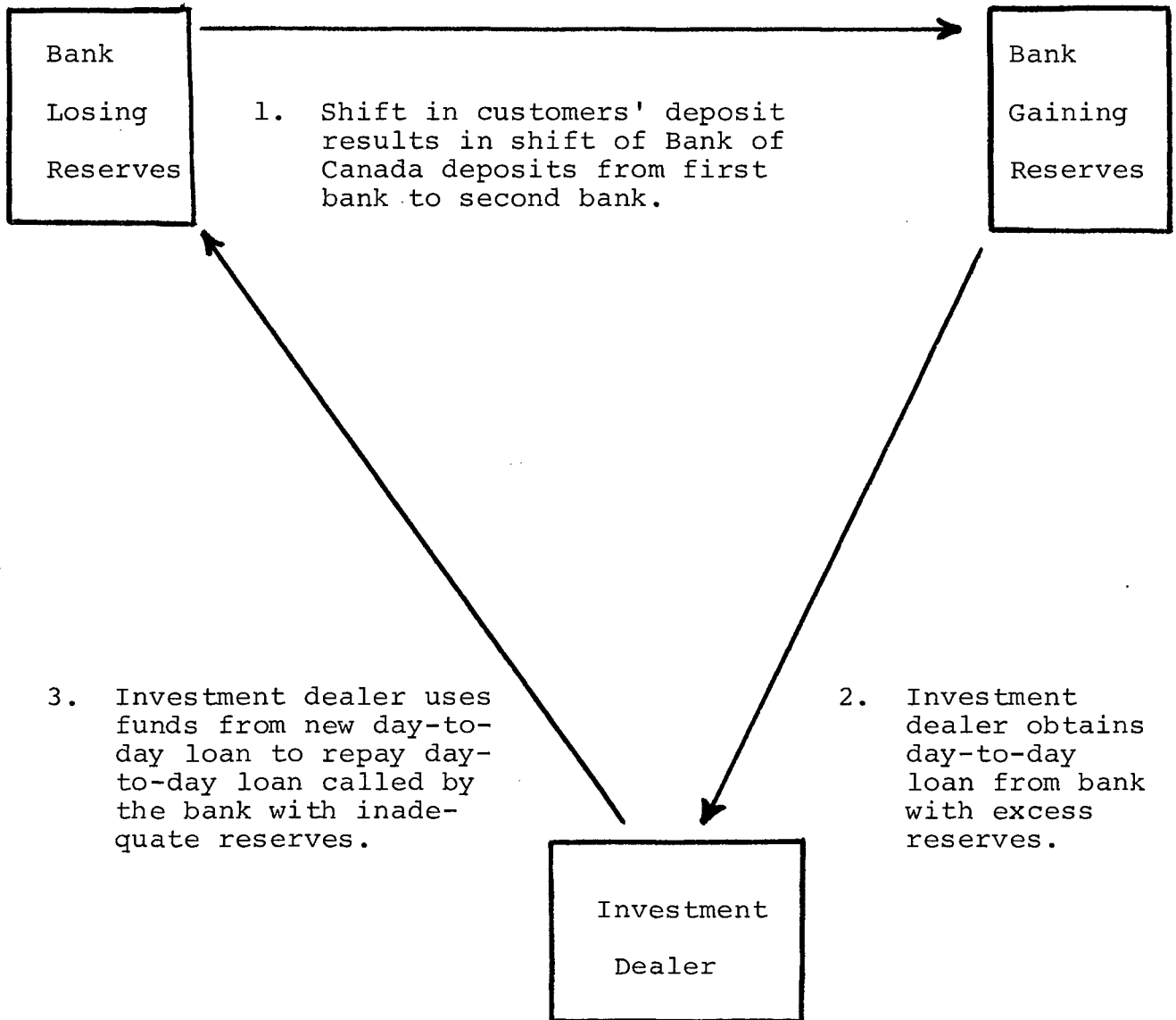


sufficient reserves simply calls sufficient day-to-day loans to reduce its loans to the level permitted by its new level of deposits. The new depository with excess reserves is sought out by the dealer whose day-to-day loan has been called, a new loan is arranged and the total banking system remains unchanged with regard to total deposits and loans but the distribution among the banks may have changed. This adjustment is shown graphically in Figure 5.

Thus the money market has provided the deficit unit with short-term accommodation but it must be explained why the lender or surplus unit would be encouraged to participate. The surplus unit can only be induced to exchange his loan to the bank for a loan to the deficit unit if the exchange leaves him better off. If the risk were the same and if no loss of liquidity were incurred the exchange would be made if higher interest income were expected. The greater the risk and the loss of liquidity, the greater the required expected interest income. A well developed money market should keep risk to a minimum by a thorough screening of borrowers and minimize the loss of liquidity by facilitating broad markets for borrowers' liabilities. The result is that a surplus unit can obtain higher income by investing in money market securities than by leaving his funds on deposit in the bank. In many cases, the rate of interest necessary to induce such an exchange is below the rate which would be paid by the deficit unit if the loan could be obtained from the bank. In any event the rate would be lower than would be the case in the absence of a money market in

FIGURE 5

ADJUSTMENT OF BANK RESERVE POSITIONS  
THROUGH THE MONEY MARKET



Source: J.W. O'Brien and G. Lerner, Canadian Money and Banking, Second Edition, (Toronto: McGraw-Hill Company of Canada Limited, 1969), p.167.

which case an exchange would have to be negotiated between the borrower and the potential lenders which could be located by the borrowers.

The money market can be seen as benefiting the borrower in two ways. Short-term loans are provided which otherwise would be difficult to obtain and/or more expensive. By doing so the money market facilitates economic activity and it does so without the interference of fiscal or monetary authorities. The increase in government deficits or reduction of surplus were not necessary. The stock of money was not affected but the money market has in fact increased the velocity of money since greater economic activity is carried out without an increased stock of money.

## CHAPTER III

## CANADIAN MONEY MARKET INSTRUMENTS

The money market in Canada deals in a variety of instruments but they are all of a short-term nature. Although the point of delineation is an arbitrary one, the money market, by definition, includes only securities with less than three years to maturity. In practice, however, the bulk of market activity occurs in securities with a term to maturity of less than one year.<sup>1</sup> The list of securities traded in the money market is quite extensive and includes those shown in Table II.<sup>2</sup>

As at December 31st, 1968, some \$16 billion in securities having less than three years to maturity had been invested.<sup>3</sup> There has been considerable growth in the market since then as evidenced by the fact that the securities in the market issued by the Government of Canada and the chartered banks (the two largest sources of money market securities) had at October 28th, 1970 grown to over \$15 billion,<sup>4</sup> an increase of approximately 20 per cent since the end of 1968.

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<sup>1</sup>Wood Gundy Securities Limited, The Canadian Money Market, 1969, p. 9.

<sup>2</sup>Ibid., pp. 16-31.

<sup>3</sup>Ibid., p. 10.

<sup>4</sup>Bank of Canada, Statistical Summary (November 1970), various pages.

TABLE II

## INSTRUMENTS TRADED IN THE CANADIAN MONEY MARKET

Government of Canada Treasury Bills

Short-Term Canada and Canada Guaranteed Bonds

Provincial Treasury Bills or Promissory Notes

Provincial Debentures (as the term to maturity  
becomes less than three years)

Municipal Promissory Notes

Chartered Bank Securities:

Bearer Deposit Notes

Deposit Receipts

Term Notes

Certificate of Deposit

U.S. Dollar Deposits

Bank Swapped Deposits

Eurodollar Negotiable Certificates of Deposit

Banker's Acceptances

Day-to-Day Loans to Investment Dealers

Collateral Loans to Investment Dealers

Trust Company Deposits:

Deposit Receipts

Short Term Guaranteed Trust Certificates

Guaranteed Investment Certificates

Term Certificates Over One Year

Loan and Mortgage Company Securities

Acceptance and Finance Company Short-Term Promissory Notes

Prime Commercial Paper

## I. THE STOCK IN TRADE OF MONEY MARKET DEALERS

Some of the securities shown in Table II are sold to short-term investors by the issuers of the instruments, such as Term Notes which are the liabilities of chartered banks and Guaranteed Investment Certificates which are the liabilities of trust companies. While such instruments are designed to fulfill the needs of respective segments of the total demand for short-term investment opportunities and facilitate the flow of funds between economic units, they are not the instruments of primary interest here. Rather, those instruments which make up the stock in trade of the money market operations of investment dealers are to serve as the focus of this chapter. These instruments are briefly described below.<sup>1</sup>

### Government of Canada Treasury Bills

Treasury bills are direct obligations of the Government of Canada. They are sold by auction by the Bank of Canada on behalf of the Minister of Finance every Thursday for delivery Friday. Bills are normally issued to mature in 91 or 182 days although terms of 270 and 365 days have occasionally been issued.

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<sup>1</sup>The descriptions of these various instruments rely heavily on the publications of three Canadian Investment Dealers; The Canadian Short Term Money Market: Instruments and Formulae by Burns Bros. and Denton Limited, Canada's Short-Term Money Market by Dominion Securities Corporation Limited, and The Canadian Money Market by Wood Gundy Securities Limited as well as from discussions with the personnel of various money market dealers and Bank of Canada officials.

Because treasury bills are issued weekly, depending on the particular day of purchase, they are available in maturities of from 1 to 182 days. Only chartered banks and investment dealers may submit bids in response to the call for tenders at noon each Thursday but investors may purchase bills (which are only issued in bearer form) in denominations of \$1,000, \$5,000, \$25,000, \$100,000 and \$1,000,000 from these sources.

Treasury bills carry no coupons but are issued at a discount to mature at par. The increment between the purchase price and the sale price or the redemption value at par is fully taxable as income. These instruments are traditionally traded on a "yield to maturity" basis rather than on a price basis. The price of a treasury bill can be calculated using the following formula:

$$\text{Treasury Bill Price} = \frac{100}{100 + \frac{(\text{Yield} \times \text{Days})}{365}}$$

Since the yield is that discount rate which equates the purchase price to the net present value of future cash flows associated with the instrument, the yield here is identical to the internal rate of return of the investment represented by the purchase price.

The Bank of Canada uses treasury bills as a medium for conducting its open-market operations and bills are an important part of the chartered banks' secondary reserves. Because

they are obligations of the Government and are default-free and because a highly elastic demand exists for them on the part of banks and many other investors, treasury bills are the most marketable of all short-term securities. Due to this great liquidity the equivalent dollar spread between the bid and asked yields is the narrowest of all money market instruments.

#### Short-Term Canada and Canada Guaranteed Bonds

Short-term Canada bonds are one of the most widely held money market instruments, being almost as liquid as treasury bills. The liquidity of these short-term federal government obligations derives from their being guaranteed by the government and the active market enjoyed by the instruments. They are available in bearer form with coupons attached. "Short Canadas" are traded at dollar prices plus accrued interest.

#### Provincial Securities

The liquidity and yield level of provincial securities depend on the characteristics of the instrument and the credit strength of the issuing body. Provincial bonds are priced and traded in the same manner as Government of Canada Bonds and as the term to maturity of outstanding debenture issues becomes less than three years, they become money market instruments.



A provincial money market instrument possessing a high level of liquidity (but less than that possessed by federal treasury bills and short Canadas) is the parity-type bond issued by Crown Corporations of the Province of British Columbia. It is guaranteed as to interest and principal by the Province and is cashable at par at any time. It bears interest which is payable quarterly.

Provincial treasury bills or promissory notes of many types are traded by money market dealers. Some are sold at par and bear a fixed rate of interest or coupon while others are sold at a discount without a coupon and many coupon-discount promissory notes are issued. Notes are generally issued for terms under one year, although terms to three years are available and certain provinces will issue notes on a "tap basis" to conform exactly to the specific maturity required by the lender. Other provinces auction their bills in a manner similar to that used to sell Government of Canada treasury bills. \$100,000 denominations are generally available in either bearer or registered form.

All of the provinces, either directly or through their various guaranteed authorities, have used the money market for short-term financing. Repayment of provincial and provincially guaranteed borrowings rests not only upon the general credit of the issuing government, but upon its taxing powers as well. As a result, they are second only to federal government obligations in credit standing.

### Municipal Promissory Notes

Municipal promissory notes are issued in the same forms as provincial paper. Liquidity, however, is more limited. While terms vary considerably, most are less than 90 days and can often be arranged to meet the lenders' requirements. Denominations of \$100,000 or more in either full registered or bearer form can be obtained. Certain municipalities will issue their notes on a demand or call basis.

Municipalities tend to issue notes heavily in the winter months, in anticipation of spring or summer tax collections. Funds may also be required to finance capital expenditures for which long term debt will subsequently be issued. Municipal borrowings fall under the surveillance of the appropriate authority in each province. The restrictions as to purpose and amount vary from province to province.

### Bankers' Acceptance

A Bankers' acceptance is a negotiable time bill of exchange, or commercial draft, drawn on a chartered bank by a borrowing company, and accepted, or guaranteed, by the bank. When the bank accepts the bill, it becomes liable for its payment, so an acceptance is, in effect, a postdated certified cheque. The chartered bank accepting the bill

charges the drawer a fee which varies with the credit of the drawing company. The drawing company then sells the acceptance to a money market dealer on a discount basis and the dealer may offer it to investors, borrow "day money" against it, or enter a purchase and repurchase agreement with the Bank of Canada. Acceptances are eligible for rediscount at the Bank of Canada, and as security for day-to-day loans with the chartered banks.

Under the provision of the Bank of Canada Act, a bankers' acceptance is limited to a period not exceeding 90 days from the date of acceptance and maturities range from 30 to 90 days. An acceptance must be drawn in connection with the production or marketing of goods in order to comply with provisions of the Bank of Canada Act. It is not necessary, however, that the acceptance be related to any specific transaction in trade. These instruments are useful to smaller non-financial corporations as any corporation that qualifies under the Act can draw them whereas only the largest corporations can issue commercial paper successfully. Short-term lenders have found these instruments attractive as they are higher yielding than Government of Canada treasury bills and are guaranteed as to payment by a chartered bank. Acceptances are created by the chartered banks in denominations of \$100,000 or any multiple thereof.

#### Bearer Deposit Term Notes

Bearer deposit notes are issued by the chartered banks

for terms ranging from one week to one year in denominations in multiples of \$100,000. They are sold on a "treasury bill type" discount basis to yield the investor the quoted rate and are secured by the general credit of the issuing bank. Money market dealers buy these notes from the chartered banks and reoffer them on sale and repurchase agreements on terms from twenty-four hour demand to one year.

Other Chartered Bank Short-Term Investment Vehicles,  
Trust Company Deposits and Loan and Mortgage  
Company Securities

Unlike bankers' acceptances and bearer deposit notes which are frequently traded by money market dealers as principals (that is, from their own inventories of short-term investment vehicles), such chartered bank instruments as deposit receipts, term notes, certificates of deposit, U.S. dollar deposits, swapped bank deposit receipts, and Eurodollar negotiable certificates of deposits are arranged by dealers on an agent basis. This latter arrangement also applies to the short-term investment vehicles of trust companies such as deposit receipts, short-term guaranteed trust certificates, guaranteed investment certificates, and term certificates over one year as well as to the securities of loan and mortgage companies which are similar to those of the trust companies. These instruments (which are placed by money market

dealers on an agent basis) are actively marketed by the respective issuers in competition with the money market dealers. Such instruments vary widely in the degree of liquidity they possess since many are not negotiable (that is, they are nontransferable) and many cannot be called before maturity or only with negotiation with the issuer and then often with penalties.

Realizing that such instruments may, however, fill specific needs of many investors, money market dealers are obliged to be in constant touch with this segment of the market. Since interest rate differentials between national money markets can result in foreign securities offering higher yields than those available in the domestic market, dealers must keep abreast of foreign market developments and fluctuations of exchange rates.

#### Acceptance and Finance Company Short-Term Promissory

##### Notes

An appreciable amount of the financing needs of acceptance and finance companies is raised via the money market.<sup>1</sup> This short-term financing is viewed as a permanent component

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<sup>1</sup>Canadian acceptances and finance company short-term issues are placed in investors' hands by the investment dealers. This is in sharp contrast to the situation in the United States where some three-quarters of the total of such paper outstanding had, in 1968, been placed directly with investors by the issuers themselves. This aspect of the U.S. market is cited in: James C. Van Horne, Financial Management and Policy (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1968), p. 413.

of such firms' capital structure. The proceeds of the finance paper issued facilitate the provision of installment credit to merchandisers and to individual consumers. A wide range of consumer durable goods are financed by these companies at both the wholesale and retail levels.

Finance paper is issued in two main types, that is secured and unsecured. Collateral trust notes are secured under the terms of a trust indenture by the pledge and deposit of receivables with a trustee in addition to the usual security of a floating charge on the assets of the company. From 112½ per cent to 125 per cent of the amount of notes outstanding is the amount of receivables pledged. Unsecured finance paper is usually unconditionally guaranteed as to principal and interest by a parent corporation whether the sales finance company involved is a subsidiary of either Canadian or U.S. manufacturing or merchandising corporations.

The notes are issued without coupon in either registered or bearer form, normally with minimum denominations of \$5,000 and at issue are either sold at par to mature with accrued interest or at a discount to mature at par. Most notes are for fixed terms of from one week to one year although terms ranging up to ten years have been arranged and some notes are repayable at the option of the investor. Although these notes are negotiable and transferable, they possess only limited liquidity

because they are not all readily marketable and therefore investors are expected to hold them to maturity except in unusual circumstances.

Notes of the prime borrowers are generally issued at similar rates with smaller firms paying rates up to about 1/2 per cent higher. The notes usually yield more than treasury bills, bankers' acceptances or chartered bank paper.

#### Prime Commercial Paper

The unsecured promissory notes issued by some of the larger well-known Canadian corporations other than finance companies are known as prime commercial paper or corporate paper. This instrument may be issued to supplement working capital; to offset fluctuations in cash flows; to facilitate expenditures promising a rapid cash pay-back; or as interim financing prior to an issue of senior securities. In some instances much short-term financing may be regarded as a permanent component of a firm's capital structure. It may serve to some degree the purpose of making the financial community familiar with the securities and credit standing of a particular issuer.

Corporate paper is backed by the general credit of the issuer and this backing is frequently supplemented with that of an unused line of credit with the corporation's bank or,

when the firm is a subsidiary, the guarantee of the parent firm. Maturities range from overnight to one year but notes can usually be arranged on a twenty-four hour demand basis which gives the lender the right to demand pre-payment upon giving the issuer 24 hours notice. Notes issued on a demand basis usually have the one-way call by the investor as described above but some two-way call notes are arranged. Normally a higher rate of interest is received by the investor if the paper runs to maturity than if pre-payment is demanded.

Minimum denominations of \$100,000 are issued and these notes may be registered. The notes are sold on an interest-bearing-at-par basis which means in effect that interest is computed on the basis of rates determined at the time the investment is made and that the notes are not sold on a discount basis but at par.

For the investor, corporate paper offers a rate of return higher than that of finance company paper and also possesses a higher degree of liquidity as provided by the demand feature. Further to this, the investor can select both the issuing date and the maturity to coincide with his anticipated needs.

For the issuer, corporate paper provides the means of tapping the short-term money market for funds for the above



mentioned purposes at a lower cost than borrowing from chartered banks. The borrower, however, is expected by investors to have bank lines of credit available to cover all paper outstanding.<sup>1</sup> Investors in corporate paper also require that issuing companies provide documentation in support of their investment. Such documentation is normally presented in a brochure<sup>2</sup> and normally includes the following:

1. The latest annual report, preferably including a five year comparative financial summary,
2. a resume of the nature of the company and its operations,
3. a copy of the borrowing by-law,
4. a resolution of the company concerning borrowing of short-term money,
5. a legal opinion by the company's counsel concerning the issue of notes,
6. if available, a legal opinion by the company's counsel concerning the legality of the notes for

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<sup>1</sup>This aspect of borrowing via the issuance of corporate paper is explicitly mentioned in the booklet published by Burns Bros. and Denton Limited, The Canadian Short-Term Money Market: Instruments and Formulae, Toronto, 1965, p. 18. Borrowers would be expected to have such lines of credit available to provide investors with confidence that, at maturity or in the event of a two-way call being exercised by the investor, funds will be available to meet repayment requirements. If the borrower encountered financial difficulties and repayment of notes could not be generated from operations, unless the bank lines of credit were being paid for, the corporation would be hard-pressed to convince its bank to allow the full use of such lines of credit.

<sup>2</sup>An example of such a brochure (excluding the annual report) is shown in Appendix A where a copy of the current offering memorandum of B.C. Telephone is shown.

investment by life insurance companies, as well as trust companies, whether federally or provincially incorporated,

7. specimen signatures of corporate signing officers and a company certificate attesting to their validity,
8. specimen short-term notes,
9. the name of the company's banker and line of credit, and
10. in the event of a parental guarantee, additional documentation pertaining to the parent is required.

A distinct segment of commercial paper is the promissory notes issued by grain companies to finance the purchase, storage and transportation of grain. Grain paper is issued at par and bears interest at a stated rate. Most notes are on a demand basis with a two-way call, but fixed terms can be negotiated up to 90 days. They can be called for same day payment if adequate notice is given (prior to noon Eastern time).<sup>1</sup>

Most of the grain handled by the grain companies is entirely for the account of the Canadian Wheat Board which pays the grain company for all its costs plus a handling margin upon delivery of a terminal warehouse receipt. As well as a

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<sup>1</sup>This description of "grain paper" liquidity is outlined in the money market booklet of Burns Bros. and Denton Limited, op. cit., p. 17.

high degree of liquidity, grain paper has a high degree of safety since any losses incurred from the final sale of the grain are borne by the Canadian Wheat Board.

#### Day-To-Day Loans to Investment Dealers

Day-to-day loans are one of the three principal techniques utilized by investment dealers to finance inventories of securities. These inventories arise from the dealers' function of maintaining trading markets in securities and also as a result of carrying a position in a new issue before it has been completely placed with investors. The other main methods of financing such inventories are call loans or collateral loans and repurchase agreements or buy-backs. These are outlined below.

Day-to-day loans are used as an investment primarily by chartered banks but also may be utilized by other institutional investors. As security for such loans the investment dealer lodges Government of Canada treasury bills, Government of Canada bonds maturing within three years, or bankers' acceptances either with the lender or his designated depository. Such loans are always subject to a two-way call so that either party may call them at any time up to noon for same day settlement.

Day-to-day loans were inaugurated in 1954 when they

were designated by the Bank of Canada as acceptable instruments for the secondary reserve requirements of the chartered banks. As a result of the high degree of liquidity of such loans, being readily callable and secured by high-quality, readily marketable securities, day-to-day loans normally bear the lowest rate of return of all money market instruments. The rate of interest paid on these loans is known as the day rate (the rate at which authorized dealers can borrow from the chartered banks using the above mentioned securities as collateral) subject to daily revision and while a dealer can fix the rate at which a loan will be made for certain periods, the loan rate normally fluctuates along with the day rate. Funds can nearly always be accepted in multiples of \$100,000.

#### Collateral Loans or Call Loans

While this type of loan to investment dealers is similar to the day-to-day loan outlined above, a higher rate of return is offered since different securities are used as collateral. Also, these loans can afford greater flexibility as to term and rate.

Securities other than those used as collateral for day-to-day loans can be pledged (those actually used are negotiated by the parties involved) with the great majority being arranged using as collateral Government of Canada medium and long term bonds, provincial treasury bills and debentures, Canadian

chartered bank bearer deposit notes, and top grade short term finance and commercial paper. As well as the securities involved, the amount of the loan, the rate and the terms are also subject to negotiation. The securities are often held by a bank or by the dealer in safekeeping for the account of the lender and the dealer usually has the right of substitution of acceptable securities for those he may need for deliveries. The term of the loan is usually on a two-way call basis either for same or one-day settlement, depending on the agreement but many loans are negotiated for a fixed number of days.

#### Repurchase Agreement or Buy-Backs

It is an arrangement of this type which provides money market dealers with access to a source of inventory financing which is available when other sources are not available. The purchase and resale agreements made by the Bank of Canada result in its position as a lender of last resort to money market dealers. In an attempt to broaden the money market the Bank of Canada began entering into purchase and resale agreements with a number of investment dealers so that these dealers could sell treasury bills and short-term Government of Canada bonds to the Bank with an undertaking to repurchase them within a relatively short period of time at a price to net the Bank a predetermined rate of interest.

In 1954 thirteen investment dealers were given lines of credit by the Bank covering the repurchase agreements. Bankers' acceptances become eligible for such agreements in 1962. The term of such agreements with the Bank is limited to two days and the rate which has always been regarded as a penalty rate or one that would discourage unwarranted use of the facilities is currently set at one quarter of one per cent above the average rate on treasury bills or three quarters of one per cent below the Bank Rate, whichever is higher.

Other lenders can enter similar agreements with a dealer using the securities noted above or any other satisfactory securities that would be used for call loan purposes. Such agreements are appropriate where liquidity is not necessary and when an investor wishes to invest his funds for a particular period for which no adequate short-term securities with the required maturity exists.

Essentially, a buy-back or repurchase agreement is simply the sale of specified securities at a fixed price and the simultaneous undertaking by the dealer to repurchase the securities at a higher price at a future date to give the lender an agreed rate of return. The difference in prices is treated as interest income and is fully taxable.

### Summary

An examination of the money market instruments described above indicates that a unique ranking of these instru-

ments according to their three main characteristics of risk, liquidity, and yield to maturity is impossible. They can be ranked according to the credit worthiness of the issuer in ascending order as follows:

1. Government of Canada Treasury Bills and Short Canadas,
2. Provincial Issues,
3. Municipal Issues,
4. Bankers' Acceptances, Bearer Deposit Term Notes, Trust Company Deposits, Loan and Mortgage Company Securities, and Other Chartered Bank Investment Vehicles,
5. Acceptance and Finance Company Notes, and
6. Prime Commercial Paper, Day Loans and Call Loans to Investment Dealers, and Buy-Backs.

According to the level of liquidity possessed, the ranking of these instruments in declining order is as follows:

1. Government of Canada Treasury Bills,
2. Short Canadas,
3. Provincial Issues,
4. Municipal Issues,
5. Bankers' Acceptances and Bearer Deposit Term Notes,
6. Other Chartered Bank Investment Vehicles, Trust Company Deposits, and Loan and Mortgage Company Securities,

7. Day Loans and Call Loans to Investment Dealers,
8. Prime Commercial Paper and Acceptance and Finance Company Notes, and
9. Buy-Backs.

Finally, the instruments are ranked below in ascending order according to yield to maturity. The rates shown are those which prevailed at March 4, 1971 and are for the maturities indicated.<sup>1</sup> Due to the range of rates prevailing within some categories, there is a considerable amount of overlapping of categories.

<u>Instrument</u>	<u>Yield to Maturity</u> (%)	<u>Maturity</u>
1. Canada Treasury Bills	3.80-3.98	1 week to 26 weeks
2. Day-to-Day Loans	4.50	demand
3. Bank of Canada Buy-Backs	4.50	1 or 2 days
4. Provincial and Municipal Issues	4.75-5.00	30 to 59 days
5. Short Canadas	4.81-5.14	up to 3 years
6. Bankers' Acceptances	4.85	30 days
7. Chartered Bank Deposits	4.90	30 days
8. Trust Company Deposits	5.00	30 days
9. Prime Commercial Paper	4.75-5.50	demand to 29 days
10. Accept. and Finance Paper	5.00-5.63	1 to 29 days
11. Call Loans to Investment Dealers	5.50-6.00	demand

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<sup>1</sup>These rates were obtained from Bank of Canada, Statistical Summary (April, 1971), p. 255, Wood Gundy Securities Limited, "The Money Market", March 4, 1971 (weekly), and Mr. George Mainwaring, Manager of Investments, Bank of Nova Scotia.



The instruments described above represent the stock in trade of investment dealers participating in money market operations. By means of these various instruments, borrowers are able to tap the pools of capital for their short-term financing needs. For investors, these instruments offer various degrees of risk and liquidity with a sufficient range of maturities and returns to provide acceptable opportunities to meet their short-term investment needs.

The purpose of this chapter has been to explicitly describe the instruments involved in the Canadian money market which were discussed in a general and more abstract manner in Chapter II. These are the instruments which are actually involved in the equating of the supply and demand of short-term capital and which are involved in the processes described previously in the participant behaviour models. In the course of the following parts of this study, reference will be made to various aspects of these instruments. The above descriptions, together with the concepts outlined in the previous chapter, comprise the basic aspects of money market activities which require understanding in order to proceed with a critical examination of the Vancouver money market.

## CHAPTER IV

### THE RECENTLY EVOLVED VANCOUVER MONEY MARKET AND ITS LOW LEVEL OF DEALER INVENTORIES

Chapters II and III have examined the overall setting in which the Vancouver money market exists. Since most of the aspects of the Canadian money market as outlined therein apply equally to the Vancouver and the Toronto-Montreal markets, the description of the Vancouver money market, which is a stated objective of this study, has already begun. Chapters IV and V will complete the description as well as outlining and, where possible, explaining the major imperfections and peculiarities of the Vancouver money market. These two chapters rely heavily on the information gathered from the series of interviews conducted with the fifteen Vancouver money market participants identified in Table I.

Chapter IV looks first at the recent growth of the Vancouver money market. It indicates the degree of involvement by the investment dealer community, notes the increased participation by local borrowers, and compares the volume of local money market investment to that of Eastern-based investors. The second part of the chapter discusses the major peculiarity or imperfection of the Vancouver money market;

that is, the low levels of inventories of money market instruments maintained by investment dealers in Vancouver. The four factors contributing to the maintenance of such levels of inventories are discussed and the chapter concludes with discussions of the implications of the inventory aspect of local money market conditions for both investors and borrowers.

# I. THE RECENT GROWTH OF THE VANCOUVER MONEY MARKET

The Vancouver money market as it centers around the investment dealer can be described as a small but growing market. Local money market participants are in general agreement that the year 1966 marked the beginning of the present period of increasing activity by investment dealers in Vancouver. Since then dealers have expanded their local staff and broadened the range of services offered to local participants of financial markets. Increasingly the money market jobbers have sought access to this region by opening branch offices in Vancouver.

Table III lists the investment dealers who qualify as money market "jobbers" and thus occupy a central position in the Canadian money market. A "jobber" is defined as an investment dealer who has access to the "lender of last resort" facilities of the Bank of Canada via the Bank's purchase and

## TABLE III

MONEY MARKET JOBBERS<sup>1</sup>

Ames, A.E., & Co. Limited  
Burns Bros. & Denton Limited  
Dominion Securities Corp. Limited  
Equitable Securities Canada Limited  
Fry & Company Limited  
Gairdner & Company Limited  
Greenshields and Company Inc.,  
Harris & Partners Limited  
McLeod, Young, Weir & Co. Limited  
Midland-Osler Securities Limited  
Mills, Spence & Company Limited  
Nesbitt, Thomson & Company Limited  
Richardson Securities of Canada  
Royal Securities Corp. Limited  
Wood Gundy Securities Limited

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<sup>1</sup>With the exception of Fry & Company Limited who became money market jobbers in 1965, the list is the same as that published in the Investment Dealers' Association Brief to The Royal Commission on Banking and Finance in June of 1962.

resale agreements. Of the fifteen money market jobbers listed in Table III, only three do not have offices located in Vancouver. These three are:

Equitable Securities Canada Limited,

Harris & Partners Limited, and

Mills, Spence & Company Limited.

The most recent arrival on the Vancouver scene is Fry & Company who opened an office here in March, 1971.

The fact that twelve of the fifteen money market jobbers have offices in Vancouver does not, however, mean that all twelve of them are actively involved in money market operations in a manner (not to mention scale) similar to their Eastern operations. In fact, only five of these twelve dealers can be said to have money market desks. That is, only five of these dealers carry significant inventories of money market instruments locally and have at least one person in the local office whose sole concern is the money market operations. In most of the others the money market is handled by a bond trader. Inasmuch as significant inventories are carried and a full time money market staff is maintained, the five investment dealers with the most complete local money market operations are:

A.E. Ames & Co. Limited,

Dominion Securities Corp. Limited,

McLeod, Young, Weir & Co. Limited,

Nesbitt, Thomson & Company Limited, and  
Wood Gundy Securities Limited.

Nevertheless, since 1966 one of the services made more widely available in Vancouver has been the dealers' money market operations. But unlike the Toronto-Montreal market where many borrowers and lenders had been aware of the benefits to be derived from participation in such a market, the financial community of Vancouver had had little opportunity to perceive the need for such services. In fact, before 1968 only two or three borrowers of short-term funds even existed in Vancouver.<sup>1</sup> At present, however, the money market is utilized as a source of short-term financing by a considerable number of organizations located in the Vancouver area. Short-term debt instruments are of course issued by the resident branches of the chartered banks and trust companies as well as their Vancouver-based competitors, the Bank of British Columbia and Yorkshire Trust Company. The latter firms are relative newcomers to the money market; the firms themselves have been in existence for relatively short periods.<sup>2</sup> Other locally-based issuers of debt

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<sup>1</sup>G.H. Eaton and D.E. Bond, "Canada's Newest Money Market: Vancouver," The Canadian Banker (November-December, 1970), p.15.

<sup>2</sup>The Bank of British Columbia in fact received its charter in December of 1966 but actual operations commenced with the opening of its first branch in July of 1968. Yorkshire Trust Company, although it evolved from an organization providing various financial services in British Columbia dating back to 1888, was established in 1965 and commenced operations in 1966.

instruments which qualify as money market instruments include merchandisers, financial institutions, manufacturers, processors, utilities, and distributors as well as provincial and municipal government bodies and their agencies. Excluding the Bank of British Columbia, Yorkshire Trust Company and the local governments and their agencies, the local issuers of money market instruments are those ten organizations shown in Table IV.

Based on the limitations of borrowing by means of the issuance of short-term promissory notes as set down in the borrowing bylaws of the companies, and shown in Table IV, the potential volume of such short-term notes which could be issued in total by the aforementioned ten organizations is estimated to be of the magnitude of about \$172 millions. However, it is unlikely that this potential volume of short-term notes would be reached at any particular point in time due to the fact that the cyclical needs for short-term funds by these firms do not coincide. In fact at this point some of the firms listed above have short-term notes outstanding to the extent that such borrowing is at or near their limits while others are far below their limits and some have either none or very little of such liabilities outstanding. Of the estimated \$172 million which could possibly be outstanding if all of these borrowers were to be borrowing at their limits at the same time, it is estimated that there is currently outstanding between \$75 millions and \$80 millions in short-term promissory notes.

TABLE IV  
SOME LOCAL ISSUERS AND THEIR BORROWING  
LIMITS ON SHORT-TERM PROMISSORY NOTES

<u>Organization</u>	<u>Limit (in millions)<sup>1</sup></u>
British Columbia Central Credit Union	\$ 10
British Columbia Packers Limited	15
British Columbia Telephone Company	55
Cunningham Drug Stores Limited	5
Inland Natural Gas Co. Ltd.	5
Kelly Douglas and Company Limited	2
Laurentide Financial Corporation Ltd.	25
MacMillan Bloedel Limited	40
Weldwood of Canada Limited	5
Woodward Stores Limited	10

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<sup>1</sup>The money market borrowing limits of these organizations were obtained from Mr. Robert Levers of McLeod, Young, Weir & Co., Limited.



The estimates of both potential and currently outstanding short-term liabilities of the ten firms cited above are estimates only of the short-term liabilities that are in the form of short-term promissory notes and do not include short-term liabilities that are in the form of bankers' acceptances. While most of the companies mentioned above use bankers' acceptances as a means of obtaining short-term financing, it has not been possible to formulate an estimate of what the potential volume of such borrowings might be. The current level of the bankers' acceptances outstanding for these firms is estimated to be approximately \$35 millions.<sup>1</sup>

Although the participants which were interviewed generally agree that the demand for money market instruments on the part of local investors has grown at a rate similar to the recent growth of money market activity by local issuers, tangible evidence to support this view could not be obtained. The total local investment in money market instruments is not large, however. It is currently estimated that such investment by Vancouver investors at any particular time would range between \$300 million and \$400 million which is judged to be at most 10 per cent of such investment by Toronto and Montreal-

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<sup>1</sup>This is the amount of such instruments outstanding as estimated by Mr. Robert Levers of McLeod, Young, Weir & Co. Limited.

based investors.<sup>1</sup>

While it is not possible to present a detailed description of the local demand for money market securities, two aspects of that demand can be mentioned. First, the estimates by the various dealers interviewed indicate that upwards of thirty per cent of the total local investment in money market securities consists of locally-issued instruments. Second, only a small portion of total money market investment involves short-term Canada bonds or federal treasury bills. Other than those purchased by the Bank of British Columbia there exists no significant demand for these securities in the Vancouver area. These instruments together account for about \$5.5 million of the Bank of British Columbia's portfolio required for secondary reserves with treasury bills comprising the larger portion. It is estimated by Bank of British Columbia officials that the total of all other local demand for treasury bills and short-term Canada bonds would not at any time exceed \$1 million.

In summary, the expansion of the Vancouver money market is reflected in the recent inflow of money market personnel to investment dealers' offices located in Vancouver, the growing number of firms which have found the market a lucrative source

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<sup>1</sup>These estimates are derived from the guesstimates of the money market personnel of the local dealers interviewed in the course of this study.

of short-term investment vehicles, and the swelling ranks of the Vancouver-based establishments which frequently and/or continuously capitalize on the opportunity to tap this growing source of funds. Understandably, local money market participants express considerable satisfaction and pride about the recent growth in the market. To them this growth represents the financial coming of age of the Vancouver money market.

## II. DEALER INVENTORIES OF MONEY MARKET INSTRUMENTS IN VANCOUVER

While local money market participants take pride in the recent growth experienced by the local market, they are not so satisfied with the market as to be without complaints. The complaint about Vancouver money market conditions most frequently voiced by those participants interviewed for this study (among both dealer-and non-dealer-participants) was that the inventories currently maintained locally by the dealers are not sufficient to provide adequate service.

It will be recalled from the discussion of the dealer behaviour model in Chapter II that dealer inventories are only involved in money market transactions when the dealer acts as a principal. It will also be recalled that when the dealer's money market operations involve the inventorying of

securities that, compared to operations on an agency basis, a greater level of dealer investment in money market operations is involved. Also, the net cash benefits are not just contingent upon the matching of issuers' and investors' needs, but upon being able to buy and sell instruments to produce capital gains. Sufficient capital gains must be realized to make the investment in such operations worthwhile. While some downside protection does exist, the difficulty of accurately forecasting interest rate changes with concurrent changes in security prices imparts a substantial degree of risk to an investment by a dealer in money market instruments. Inasmuch as the financing costs of such investments display considerable volatility and the rates on outstanding loans for such financing are automatically adjusted to coincide with current rates on such loans, the profitability of such investments by a dealer cannot be accurately predicted. A dealer may be prompted to carry inventory as a means of encouraging greater money market activity in the future by issuers and investors which can be expected to result in net cash benefits being received by the dealer.

For the investment dealer who is considering whether or not to maintain an inventory of money market securities in Vancouver or who has decided to maintain an inventory in Vancouver but must determine the appropriate level, there are four main factors to be considered. The order in which these factors are presented does not indicate that importance is

attached to them in that order.

1. The dealer must carefully evaluate the potential opportunities for profitable operations and compare them to both the potential opportunities of other geographical areas and to the potential opportunities of activities involving services other than money market operations.
2. Also to be considered is the depth and breadth of the Vancouver money market since these factors have a bearing on the liquidity of an inventory and thus on the ease with which an inventory can be liquidated either to take advantage of capital gains or to prevent capital losses.
3. Both the availability and reliability of loans for the financing of inventory must be considered since inventories of money market instruments are supported by external financing.
4. Finally, consideration must be given to the alternatives to holding inventory in Vancouver. If devices exist which allow the same profits to be made while holding either risk or investment at lower levels, they would serve to detract from the motivation for the dealer to hold inventories in Vancouver.

It can be concluded that high levels of inventories would be maintained in Vancouver if the situation could be described as

follows: the best opportunities for dealer investment exist in Vancouver, the local money market has both depth and breadth, loans to finance inventory are both available and reliable, and no other alternatives to maintaining a Vancouver inventory exist.

The total trading inventories held in Vancouver have been estimated to be \$52 million with more than half of this held by the chartered banks and normal daily money market transactions in the Vancouver market have been estimated at about \$40 million.<sup>1</sup> While these data were based on market conditions and activities in the fall of 1970, the money market personnel of the dealers interviewed for this study feel that the current levels would be little changed. Dealer inventories are currently estimated to be a little over \$20 million which would seem to be a low level considering the daily turnover of about \$40 million. This total level of Vancouver dealers' inventories of just over \$20 million serves as a point of sharp contrast between the money markets of the Toronto and Montreal areas and that of Vancouver. Local money market personnel who are familiar with the Eastern market<sup>2</sup> point out that the Eastern inventories of any one of the fifteen jobbers would almost always exceed the total of all

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<sup>1</sup>These are the estimates of G.H. Eaton and D.E. Bond, op. cit.

<sup>2</sup>Mr. David Holmes of A.E. Ames & Co. Ltd., can be cited as one who has the experience in the Eastern market to lend credibility to this statement.

dealer inventories domiciled in Vancouver. Such a fact is cited by local money market personnel to substantiate their opinion that in many ways the Vancouver market can be compared to the Eastern market only in highly qualified terms.

It is not possible to indicate which of the above four determinants of inventory management has been most responsible for the low levels of inventory maintained in Vancouver. It may be that because the Vancouver-based investment in money market instruments is only about one-tenth of that in the Toronto-Montreal area that the local market simply does not offer sufficient opportunities to support more than the small inventories of only five dealers. Or, it may be that since the market in Vancouver is relatively small and is somewhat isolated from the Eastern market, that the difficulty of liquidating large inventories in Vancouver may act as a strong deterrent to the holding of such levels. There is evidence that the last two factors, the availability and reliability of loans for inventory financing and the existence of other alternatives to inventories in Vancouver may be major factors in causing low levels of local inventory to be maintained. These two factors will be discussed below.

#### Financing for Dealer Inventories

As was pointed out in a previous section dealing with the various instruments involved in the money market, loans

to investment dealers are essential to the workings of such a market in which investment dealers play a central role. This point is most emphatically indicated by the provision of lender of last resort facilities provided to the dealers, which are designated as money market jobbers, by the Bank of Canada; facilities which, prior to 1953, were afforded by the Bank of Canada only to the chartered banks.

The daily operational financing of dealers' inventories, however, is facilitated by day-loans to dealers by the chartered banks and call loans to dealers by chartered banks, financial institutions and non-financial institutions. The day-to-day loans by the chartered banks originated in April of 1954 at the suggestion of the Bank of Canada. The call loan became a common financing device shortly thereafter when the Bank of Canada urged the dealers to seek additional inventory financing outside the banking community. Such financing has been known as country banking and has played an important part in the growth of the money market.

#### Day-to-Day Loans

Day-to-day loans from the chartered banks are secured by treasury bills, short-term Government of Canada bonds, and bankers' acceptances and generally are used to finance the acquisition by the dealers of these instruments for the purpose of maintaining trading inventories of such instruments.



Day-to-day loans serve as a highly liquid investment for the chartered banks and since they form part of the banks' secondary reserves, they provide the banks with a simple means of adjusting the level of their reserves in the constant process of liquidity management.

The aspect of financing via day-to-day loans which has important ramifications for the Vancouver money market is that all chartered banks treat cash management as a centralized function. This means that all cash management decisions and therefore all day-to-day loans are administered in the head offices of the chartered banks. Since the Bank of British Columbia is the only bank with its head office in Vancouver, the implication is that dealers in Vancouver have only one local source of day-to-day loans. The Bank of British Columbia has, of course, only limited funds which it will invest in day loans (recent levels of day loans by the Bank of British Columbia have been approximately \$3 million). The situation is further complicated by the fact that a three-hour time difference exists between Vancouver and the Eastern markets where the head offices of the other chartered banks are all located. Moreover, most of the money market transactions and day-to-day loan arrangements have taken place in the Eastern market by noon Eastern time.

If a dealer is unable to get a day loan from the Bank

of British Columbia due to its unwillingness to extend further credit in this form or if the Bank of British Columbia has called an outstanding day loan, the results may be as follows. In the first case if the security to be pledged is in the dealer's head office in the East or can be transferred there through the Bank of Canada's facilities (only treasury bills or Government of Canada bonds can be transferred by the Bank), the dealer's head office will negotiate a day loan in the East or if this is not possible, recourse may be had to the lender of last resort facilities of the Bank of Canada.<sup>1</sup> If the security is in Vancouver and cannot be transferred (bankers' acceptances) or if the Vancouver branch office of the investment dealer wants to maintain the level of local inventory, the other chartered banks represented in Vancouver may be approached. If the bank's head office approves and has day money available, the day-to-day loan may be authorized with the security to serve as collateral being lodged with the Vancouver branch of the chartered bank. In the event that this procedure is not successful in obtaining the necessary financing, the Vancouver agency of the Bank of Canada can provide lender of last resort facilities. The above methods of acquiring financing, whether they are carried out by the dealer in Vancouver or in the East either through the chartered banks or the Bank of Canada, are conditional upon

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<sup>1</sup>Such facilities became available on a local basis to dealers in Vancouver in 1968 when the Bank of Canada brought a security representative to its Vancouver agency. This action was in fact prompted by the commencement of operations by the Bank of British Columbia.

such activities being undertaken prior to two o'clock Vancouver time since none of these facilities are available after two o'clock, which is five o'clock in the Eastern time zone. In fact, access to Eastern day money may be impossible after ten o'clock Vancouver time which is one o'clock in the Toronto-Montreal time zone and by then most, if not all, of the cash management process and associated day loan activity of the chartered banks will have been completed.

Since day-to-day loans can be called by either party to the loan up to twelve o'clock, it would seem that such action by the Bank of British Columbia would inevitably lead to refinancing difficulties on the part of the dealer. This fact is, of course, recognized by the bank and in order to prevent such difficulties it makes the dealer aware of its intention to call loans as far in advance of the call as is feasible.

The complexity and uncertainties of inventory financing in Vancouver by day loans as outlined above could hardly be expected to encourage the local maintenance of anything but minimal levels of inventories.

#### Other Implications of the Day-Loan Factor

In the Eastern market where there are many lenders in competition for the financing needs of the investment dealer

community the investment dealer enjoys a more favourable bargaining position than does his counterpart in the Vancouver location. For instance, because eight banks<sup>1</sup> are involved in providing day-to-day loans in the East, the dealer can move from bank to bank in response to any lowering of interest rates for such loans. The banks are aware of the fact that dealer loyalty in the area of day money needs is non-existent and that a dealer will terminate a loan and transfer his collateral to any other bank which offers any financing cost advantages. From this environment has evolved a highly competitive situation which results in the rapid dissemination of any change in the rates charged for day money.

Due to the fact that the only local supplier of day-to-day loans in Vancouver is the Bank of British Columbia,<sup>2</sup> there is a much less competitive situation prevailing. Even at mid-day Eastern time, day money may be difficult to arrange for an Eastern-based inventory. It is, as described above, a more complex procedure for a dealer to arrange Eastern day loans for inventory located in Vancouver. The result is that the dealer in the Vancouver market has limited

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<sup>1</sup>The eight banks providing day-to-day loans in the Eastern market are: Canadian Imperial Bank of Commerce, The Royal Bank of Canada, Bank of Montreal, The Toronto-Dominion Bank, The Bank of Nova Scotia, Banque Canadienne Nationale, La Banque Provinciale du Canada and the Mercantile Bank of Canada.

<sup>2</sup>Both the local investment dealers and the chartered banks confirmed that there is only one source of day-to-day loans in Vancouver.

bargaining power and since the alternative may be the penalty rates of the Bank of Canada's Purchase and Resale Agreement facilities, the dealer is reluctant to press too strongly for lower day loan rates even when Eastern rates have weakened. The result is that discrepancies between the Eastern and Vancouver markets of up to half of one per cent in day loan rates have occurred when rates have been falling. The lag has meant higher financing costs for the Vancouver inventories of dealers in comparison to the costs of Eastern inventory financing. In the course of interviews with officials of the Bank of British Columbia they acknowledged their awareness of this situation but expressed the belief that the temporarily relatively higher costs are offset by the fact that the local rate for day-to-day loans also lags the Eastern rates when the rates are rising. It is only during periods of rather rapid changes in these rates that any rate differential has been in evidence.

### Call Loans

The remainder of inventories of money market instruments not financed by day-to-day loans (that is all money market instruments except Government of Canada treasury bills, short-term Government of Canada bonds, and bankers' acceptances) must be financed using the call loan facilities of the chartered banks, financial institutions and non-financial institutions. Since the instruments used as collateral for such

loans are of a higher risk class and are generally less liquid than those securing day-to-day loans, interest charges for call loans are higher than those for day loans. Call loans, however, can be obtained from a much wider range of sources and therefore the necessity of lender of last resort facilities which exists for day loan collateral financing has been obviated as far as other money market instruments is concerned.

As is the case with day loan financing of inventories, the call loan situation in Vancouver is far from being as reliable or as simple as that which exists in the East. While a dealer in Toronto or Montreal can obtain call loan financing from at least two hundred institutions, the dealer trying to obtain such funds in Vancouver must rely on a mere handful of lenders. The most important of the few local sources of call loans are the Bank of British Columbia, Cominco Ltd., Placer Development Ltd., Bank of Nova Scotia, and Royal Trust. While the smaller number of sources for call loans can be seen as restricting the growth of dealer inventories due simply to the limited funds available, it also has implications which make the situation more complex and less reliable than that of the East.

In the normal course of business, a dealer may have an opportunity to sell some item from his inventory which he has pledged as collateral for a call loan. This usually presents no problem since the lender has agreed to allow the

dealer to substitute other securities from his inventory in the event such a need may arise. The lender, however, has restricted the substitutions the dealer may make to a specified list of securities and then only up to certain amounts for each of the approved securities. Specification of which securities may be substituted and the allowed proportions of the total of the securities pledged are arrived at by the lender after an analysis of all money market investment opportunities. The list of specifications mentioned above should be the same as the approved list of short-term investments from which the investment manager of the lending firm is able to make selections for the firm's short-term investment portfolio. For these lists of approved securities to differ would be irrational on the part of the lender since in the event of default on a call loan by a dealer, the lender in fact becomes an investor in the collateral pledged as security for the loan which then would be claimed by the lender.

When a dealer's inventory is large and he has call loans outstanding with a large number of lenders, such as is the case in Toronto and Montreal, there is little reason to expect difficulty in being able to substitute from inventory for any particular item. But, in the Vancouver situation, there is less chance of approved lists overlapping enough securities to ensure that substitution can be carried out when so few lenders are involved in call loans. The result of

not being able to effect a substitution is that the loan must be repaid. This the dealer is able to do since he is selling the item for which the call loan (or a portion of the total call loan) was secured. But by terminating the loan, the dealer is risking the ire of the lender who had not expected to have to find another investment opportunity for his funds so soon. Or, while the lender may not be at all annoyed, his search for an investment opportunity for the newly freed funds may result in a call loan to another dealer and thus leave fewer funds available in the future for the dealer unable to effect a substitution.

It can be seen from the above discussion that the institutional state of affairs in the Vancouver area is not conducive to the maintenance of large dealer inventories of those money market instruments which are normally financed by the use of call loan facilities.

#### Devices Providing Alternatives to Dealer Inventory

There exist four devices which facilitate the maintenance of low levels of inventories by dealers; letters of undertaking, the issue of notes by agents, the Bank of Canada transfer service and the provision of locally-issued securities by dealers on an agency basis. These devices are outlined below.



### Letters of Undertaking

To some investors, in lieu of immediate delivery of the instrument, the dealer may be able to simply deliver (upon receipt of payment for the security) a letter of undertaking which is simply a written agreement to undertake delivery of the particular security as soon as possible from the location in which the inventory is located. Frequently, the actual dealer's letter of undertaking is deemed unnecessary. The dealer's verbal commitment by telephone may be regarded as sufficiently binding.

To the investor who is unwilling to accept a dealer's letter of undertaking in lieu of the actual security, another alternative does exist. When a dealer's letter is regarded as unacceptable, rather than forego an investment opportunity when the securities are not located in Vancouver, the investor may be willing to accept a bank letter of undertaking. For a fee amounting to \$40 per million dollars worth of securities involved, a chartered bank will deliver a letter to the investor in which it assumes the responsibility of delivering the particular securities. The letter states that the securities are being held by the bank for the investor and that they will be delivered as soon as possible by the bank to the investor or to a location or agent designated by the investor. Before such a letter can be issued by the bank the securities must be delivered to the bank by the dealer.

The bank letter of undertaking has been more widely accepted locally than has the dealer's letter since the Canadian chartered banks are viewed as having little or no default risk or at least much less than any particular investment dealer.

### Issue of Notes by Agents

In order to facilitate the wide geographical dispersion of their instruments, some issuers make arrangements with chartered banks and trust companies to issue their instruments in cities other than the corporation's head office location. In this way a borrower is not denied access to the funds of a lender who makes an offer contingent upon his being able to take receipt of the actual instrument on the same day. This situation could and does arise in the case of a dealer not having any of the particular securities in his inventory in the city in which the lender is located when the head office of the borrower is located in another city. If the lender were unwilling to accept the dealer's letter of undertaking or a bank letter of undertaking, the deal could not be closed unless the issuer had made arrangements for an agent in the lender's location to issue the instruments of interest.

To make such an arrangement an issuer simply approaches the chartered bank or trust company he wants to act as his issuing agent and negotiates the terms and conditions. A fee

is charged by the agent and currently ranges from five to ten dollars for each instrument issued. The fee does not vary in relation to the denomination of a particular note. The issuing corporation must provide the agent with an adequate supply of the notes.

As a result of this procedure, short-term investors in the Vancouver area can take immediate possession of many short-term instruments issued by borrowers in locations other than Vancouver even though such instruments may not be in local dealer inventories at any particular time. Among examples of borrowers not located in Vancouver who use this device are the Province of Manitoba, the Province of Saskatchewan (both issuing provincial treasury-bills), Firestone Tire and Rubber Company of Canada Limited, International Nickel Company of Canada Limited, Honeywell Holdings Limited, and Transamerica Financial Corporation of Canada Limited. Among Vancouver-based borrowers who use this device for issuing notes in the Eastern cities are MacMillan Bloedel Limited and British Columbia Telephone Company.

#### The Bank of Canada Transfer Service

Another device which facilitates the low level of dealer inventory is the Bank of Canada transfer service. In the Investment Dealer's Association Brief to The Royal Commission on Banking and Finance of June 1962 this facility is

described<sup>1</sup> as one which has greatly assisted the dealers in doing business outside of the Toronto and Montreal areas. The transfer service is in fact an arrangement whereby the Bank of Canada releases bonds at no cost to the dealer at any one of the Bank's agencies across Canada. Under this arrangement, after January 1957, any dealer could hand in Government of Canada treasury bills or short-term Government of Canada bonds at any agency of the Bank of Canada, which would arrange to release the same securities the same day at any other agency of the Bank.

The Provision of Locally-Issued Securities by Dealers  
On an Agency Basis

Just as the issuance of notes by Eastern organizations through agents in Vancouver obviates the need for the local dealer to carry such instruments in local inventories, the practice of Vancouver issuers of issuing instruments on demand or on short notice has a similar effect. The incentives for a dealer to handle such local issues on an agency basis are first, that such transactions do not require an increase in the dealer's investment in inventories and second, that the attention given to such an issuer may increase the likelihood of increased future business for the dealer from the issuer.

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<sup>1</sup>Investment Dealer's Association Brief to the Royal Commission on Banking and Finance, Toronto, June, 1962, Appendix G, pp. 2-3.

In summary it appears that the low levels of dealer inventories in Vancouver are the result of more attractive opportunities for dealer investment in other geographic and/or service areas, the adverse impact of the relatively small money market in Vancouver on the liquidity of money market inventories, the limited availability and reliability of loans for inventory financing in Vancouver, and finally, the existence of devices such as letters of undertaking, the issue of instruments by agents, the transfer service of the Bank of Canada, and the provision of locally-issued securities by dealers on an agency basis.

#### The Implications of Low Dealer Inventories for Vancouver Investors

Inadequacies regarding dealer inventories may be of two types; first, the inability to supply more than a small amount of any particular issue demanded by an investor; second, the inability to supply a wide range of instruments with regard to issuer, risk level, maturity, callability, marketability, and yield. While these two types of inadequacies are concepts which overlap, it is the second which has the greater importance to local investors since it is this type of inadequacy which restricts diversification of an investment portfolio and presents difficulties in the matching of cash flows to investments.

The first type of shortcoming, that only small amounts of a particular issue may be held in inventories by dealers locally, seems not to be a serious problem. This is because the total investment in money market instruments is not large. Since the total demand by Vancouver investors for short-term investments is relatively small, assuming some diversity of interest the demand for a particular issue will be relatively small and therefore, large quantities of particular issues in local inventories would not be necessary.

There exists the desire, on the part of some local investors, for a wider range of choice of instruments; that is, for a market with greater breadth. The desire for a wider range of choice is consistent with the investor behaviour model inasmuch as, with a wider selection of investment opportunities available, the investor will likely be able to obtain an investment portfolio more nearly optimal. However, the fact that the dealers have the particular investment vehicle desired by the investor in inventory in Toronto or Montreal rather than in Vancouver is regarded as sufficient by some investors. To these investors, in lieu of immediate delivery of the instrument, the dealer may be able to simply deliver (upon receipt of payment for the security) a letter of undertaking which is simply a written agreement to undertake delivery of the particular security as soon as possible from the location in which the inventory is located.

Understandably, to some investors a dealer's letter of undertaking is not regarded as a suitable means of overcoming the problem of insufficient local inventories. For these investors, the acceptance of a dealer's letter of undertaking is recognized as adding a further measure of risk to the investment. That is, the investor faces the risk not only that the issuer of the security being purchased will default, but also that the dealer who sold him the security will fail to honour the commitment to deliver the security as promised in the letter of undertaking and may be unable or unwilling to reimburse the investor for his payment for the security and/or the resultant loss of interest.

An investor who is unwilling to accept a dealer's letter is acting on the basis of the following premises. The promised return on an investment (in the case of default-free securities such as Government of Canada treasury bills and bonds held to maturity, the promised and expected returns will be identical) is just sufficient to compensate the investor for his temporarily being deprived of his capital and for the risk being borne by the investor that the borrower will default (default meaning that payments of interest and/or principal are not made by the borrower as promised). The promised yield of an investment is the same whether or not the dealer is able to deliver it immediately. In the event of the dealer's encountering financial or administrative

difficulties, the dealer may be unable or unwilling to deliver the security for which the investor has paid when the arrangement of a dealers letter of undertaking has been used and the investor may lose both principal and the expected interest income.

Those investors who accept a dealer's letter must bear the risk of the loss of the amount paid to the dealer in the event the dealer fails to honour his commitment to deliver the security. This loss would be offset by any compensation for the loss as obtained through court action or from a receiver in the event of liquidation of the dealer. This risk is above and beyond that investment risk borne by the investor even if the security is delivered by the dealer as agreed, that is the risk of default by the issuer.

An investor who is unwilling to accept a dealer's letter, then, regards the promised yield on the investment as not being sufficient to fully compensate for the investment risk plus the dealer risk.

For some investors the question of whether a dealer's letter or a bank letter or the immediate delivery of the actual securities is the acceptable means of doing business may be important. This is so because in some cases none of these occur; the investor merely leaves the security in safekeeping



with the dealer and never actually takes possession (nor does his agent take possession) of the security. The implications for the risk borne by the investor (unless the security is fully registered) are much the same as is the case for dealers' letters of undertaking as outlined above, except that in this case the additional dealer risk is extended over the entire duration of the investment. Both of these practices have the effect of shifting the instruments involved into a higher level of risk without any additional compensation.

Of those Vancouver money market lenders or investors interviewed, some were found to accept dealer's letters as a matter of course, others will accept only bank letters, while some will accept either on only rare occasions. For example, the Bank of British Columbia has explicitly expressed to the investment dealers that aside from the risk implications involved, its policy of demanding normal delivery of securities except in only unusual circumstances is also designed to encourage larger dealer inventories in order to promote the development of the local money market.

For a local investor to achieve an optimal short-term portfolio the breadth or range of available alternative investment opportunities in the Vancouver market should be as wide as that of the Eastern market. Complete information of

available opportunities is required for such an optimal portfolio to be achieved. When a local investor requires normal delivery the dealer, in making an offering of securities, will not include any instruments which would require delayed delivery. This screening process in the composition of offerings would narrow the range of alternative opportunities available to the investor since the offering would include only those instruments held in local inventories, the issues of Eastern organizations available through local agents, securities which are held in the dealer's inventories in Toronto or Montreal and can be transferred to Vancouver via the Bank of Canada and the securities of Vancouver-based issuers which can be secured on short notice. Such screening by a dealer contributes to the suboptimization of investors' short-term portfolios.

#### The Implications of Low Dealer Inventories for Vancouver Issuers

The local issuer of money market instruments seems to be the main beneficiary of the prevailing low level of dealer inventories. His issue provides the market with a readily available investment vehicle and since it is often issued on demand, such a security appeals to the local investor who requires immediate delivery. Since such securities are available on short notice, inventorying of the issue by a dealer is not required. The fact that such securities can be handled on an agency basis by a dealer and the appeal of these instruments

to local investors requiring normal delivery ensure a local issuer of receiving top-notch service from the investment dealer.

The issuer's borrowing via the money market is thus made easier which helps him in his attempt to minimize his cost of short-term capital.

This completes the discussion of the recent growth of the Vancouver money market and its major imperfection as outlined in the introduction to this chapter.

## CHAPTER V

## ADDITIONAL PECULIARITIES OF THE VANCOUVER MONEY MARKET

This chapter completes the description of the Vancouver money market by outlining the remaining major peculiarities which are manifest in that market. Part I points out the low level of autonomy granted by the head offices of investment dealers to their Vancouver money market personnel and indicates the implications of this lack of autonomy to local market participants. Part II is a discussion of the implications of the time zone differential between the Vancouver and the Eastern markets. Part III concludes the chapter with a discussion of the relative lack of sophistication exhibited by local investors and local borrowers in their respective money market activities. Furthermore, Part III suggests that the responsibility for this lack of sophistication rests with the local investment dealer community.

## I. DEALERS' LACK OF LOCAL AUTONOMY

A complaint frequently voiced about local money market conditions by investors and borrowers is that local dealer personnel lack autonomy in decision-making regarding money market operations.

Since the local dealer has limited inventories he is often forced to make offers to investors from head office inventories. This means that the offer to the client must be delayed until the dealer's head office is contacted to ascertain not only what instruments are available, but also the relevant rates. The delay involved may be only a matter of a few minutes or it may be overnight if the request for an offering is not received locally before two o'clock at which time Eastern head offices are closed.

The lack of local autonomy also affects the ability of a local dealer to respond to an offer from a local investor or institution to sell a money market instrument. The dealer will enter a bid for the security if he feels that he can readily sell it to another local investor or for his trading inventory if he feels that demand for the security will exist in the near future. This situation closely parallels that of a request for bids for securities from a local issuer of money market securities. If the local dealer is faced with making a purchase of either of these types for his own inventory, he is free to do so without consulting his superior in the head office only if the amount involved is below a specified size or an unspecified but well understood size and if he is able to obtain local financing for such additional inventory. In the event that the size involved is above local limits or financing locally is not possible, the local money

market personnel must contact either the partner or director in charge of the firm's money market operations who is located in the head office.

While the delay caused from having to contact the money market manager arises from the necessity of using teletype or telephone instead of the personal contact available in the Eastern markets, there are other factors which may increase the delay and thus compound the problems caused by such delays. First, there is the time difference. From nine o'clock to eleven o'clock Vancouver time, the manager in the East will likely be at lunch and no reply to the local personnel's query will be forthcoming until his return. Further to this, if the request is not made before two o'clock Vancouver time, the manager in the East has left the office for the day. Second, while the amount involved may be too large for the local personnel to make a decision, it may be quite small in comparison to the transactions which are normal in the Eastern market. Since the manager in the East may be involved in making decisions involving amounts many times greater than that which the Vancouver branch is concerned with, he may not give it the prompt attention which the local personnel would desire.

It is seen, then, that the lack of local autonomy can produce delays in servicing local participants due to the need for consultation, the difference in time zones, and the

generally smaller size of transactions in the local market.

When such factors cause a local dealer to delay the presentation of an offering of available securities as requested by an investor with funds to be invested in the money market, the investor is being restricted in his attempt to obtain an optimal short-term portfolio. While his funds can be banked over night, the return received will be less than that which would have been realized had the investor been able to readily purchase the money market instruments of his choice. The investor is also affected by delays on the dealer's part in his bidding for instruments offered by the investor when the investor wishes to terminate an investment. Since this is more prevalent when substantial amounts are involved, the investor considering the purchase of a large issue must recognize these potential delays as reducing an instrument's liquidity and in calculating the NPV of the investment, must reduce the certainty equivalent coefficients accordingly. Delays by a dealer in making bids for securities offered by an issuer may result in higher costs of short-term capital for the issuer or perhaps in the issuer being temporarily unable to obtain funds. The higher costs of short-term capital would be the result if more expensive bank loans were utilized to provide interim funds until the dealer prepared a bid.

For the dealer, the limited local autonomy permits

the head office to control the level of investment which the firm makes in its total money market operations. This centralization of decision making permits the firm's money market manager to compare the potential profitability of Eastern and Vancouver money market investments. The manager must judge the importance of the greater liquidity afforded by the larger Eastern market in deciding which of the available alternative Eastern and Vancouver investments to make. Furthermore, the greater selection of suppliers of call and day loans in the East may permit the manager in the head office to obtain lower rates on such loans than could be obtained in Vancouver which increases an investment's profitability by lowering the firm's cost of capital.

Clearly, the lack of autonomy on the part of local dealers is a peculiarity of the Vancouver money market which is of importance to all three types of participants involved in the local market.

## II. IMPLICATIONS OF TIME ZONE DIFFERENTIALS

Mention has been made of the different time zones in which the Toronto-Montreal and Vancouver money markets are located. Canada is divided into six time zones with a total of four and one half hours temporally separating Newfoundland



and British Columbia.<sup>1</sup> The three hour time difference between the Toronto-Montreal market and that of Vancouver means that by the time that most market transactions have been completed in the East, that is at noon Eastern time, business hours in Vancouver are just beginning. Also, some three business hours remain in the Vancouver market after Eastern closing time.

In the light of these circumstances, it would seem rational to expect that the two markets would be independent to a considerable extent. Often cited as evidence that the Vancouver money market is not merely an offshoot or branch of the Toronto-Montreal market is the fact that money market transactions occur in Vancouver after the bulk of the Eastern daily market activity has occurred and even after the Eastern offices are closed. Such local transactions involve both local issues and those of Eastern concerns and may even involve foreign participants.

But much of the Vancouver market activity coincides with and involves the Toronto-Montreal market. When funds become available for investment in money market instruments either after the Eastern market is closed or even earlier but when most activity has ceased in that market and suitable instruments are not available in Vancouver inventories, the common procedure is for the funds to be banked locally overnight and invested in the

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<sup>1</sup>The six time zones of North America are depicted graphically on the map of Figure 6 below.

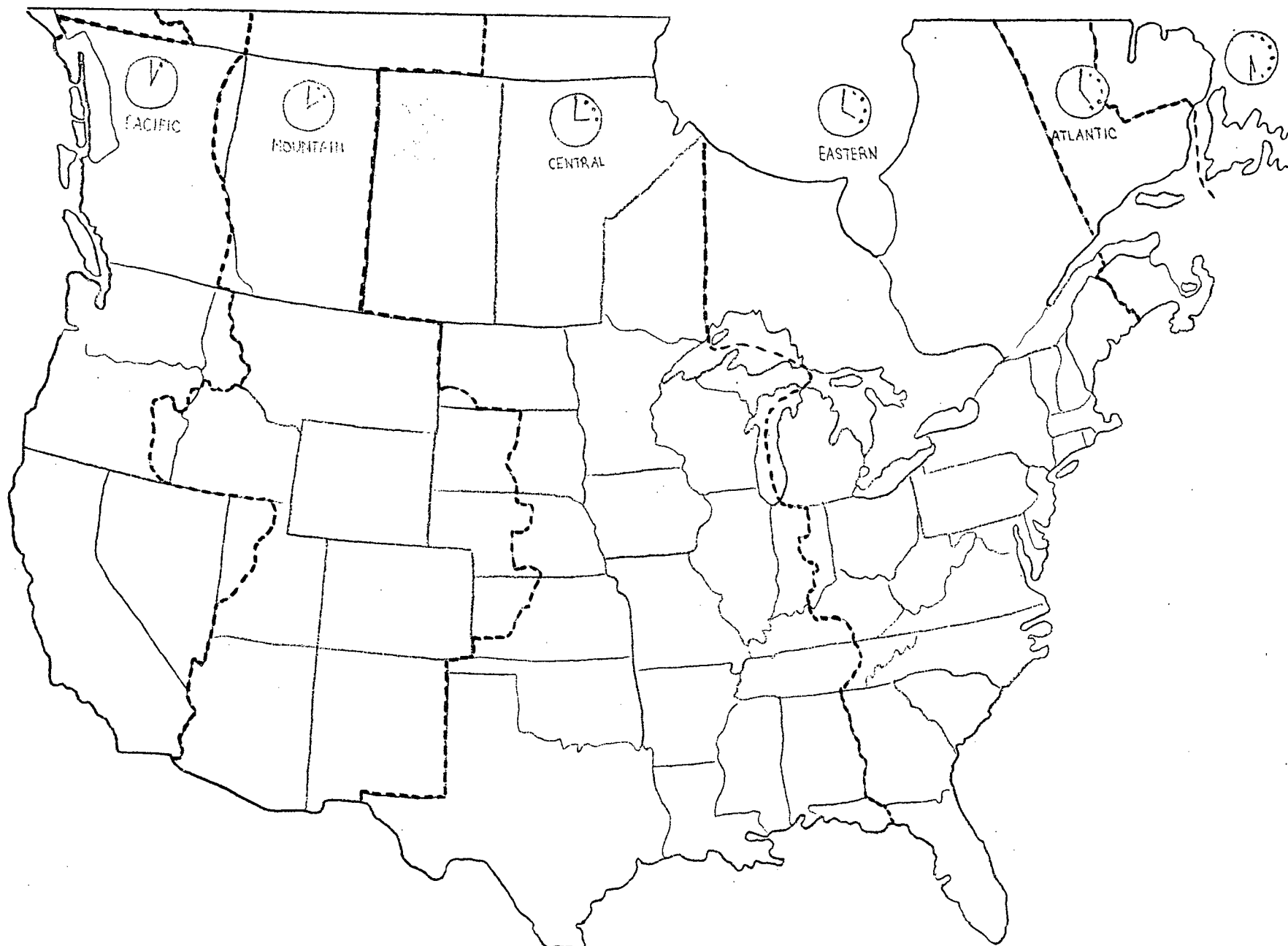


FIGURE 6  
NORTH AMERICAN TIME ZONES

appropriate security available in the East the next morning. Lodging the funds overnight in a bank prevents the investor from failing to obtain some return on the funds for the day.

To ensure that such funds are placed in the appropriate securities without further delay, the local dealer will arrive at his office around eight o'clock the next morning while the Eastern market is still active and the money market personnel in his head office are all available to assist him in placing the funds. The interaction of the two money markets is in fact quite extensive since a great deal of local investment involves this procedure.

The difference in time can lead to difficulties when a Western branch tries to contact the head office money market manager. He may have left for lunch or may have left for the day while business hours in Vancouver continue and this may mean overnight postponement of a financing or investment decision by a Vancouver participant.

Western inventory problems are also made more complicated by the time difference. It is not possible to make transfers from Toronto or Montreal to Vancouver through the Bank of Canada after five o'clock Eastern time which is two o'clock Vancouver time. The same time constraints apply to the arrangement of day-to-day loans at banks other than the Bank of British Columbia and the arrangement of either bank letters of undertaking or dealer's letter of undertaking.

Although the Bank of Canada offers its lender of last resort facilities to the Bank of British Columbia during the normal business hours in Vancouver, this does not apply to the Bank of Canada's lender of last resort facilities which are available to local dealers. The Eastern time continues to prevail in cases where the local agency of the Bank of Canada is requested by local dealers to provide inventory financing under its purchase and resale agreements.<sup>1</sup> Therefore, dealers in Vancouver are precluded from using the lender of last resort facilities of the Bank of Canada after the Bank's head office in Ottawa closes which is two o'clock Vancouver time. This aspect of local operations of the Bank reflects the limited autonomy given to agencies of the Bank. Local dealers describe the local Bank of Canada agency as a listening post with little or no freedom to participate in the local money market without explicit instructions from the Bank of Canada in Ottawa.

Not all Eastern outlets are closed to local investors at two o'clock, however. The time difference between Vancouver and Winnipeg is only two hours which means that access to the issuers of grain paper is possible for an hour after the Toronto and Montreal offices close.

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<sup>1</sup>The imposition by the Bank of Eastern time constraints on local dealers' access to the Bank's lender of last resort facilities was brought out in a discussion with H.A.N. Janssen, the Vancouver representative of the securities department of the Bank of Canada. This was on the occasion of Mr. Janssen's address to students in a finance course, at U.B.C. on March 1, 1971.

An area which is not separated from the Vancouver market by a different time zone is the Western United States. The physical proximity, the north-south trade flows, and the common time zone all contribute to the investment activity between Vancouver and such cities in the Western United States as Seattle, Tacoma, Portland, Los Angeles and San Francisco. As Eaton and Bond point out, "These transactions fit both Canadian and U.S. west coast time preference."<sup>1</sup> In some cases, Vancouver dealers have been able to obtain inventory financing in banks in these American cities.

The time differential between Vancouver and Toronto-Montreal does have its benefits, however. While local investors view it as harmful in that it can temporarily restrict their ability to select from the wide range of short-term instruments available to Eastern investors, local borrowers view it as having benefits. It is seen as making local issues more attractive to local investors than they would be otherwise since these securities are available after the Eastern market is closed. They are also available to Eastern investors whose funds become available for investment after Eastern market activities have ceased.

In summary, the time zone differential, like the lack of local dealer autonomy, affects each type of participant.

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<sup>1</sup>Eaton and Bond, op. cit., p. 15.

It can prevent the local investor from having a wide range of choice among investment opportunities and thereby may frustrate him in his attempts to achieve an optimal portfolio. Like the delays caused by the lack of local dealer autonomy, it may force him to simply bank his funds overnight and obtain lower than anticipated returns. Securities possess lower levels of liquidity when only the Vancouver market is open for trading and this must be considered by the local investor when calculating the NPV of an investment and would be reflected in a lower certainty equivalent coefficient. The effect of the time zone differential upon the liquidity of money market securities is a major factor underlying the low level of demand by local investors for Government of Canada treasury bills. While the cash flows associated with treasury bills are generally regarded as certain cash flows and under the certainty-equivalent approach would normally be multiplied by a certainty-equivalent coefficient of one in calculating the net present value of the investment, this is not the case when a Vancouver investor evaluates an investment in treasury bills. In this case the coefficient is substantially reduced to reflect the fact that the liquidity of treasury bills falls sharply when the Toronto-Montreal market closes. As a result of the smaller local market for money market securities the marketability of treasury bills declines. The capital certainty of treasury bills shows a similar decline to reflect the possibility that such instruments may prove unsaleable

during the last three business hours in Vancouver. Such a decline in liquidity with a corresponding reduction of the certainty-equivalent coefficient results in a low net present value for investments in treasury bills by Vancouver investors and seems to be the main factor causing the limited degree of local demand for such securities.

For the local borrower, being the only available alternative to the low rates of return which can be obtained from the banks overnight, and thus attractive to both local and Eastern investors, the time zone differential tends to hold down the short-term cost of capital. It does so by providing an attractiveness to the local issuer's securities which would otherwise have to be produced by increasing the associated interest payments.

The time zone differential can create serious communication problems for the local dealer who wishes to consult with his superior in the East. This problem is accentuated by the lack of local dealer autonomy which requires that such consultation be relatively frequent. The time zone differential limits the liquidity of the dealer's inventory which is detrimental to the profitability of his investment in money market operations by lowering the level of expected net cash inflows. The differential can also be detrimental to the profitability of money market operations by forcing the dealer to finance his inventory in Vancouver at higher rates than

prevail in the Eastern time zones. A higher cost of capital is the result of such a case.

The time zone differential, then, is an exogenous variable which must be seen as having an effect on the local money market participants.

### III. THE LEVEL OF SOPHISTICATION EXHIBITED BY VANCOUVER INVESTORS AND BORROWERS

Among those participants in the Vancouver money market who are familiar with the Eastern market there is general agreement as to the relative lack of sophistication which is an attribute of the activities of local borrowers and investors in comparison to those involved in the Eastern market. Sophistication with regard to money market activities may be defined as the investor's ability to achieve the optimal portfolio of money market instruments and the borrower's ability to obtain the lowest possible cost of short-term funds.

For a participant to achieve a high degree of sophistication as defined above, he has three basic requirements which must be fulfilled. These requirements are the need for knowledge of the subtleties and complexities of the money market, the need for an understanding of the motivations and objectives of other market participants as they are embodied in the participant behaviour models outlined in Chapter II, and the need for knowledge of the complete range of available



opportunities afforded by the money market. Essentially, these three requirements can be summarily described as the need for information. Inasmuch as complete information is assumed to be a requirement for a perfect market, the high level of sophistication which results from having complete information can be regarded as important to the overcoming of money market imperfections. The suboptimization of short-term investment portfolios and the existence of unnecessarily high short-term borrowing costs are both evidence of an imperfect money market.

Perhaps the most obvious indication of lack of sophistication on the part of a participant is his description of his money market operations as being a very simple process, that is, as merely borrowing or investing funds. This description of participants' involvement in the market was encountered during the course of the interviews conducted for this study. Such a description was used by participants interviewed with regard to both their own operations and to the operations of others.

Examples of the complex and subtle facets of the market would be the term structure of interest rates,<sup>1</sup> the relationship between nominal and effective interest rates,<sup>2</sup>

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<sup>1</sup>The term structure of interest rates is defined as the relationship between yield and maturity on securities differing only in length of time to maturity.

<sup>2</sup>The relationship between nominal and effective interest rates is brought out in the subsequent section discussing the difference between interest-bearing and discount instruments.

the possibility of profitably "riding the yield curve,"<sup>1</sup> a familiarity with the impact of fiscal and monetary policy on the market, and generally those potential benefits and risks associated with participation in the market.

The implications of a lack of knowledge of such market complexities are many. Both borrowers and lenders may misjudge the timing of and/or direction of changes in interest rates. This may result in borrowers paying more than necessary to obtain funds or not offering sufficient interest and thereby being temporarily short of funds. Lenders may require too little for their funds and, as a result, receive a return on their investment below that generally available. Or they may seek too high a return and subsequently not be able to obtain suitable investment opportunities.

Ignorance of the impact of economic developments on an investment may result in failure to perceive that a relatively riskless instrument may become much riskier in a

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<sup>1</sup>An example shown in Van Horne, op. cit., p. 426 is cited here to illustrate the process of riding the yield curve. The yield curve shows the relationship between yield and maturity on securities of the same default risk. Riding the yield curve involves selling securities before they mature and requires an upward sloping yield curve.

If 180-day treasury bills yield 6 per cent and 90-day treasury bills 5 per cent, and the investor buys the 180-day bills now and sells them 90 days later at a yield of 5 per cent, his return per annum for the holding period is 7.2 per cent. This example assumes that the yield curve does not change over the holding period. Ignoring transaction costs, the investor buys the 180-day bills at a price of \$97, at which price they yield 6 per cent to maturity, and sells them 90 days later for \$98.75, where they yield 5 per cent to maturity. Thus, he realizes a holding-period yield of  $(1.75/97) (360/90) = 7.2$  per cent.

brief period. An economic expansion or recession (even of a regional nature) can affect the credit worthiness of many issuers and thereby change the risk complexion of an investment portfolio. Monetary and fiscal policies can have similar impacts.

The difference between the nominal and effective rates of interest should be considered in the decision to borrow via the money market or via the chartered banks. An investor should make a similar consideration when evaluating various investment opportunities.

In the course of the interviews for this study another sign of this lack of sophistication was encountered as it applies to those local participants who are lenders or investors. It was seen in the lack of awareness on the part of participants of the difference between an interest-bearing security purchased at par and an instrument sold at a discount and maturing at the par value.<sup>1</sup> The example shown in the footnote indicates that the effective interest rate is higher than the nominal rate in the case of a discounted security so that

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<sup>1</sup>A brief example is cited here to clarify the difference between interest bearing and discount securities:

- A. 5% Interest-Bearing Note maturing in one year. Investor buys note at face value of \$1,000. At maturity the investor is repaid his \$1,000 investment plus \$50 in interest payments ( $.05 \times \$1,000 = \$50$ ).

The increase of the investor's wealth (\$50) as a percentage of his initial investment (\$1,000) is

$$\frac{50 \times 100}{1000} = 5\%$$

In this case the nominal interest rate and the effective interest rate are identical.

such a security will always yield a higher return on investment than an interest-bearing security purchased at its par value if both instruments have the same nominal interest rate. The advantage of the higher return on investment offered by the discounted security varies with the absolute level of nominal interest rates with the incentive to invest in discounted instruments increasing as the level of nominal rates rises. Nevertheless, other things being equal, the discounted security always results in a higher NPV/OUTLAY ratio to the investor.

It has been indicated by local dealers that the significance of this difference between interest-bearing and discount securities is either ignored or de-emphasized by many local investors. This aspect of the local market is evident in the notably differing proportions of interest-bearing short-term securities to discounted short-term securities purchased by local investors in comparison to Eastern investors.

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- B. 5% Discount Note maturing at par in one year. Investor buys note at face value less face value times nominal interest rate, that is  $\$1,000 - (\$1,000 \times .05) = \$1,000 - \$50 = \$950$ . At maturity the investor is repaid the par value of the bond, his interest income being the difference between the purchase and the redemption price ( $\$1,000 - \$950 = \$50$ ) (Note that the income actually gained is the same in either case). However, the increase of the investor's wealth (\$50) as a percentage of his initial investment (\$950) is  $\frac{50 \times 100}{950} = 5.26\%$ . In this case the nominal interest rate and the effective interest rate differ.

The former proportion is much higher in Vancouver money market transactions than in Eastern market transactions. In addition to the observations of local dealers with regard to this phenomenon, substantiation was obtained from local issuers of short-term instruments available in either interest-bearing or discounted form. Since a high proportion of such instruments are fully registered it is quite easy for an issuer to monitor the geographic dispersion of most of an issue. These issuers have noted two aspects of the demand for their securities which show a relationship to the geographic origin of such demand. First, demand for large denomination securities generally comes from the East while most of the Vancouver-based demand is for smaller denominations. Second, and of particular interest in this discussion, the major portion of Eastern demand is for discount notes while the larger portion of Vancouver demand is for securities of the interest-bearing form.

The explanation for this peculiarity of the local market may be found among or may in fact involve all of the following reasons which were offered by local market participants.

1. Some local investors do not know that there may be differences between the nominal and effective interest rates.
2. Some investors who do know that a difference may exist between nominal and effective rates may not

know or may not feel that the difference may be large enough to be of any importance to them in making their investment decisions.

3. Some investors may prefer to keep investments restricted to the round lot amounts of securities traded in the interest-bearing form rather than the more complicated amounts to be dealt with when discount securities are purchased.

The rationale behind the third reason cited above is that in many cases the manager of a firm's short-term investments may only devote a few hours a week--sometimes a few minutes--to this chore and may not wish to complicate the process in any way. Also, such a manager may have to report to superiors who have little or no knowledge of short-term investment practices and the desire on the manager's part to keep the process simple may stem from his apprehension of or dislike of having to explain any techniques he uses to his less-knowledgeable superiors.

The importance of an understanding of the motivation and objectives of market participants should not be underestimated. Accuracy in predictions of market behaviour generally accrues to those who possess this attribute as understanding participant behaviour permits anticipation of market reactions to exogenous shocks. Further to this, viewing a participant's actions in the perspective of a behavioural

model may allow another participant (a customer or a competitor) to enhance his bargaining position. For example, an issuer may be able to capitalize on his knowledge that investors are risk averse. To minimize his own cost of short-term capital he may be able to induce investors to accept lower interest payments if he provides evidence of contractual (paid-for) lines of credit as additional security for his liability as represented in his short-term issue. The cost of such lines of credit may be less than the savings from lower interest charges and, if this were so, would result in a lower cost of short-term capital to the issuer.

Often cited as evidence of lack of sophistication is the apparent preference shown by local investors for the instruments of locally-based issuers. During the course of the interviews conducted for this study, some investors admitted that in some cases a local issue is purchased in preference to a non-local issue differing only in place of origin. Such investor's actions are a reflection of a form of provincialism (akin to nationalism) and are excused by the investors on the basis of the desire to promote local economic activity by augmenting local investment or simply to provide assistance to borrowers with whom they are familiar.

The purchase of local issues having promised yields identical to non-local issues but possessing greater potential levels of risk due to the greater variability of financial health on the part of the local issuer, may not be inconsistent with the model of investor behaviour assumed to determine

investors' actions. The greater familiarity with and proximity to the issuer may provide the local investor with better and cheaper formal and informal means of monitoring the issuer's financial position. These lower information costs augment the net cash inflows viewed with certainty by the investor and the superior monitoring will allow the investor to quickly perceive changes in risk levels and accordingly adjust his portfolio. Since this behaviour by local investors is due to their having more complete information upon which to base their investment decisions, rather than serving as evidence of the lack of sophistication, such preferences for local issues may in fact indicate a high degree of investor sophistication.

The relatively low level of sophistication exhibited by local investors and borrowers in their money market activities is frequently regarded as stemming from the relatively recent appearance of the market in Vancouver. However, it would seem that the cause of this phenomenon actually lies in the lack of information as described above to be the basic requirements for the development of high levels of sophistication. The money market participant with the greatest amount of information required by the other participants is the investment dealer. Access to this information should lead to the development of a high degree of sophistication since it is in the best interests of both investors and borrowers to overcome the suboptimization of their respective goal achieve-



ment. Lack of sophistication on the part of local investors and borrowers would seem to indicate that the proliferation of information by investment dealers has been less than satisfactory.

Since money market activity in the Vancouver area has only recently become significant, many of those investors and borrowers presently participating are relative new-comers to the market. Many will have been introduced to the market by investment dealers and in their attempt to broaden market participation, the dealers may have de-emphasized the complexity of the money market in the belief that potential participants might be deterred from participation by the complexity of the market. Broader market participation would be sought by a dealer since the higher level of expected cash inflows would enhance the profitability of his investment.

The introduction of potential participants to the money market by investment dealers has taken much the same form as it did in the East some five or more years earlier: it was apparently deemed sufficient to indicate to borrowers and lenders the financing and investment or cash management benefits to be gained from market participation and to familiarize them with the jargon, mechanics, and main rules of the road of the market.<sup>1</sup>

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<sup>1</sup>There seems to be little if any difference in the current method of educating participants locally compared to that used in the development stages of the Eastern market. This conclusion is based upon a comparison of the presently emphasized benefits of market participation and those outlined in a speech entitled The Corporate Treasurer's Use of the Money Market delivered to the Quebec Institute of Chartered Accountants at the Board of Trade Building in Montreal on May 14th, 1964 by Mr. J.C. Murphy of Burns Bros. and Denton Limited, Investment Dealers.

Most dealers have booklets or manuals describing the money market terminology, the instruments involved, and even the requirements for participation as a borrower in some cases.<sup>1</sup> The usual practice is for the participant's key money market personnel to spend a few days at the money market desk of the dealer who is introducing him to the money market. This quickly familiarizes the participant with jargon or terminology and mechanics and is undoubtedly expected by the dealer to contribute to the establishment of a personal relationship between the dealer's and the participant's money market personnel and hopefully may create and prolong a business relationship.

There is evidence, however, that the introductory information provided by the local dealers is less than complete. As was noted earlier, a normal requirement for the issuance of commercial or financial paper is the offering memorandum with its documentation (of the type shown in Appendix A). This memorandum is viewed by most investors as necessary and permits the issuer to come to the market with at least the appearance of possessing some degree of sophistication. Yet a local issuer (who must remain unnamed) had not been informed by local dealers of this basic requirement but, to his embarrassment, learned of it from other sources.

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<sup>1</sup>A copy of Issuing Commercial and Financial Short Term Promissory Notes which is produced and distributed by A.E. Ames & Co. Limited comprises Appendix B and is an example of educational material currently being used in the Vancouver area.

While the information contained in dealers' publications such as that reproduced in Appendix B may enable a potential participant to become involved in money market activities, it is obviously much below the amount of information which would be required to promote any significant degree of sophistication. It is unlikely that the sophistication of the local market will be increased by any influx of sophisticated borrowers since there is likely to be less local activity by dealers in the future in the area of introducing potential borrowers to money market operations. This reflects the general consensus of local dealers that there are no local firms which are not utilizing the money market for their short-term financing needs which possess the level of credit worthiness which would allow them to do so. There is every reason to expect that the introduction by dealers of local lenders or investors to money market operations will continue, however.

For those participants who are currently involved in money market operations the dealer remains the most important source of information. However, the type of information which promotes sophistication seems not to be forthcoming. Judging from the eagerness to improve their knowledge of the local market as expressed by participants during the course of the interviews conducted for this study, the information which the dealer could make available would quickly result in a more sophisticated market. These participants express

dissatisfaction with the lack of useful information available from local dealers. They point out that the dealers' market letters are useful in providing an indication of the issues a dealer handles most frequently but that the rates quoted are nothing more than an indication of what current rates may be. Such market letters, of course, are issued by the investment dealer's head office and therefore are not designed specifically to serve the Vancouver market participants. Copies of recent issues of the market newsletters produced and distributed by A.E. Ames & Co. Limited and Wood Gundy Securities Limited may be found in Appendix C.

In the provision of the dealer's service of helping the investor put his funds to the best possible use within the constraints of acceptable levels of risk and liquidity requirements and in the proper fulfillment of his role as intermediary between borrowers and lenders, the dealer should point out to the investor any sub-optimization which is in evidence in the participant's activities. If the investor is not aware of the difference in effective yields between discount and interest-bearing securities, this difference should be pointed out by the dealer. If the investor feels the difference is not important enough to him to warrant the consideration of this factor in his investment decision-making, the dealer should indicate explicitly what impact this difference can have on the investor's total portfolio. Such a dollars and cents illustration would at least ensure the

investor's understanding of what the implications are of his present investment strategy. This same approach would be useful for the investment manager who must report to superiors with little or no knowledge of money market activities. Such a manager would then know the costs of his unwillingness to deal in the slightly more complex discount securities market or he could use the dealer's presentation to explain the technique to his superiors.

It would seem that rather than merely waiting for the Vancouver money market to mature and perhaps become more sophisticated, the rather simple steps outlined above would help move the market toward a higher level of sophistication. There may be some hesitation on the part of dealers to hasten the growth of sophistication in the local market since more sophisticated investors could be expected to demand more complete and more efficient service from the dealers. Such a possibility may be presently perceived by the dealers as being undesirable since the relatively small market which currently exists may not be regarded as warranting the additional investment in money market operations which would be required to meet demands for complete information services.

This concludes Chapter V and since this study has now (1) outlined the overall setting in which the Vancouver money market exists, (2) described the Vancouver money market itself, (3) indicated the major peculiarities and imperfections of that market, and (4) presented explanations for such peculiarities and imperfections where possible, the stated objectives of this study have been attained and this therefore concludes the body of this study.

## CHAPTER VI

### CONCLUSION

This chapter concludes the study by presenting a brief synopsis of the material included in each chapter of the main body of the study, indicating the main contribution of each chapter, and pointing out those areas which deserve future investigation.

In the course of examining the Vancouver money market this study has addressed itself to the four objectives as outlined in Chapter I. Those objectives are as follows:

1. To provide a description of the overall setting in which the Vancouver money market exists.
2. To describe the Vancouver money market.
3. To indicate the major peculiarities and imperfections which exist in that market.
4. To provide, where possible, explanations for those peculiarities and imperfections.

Chapter II, The Canadian Money Market: Concepts And Functions and Chapter III, Canadian Money Market Instruments describe and examine the overall setting in which the Vancouver

money market exists to achieve the first objective of the study. Part I of Chapter II provides a conceptualization of the money market which points out the interrelationship between investors, borrowers, and intermediaries and indicates how economic activity is facilitated by the equating of supply of and demand for short-term capital via the money market.

The main contribution of Chapter II lies in the presentation of the models of participant behaviour. Drawing on the concepts embodied in profitability criteria for investment decisions, behavioural models are developed for the money market investor, the money market borrower, and the intermediary, the investment dealer. The behavioural model of the money market investor describes that participant as seeking the maximum net present value per unit of outlay of the cash flows associated with an investment which are regarded as being certain as calculated under the certainty-equivalent approach. The basic goal underlying the borrower's money market activities is the minimization of the borrower's cost of short-term capital where the cost of short-term capital is viewed as that discount rate which equates the net present value of payments to the suppliers of such funds to the proceeds received by the borrower. Investment dealer behaviour is determined by that participant's goal of maximization of the net present value of the expected cash flows associated with his money market operations as discounted by the

firm's appropriately weighted cost of capital. Finally, this section underlines the importance of an awareness of the interdependence of the three participants.

Section III of Chapter II serves to describe the nature of money market instruments by comparing tangible assets and financial assets. Since liquidity is an important aspect of the money market's functions, the elaboration on the concept of liquidity and especially on the relationship of the marketability and capital certainty of assets serves as a major contribution of the chapter. Section IV briefly outlines the development of the Canadian money market from 1934 when it may be said to have begun and also discusses the implementation of the monetary policies of the Bank of Canada via the money market. The chapter concludes with a section which provides an example of the functions of the money market which indicated that the market facilitates the equating of supply and demand of short-term capital at lower costs to participants than would be the case without such a market. Also shown is the importance of the investment dealer in preventing shifts of deposits between banks from seriously disrupting the total banking community.

To complete the description of the setting in which the Vancouver money market exists, Chapter III indicates the major attributes of the fourteen instruments which make up the stock in trade of the Canadian money market. These instru-



ments include the liabilities of governments (federal, provincial, and municipal) and their agents, banks, trust companies, mortgage and loan companies, acceptance and finance companies, non-financial companies, and investment dealers. Finally, these instruments are respectively ranked according to their three main characteristics of risk, liquidity, and yield to maturity. The main contribution of the chapter lies in its serving to indicate the diversity which exists in the assets traded in the money market and also among the participants in that market.

It is the purpose of Chapter IV, The Recently Evolved Vancouver Money Market And Its Low Level of Dealer Inventories and Chapter V, Additional Peculiarities Of The Vancouver Money Market, to satisfy the three remaining objectives of the study. Section I of Chapter IV discusses the recent growth of the Vancouver money market since 1966. While twelve of the fifteen money market jobbers now have offices in Vancouver, the bulk of the market activity involves only five of these dealers. Participation by both borrowers and investors has increased over the past five years but although the local market has grown substantially, it still is dwarfed by the Toronto-Montreal market.

Section II of Chapter IV discusses the low level of dealer inventories of money market instruments in Vancouver. It is indicated that while the smaller Vancouver market may not offer the opportunities for profit or the liquidity for

safety, the difficulties of financing local inventory and the existence of other alternatives to local inventories seem to be the stronger factors underlying the low levels of dealer inventory. The main contribution of this chapter is to be found in the discussion of the problems facing dealers in financing an inventory of money market instruments which indicates that the solution to this problem is substantially beyond the control of the investment dealers. The dealers can only look to the Western United States for relief to this problem which stems from the finite number of local sources of inventory loans. The decentralization of the cash management process of the chartered banks with the concurrent decentralization of the management of day loans and call loans to investment dealers would provide a solution to this problem. The impact on the local market, its participants, the regional and national economy, and the chartered banks which would result from the aforementioned decentralization is an area which warrants future investigation. After discussing such devices providing alternatives to dealer inventory as letters of undertaking, the issue of notes by agents, the Bank of Canada transfer service, and locally-issued instruments, the chapter concludes by pointing out that low dealer inventories restrict the local investor in his attempt to achieve an optimal portfolio of short-term investments while Vancouver borrowers benefit from the situation by being able to capitalize upon the investors' unfilled needs.

Chapter V completes the study by discussing some additional peculiarities of the Vancouver money market. Part I indicates that the dealers' lack of local autonomy due to the centralization of decision making and limited local inventories produces delays in market transactions which inhibit the achievement of investment goals by the investor, decrease the liquidity of his investments, and raise the borrower's cost of short-term capital.

Section II considers the implication of the time zone differential between the Vancouver and Eastern markets. This differential can lead to delays which restrict the range of choice for Vancouver investors and due to the limited local market can seriously reduce the liquidity of money market investments. Local borrowers, however, can benefit from this situation since their securities are available after the Eastern market closes. Dealers encounter problems financing inventory because of the differential since all Eastern-controlled funds become unavailable at two o'clock in Vancouver. The fact that, like the chartered banks, the local Bank of Canada agency enjoys little autonomy as evidenced in the agency's inability to offer its lender of last resort facilities to local dealers after two o'clock when the main Bank of Canada office in Ottawa closes suggests another area for future study. The impact of some decentralization of decision making by the Bank of Canada upon the Vancouver money market is suggested as a topic worthy of investigation. This topic should be considered

as especially important since the implementation of monetary policies utilizes the money market and the proximity and similar time-preferences of the Western United States may lead to a Vancouver money market which is more responsive to foreign than domestic monetary policy.

In concluding Chapter V, Part III examines the level of sophistication exhibited by Vancouver investors and borrowers. These participants possess incomplete knowledge of the subtle and complex facets of money market operations, the motivations and objectives of other market participants, and the range of available opportunities afforded by the money market. An example revealing unsophistication cites the lack of awareness of the difference between interest-bearing securities purchased at par and instruments sold at a discount and maturing at par. The apparent preference by local investors for local issues which is often cited as evidence of lack of sophistication may in fact be evidence of a high degree of sophistication. The major contribution of this chapter is the conclusion that since overcoming the lack of sophistication in the local market can be achieved with the dissemination of more complete information and since the investment dealer either possesses or has ready access to such information, the dealer must be held responsible for the relatively unsophisticated nature of the Vancouver money market.

This completes Chapter VI and therefore completes the study comprised of an examination of the Vancouver money market.

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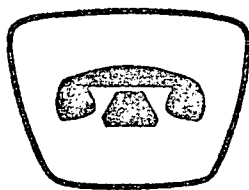
- Ames, A.E. & Co. Limited
- Bank of British Columbia
- Bank of Canada
- Bank of Nova Scotia
- British Columbia Central Credit Union
- British Columbia Packers Limited
- British Columbia Telephone Company
- Burns Bros. and Denton Limited
- Cominco Limited
- Kelly Douglas & Company Limited
- MacMillan Bloedel Limited
- McLeod, Young, Weir & Co. Limited
- Wood Gundy Securities Limited
- Woodward Stores Limited
- Yorkshire Trust Company.

## APPENDIX A

This Appendix consists of a copy of the current offering memorandum (excluding the annual financial statements) of British Columbia Telephone Company.



*This offering memorandum is not and under no circumstances is to be construed as an offering of these Short Term Promissory Notes for sale in the United States of America or the territories or possessions thereof.*



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# OFFERING MEMORANDUM

## Short Term Promissory Notes

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***BRITISH COLUMBIA TELEPHONE COMPANY***

Vancouver 2, British Columbia

**SHORT TERM PROMISSORY NOTES**

- PRINCIPAL AMOUNT:** The aggregate principal amount borrowed and repayable shall not at any time exceed Fifty-five Million Dollars (\$55,000,000) in Canadian funds or the equivalent thereof in any other currency.
- DENOMINATIONS:** Short term promissory notes will be issued in the name of the purchaser thereof or in bearer form as Interest Bearing Notes, or notes issued at a discount to mature at par, in Canadian or United States currency subject to a minimum of \$50,000.
- TERM:** Up to 365 days.
- RATES:** Available upon request.
- DELIVERY:** Notes can be arranged for same day delivery in Montreal, Toronto or Vancouver.
- PAYMENT:** At maturity payment will be made at a chartered bank as designated on the face of the note.
- BANK LINES OF CREDIT:** The Company has bank lines of credit with Chartered Banks totalling Thirty-eight Million, Five Hundred Thousand Dollars (\$38,500,000).
- ELIGIBILITY:** As outlined and qualified in the opinion of counsel, which forms part of this offering memorandum, the promissory notes of British Columbia Telephone Company are eligible investments under:
- (a) Canadian and British Insurance Companies Act
  - (b) The Loan and Trust Corporations Act of Ontario
  - (c) Trust Companies Act of Canada, for unguaranteed trust money.

We, as agents, offer these short term notes subject to confirmation by the Company and subject to the favorable legal opinion of Messrs. Blake, Cassels & Graydon, Toronto, Ontario.

**HARRIS & PARTNERS LIMITED**

**ODLUM BROWN & T. B. READ LTD.**

**June 30, 1970**

## THE COMPANY

The British Columbia Telephone Company was incorporated by Special Act of the Parliament of Canada, April 12, 1916. The Company or its predecessors have carried on telephone operations in British Columbia continuously since 1880 when one of the predecessor companies on Vancouver Island commenced the first telephone system in British Columbia.

The Company, together with its subsidiary Okanagan Telephone Company acquired in 1966, furnishes a complete communications service to over 99% of the population of the Province of British Columbia. The Company is the second largest telephone company in Canada, and at June 30, 1970 had 1,003,925 telephones in service, over 99% of which are dial operated.

In 1931, the major telephone systems in Canada formed the Trans-Canada Telephone System to provide a Canadian route for long distance services. The Company owns and operates the sections of the system in British Columbia, including the British Columbia portion of a coast-to-coast microwave radio relay network completed in 1958 and expanded several times since. In addition to regular telephone and special service transmission, this system carries the signals of two national television networks. A second microwave radio relay network, following an alternate route across British Columbia, was placed in service during May, 1970. Through this system and other connections, service is available to nearly all parts of the world.

The Company also provides the operating center for the Canadian end of the Commonwealth Pacific Cable between Vancouver and Australia.

Because of the rugged coastline and terrain of the province, the Company was a pioneer in the field of radiotelephony and now operates one of the world's largest radio-telephone systems, providing the links between the regular telephone system and the more than 10,000 radiotelephone sets in automobiles, aircraft, industrial vehicles, land stations serving remote settlements and ships plying coastal and international waters. The ship stations alone number over 5,000.

The Province of British Columbia is the third largest in Canada in terms of population as well as manufacturing. According to figures issued by the Dominion Bureau of Statistics, British Columbia has, for some years, been one of Canada's fastest growing provinces. The estimated population of 2,128,000 at April, 1970 represents an increase of about 33% since April, 1960, as compared with an increase of 20% for Canada as a whole during the same period. Vancouver is the largest city in the province and the third largest in Canada with a population in its metropolitan area of 980,000 in June, 1969. It is the principal financial, shipping and manufacturing center west of Toronto and is one of the most important seaports on the Pacific coast of North America.

At the present time Anglo-Canadian Telephone Company of Montreal owns 50.31% of the 2,877,000 Ordinary shares outstanding. The balance of the Ordinary shares as well as the Preference and Preferred shares are widely held throughout Canada. Anglo-Canadian is 82% controlled by General Telephone & Electronics Corporation of New York. This association gives the Company direct access to research, development and other support that would not otherwise be available through its own resources.

June 30, 1970



**BRITISH COLUMBIA TELEPHONE COMPANY**

DISCOUNT NOTE

No. D - 000

VANCOUVER, CANADA

19\_\_

BRITISH COLUMBIA TELEPHONE COMPANY for value received hereby  
promises to pay to or to the order of \_\_\_\_\_

on the \_\_\_\_\_ day of \_\_\_\_\_, at the office of \_\_\_\_\_

the sum of \_\_\_\_\_  
dollars (\$ \_\_\_\_\_)

in lawful money of \_\_\_\_\_

upon due presentation and surrender of this promissory note

**B.C. TEL**

**BRITISH COLUMBIA TELEPHONE COMPANY**

PER \_\_\_\_\_

PER \_\_\_\_\_



# BRITISH COLUMBIA TELEPHONE COMPANY

INTEREST BEARING  
NOTE

No. 1-000

VANCOUVER, CANADA

19

BRITISH COLUMBIA TELEPHONE COMPANY, for value received, hereby  
promises to pay to or to the order of

on the \_\_\_\_\_ day of \_\_\_\_\_ 19\_\_\_\_ at the office of \_\_\_\_\_

the sum of \_\_\_\_\_  
dollars (\$ \_\_\_\_\_)

in lawful money of \_\_\_\_\_

with interest thereon at the rate of \_\_\_\_\_

percent ( \_\_\_\_\_ %) per annum, from the date hereof to the date of maturity, upon

due presentation and surrender of this promissory note.

**B.C. TEL**

BRITISH COLUMBIA TELEPHONE COMPANY

PER \_\_\_\_\_

PER \_\_\_\_\_

# FARRIS, FARRIS, VAUGHAN, WILLS & MURPHY

## BARRISTERS & SOLICITORS

HON. J. W. DEB. FARRIS, Q.C.	JOHN L. FARRIS, Q.C.	D. L. VAUGHAN, Q.C.
C. H. WILLS	C. FRANCIS MURPHY	BRICE S. EVANS
A. D. POOL	G. S. HUGH-JONES	JOHN D. McALPINE
BRIAN S. LOWE	P. W. BUTLER	JACK M. GILES
MICHAEL BUTLER	K. A. L. HILLMAN	JAMES F. RICHARDSON
H. P. McLAUGHLIN	J. D. N. EDGAR	GLEN P. BANCROFT
DAVID B. FINLAY	ROGER J. DUNCAN	TERENCE W. BOYLAN
RODNEY K. WARD	R. JOHN ROGERS	IRWIN G. NATHANSON

TELEPHONE 681-7111  
AREA CODE 604  
CABLE ADDRESS "FAREM"

15TH FLOOR  
510 WEST HASTINGS STREET  
VANCOUVER 2, B. C.

REPLY ATTENTION OF Mr. D. L. Vaughan, Q.C.

June 30, 1969.

British Columbia Telephone Company,

Odium Brown & T. B. Read Ltd.,

Harris & Partners Limited,

Dear Sirs:

We have acted as counsel for British Columbia Telephone Company (the "Company") in connection with the proposed sale of its unsecured short term promissory notes (the "Notes") in maturities up to 365 days from the respective dates of issue.

We have examined the special Act of Parliament of Canada incorporating the Company and all amendments thereto, the Borrowing By-law of the Company, resolutions of the Board of Directors of the Company, certificates of officers of the Company and such other documents as we have considered relevant for the purposes of this opinion. We have also received and relied upon the following opinions, each dated concurrently herewith:

- (a) the opinion of Messrs. Fraser & Beatty of Toronto, Ontario, as to the offer and sale of the Notes in the Province of Ontario;
- (b) the opinion of Messrs. Thompson, Dilts & Co.

of Winnipeg, Manitoba, as to the offer and sale of the Notes in the Province of Manitoba;

- (c) the opinion of Messrs. Saucier, Jones, Peacock & Co. of Edmonton, Alberta, as to the offer and sale of the Notes in the Province of Alberta;
- (d) the opinion of Messrs. Lafleur & Brown of Montreal, Quebec, as to the offer and sale of the Notes in the Province of Quebec.

Based upon and subject to the foregoing, we are of the opinion that:

(1) The Company has been duly incorporated and is a valid and subsisting corporation in good standing under the laws of Canada.

(2) All necessary corporate action has been taken by the Company and the Directors thereof to authorize the obtaining of loans by the Company, the execution of Notes for such loans and the sale, discount and re-discount of Notes to any purchaser.

(3) The specimen Notes, copies of which are included in the Company's Offering Memorandum (the "Memorandum") dated June 30, 1969, are satisfactory in form and, when duly executed by the President or any Vice President together with the Secretary or an Assistant Secretary of the Company and delivered by the Company, the Notes in such form will be valid and binding obligations of the Company in accordance with their terms.

(4) Based on the earnings of the Company for the five years ended December 31, 1964 to 1968 inclusive, and on the dividends paid by the Company on its ordinary shares in each of such five years and in the first quarter of 1969, and on the dividends paid by the Company on its preference shares and preferred shares in each of such five years and in the five-month period ended May 31, 1969, the Notes are investments:

- (a) in which the Canadian and British Insurance Companies Act states that companies registered under Part III thereof may, without availing themselves for that purpose of the provisions of subsection (4) of section 63 of the said Act, invest their funds; and
- (b) in which The Loan and Trust Corporations Act of Ontario states that trust companies registered thereunder may, without availing

## APPENDIX B

Appendix B consists of a copy of Issuing Commercial and Financial Short Term Promissory Notes which is produced by A.E. Ames & Co. Limited and is used by that company as an aid in the process of introducing the money market to prospective issuers of promissory notes.



A. E. Ames & Co.  
Limited

ISSUING COMMERCIAL AND FINANCIAL  
SHORT TERM PROMISSORY NOTES

I N D E X

Page

1. What is Commercial and Financial Paper?
2. The Purpose
3. The Advantages
4. Basic Financial Requirements
5. Coming to the Market
6. Documentation
7. Operating Procedure
8. What We Provide and Charges
9. Guarantees or Similar
10. Rating Services
11. Description of the Money Market
- 12 - 14. Representative List of Short Term Borrowers
- 15 - 17. Glossary of Terms

- Appendix    I    Comparative Rate Graph  
              II    Extract from Trust Companies Act  
              III   Documents Required for Issuance  
              IV    Extracts from Income Tax Act

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WHAT IS COMMERCIAL AND FINANCE PAPER?

Commercial Paper is short term unsecured promissory notes of major corporations, either interest bearing or discount notes issued in accordance with the borrowing by-laws of the Corporation for a specific maturity and bearing an interest cost rate agreed upon between the borrower and lender. Maturities vary from demand notes, which can be prepaid on 24 hours notice, to three years. 30-60-90 day notes are most common, however, and constitute approximately 90% of all commercial and financial paper outstanding.

Financial Paper is basically the same by application except it is usual for this paper to be secured by a pledge of receivables in excess of 100% or carries a guarantee of a larger parent.

The minimum legal denomination without registration under various Provincial Securities Acts is \$50,000 but most borrowers set a minimum of \$100,000.

Commercial and Financial paper can be issued by any prime borrower with proven credit acceptance irrespective of whether the borrower is publicly or privately incorporated.

These notes are marketed by investment dealers to major institutional and corporate lenders on an agency basis. (A commission being paid by the borrower to the placement dealer for his efforts).

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THE PURPOSES

Commercial paper is usually issued for working capital purposes to finance inventories or receivables. It may also be issued to finance "bumps" in capital expenditures, which can be financed by this method without being capitalized. A few borrowers have used commercial paper to delay more permanent financing and to gain flexibility in timing over an extended period of time.

Finance companies borrow permanently in the short term market to finance receivables, and as part of an overall borrowing strategy. Utilities, including provincial government utilities, also appear to be turning to permanent short term financing as part of their capital composition.

Commercial paper should be considered as a complement to current financing through bank loans and Bankers' Acceptance, and not utilized as a replacement of these normal channels. These three vehicles vary in their relative cost and attractiveness, according to market conditions, and the most attractive at any given time should be used. Historically, commercial paper has been the most economical, but in periods of extreme credit restraint, the spreads tend to narrow. In periods of credit ease interest rates on commercial paper decline more rapidly than the Banks' prime rate, reflecting the true supply and demand factors.

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THE ADVANTAGES

Commercial and Financial paper has historically been the cheapest method of short term financing. The enclosed graph (Appendix I) compares 30 day prime corporate rates with the prime rate since 1965. The average saving has been  $\frac{1}{2}\%$  excluding commissions. 30 to 90 days has been the normal maturity pattern for industrial borrowers to minimize costs, but longer maturities can be arranged to suit the borrower and are recommended when rates are expected to increase. In this respect, commercial paper provides the only technique of hedging current borrowing costs against escalation in interest rates.

There are various strategic advantages to consider. Usually, contingency bank lines to back up commercial paper can be arranged at a minimum cost, consequently, there is an increase in the borrower's short term financing capacity. In a credit squeeze issuing short term paper may inhibit the banks from introducing compensating balances, or utilization fees, which permanently affect the cost of borrowing. It enables a corporation to balance out cash flow distortions and to obtain more flexibility in timing permanent debt.

Issuing commercial paper as a preliminary to future permanent financing can promote a broader market acceptability and an awareness of a corporation's name among the investors.

Regular contact with senior investment dealers and credit markets are further positive advantages. These advantages have repercussions on a corporation's pension funds, acquisitions, general knowledge of the economy, credit conditions, and new financing techniques.

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BASIC FINANCIAL REQUIREMENTS

Commercial paper borrowing is available only to prime credits. A minimum equity of \$10,000,000 is required, unless there is a guarantee or some special subsidiary relationship. Minimum borrowing expectation should be \$5,000,000 over a period of two years, or during regular seasons. Unused bank lines (Canadian or International) equal to the amounts expected to be borrowed are essential, and extra lines to back up paper issuance can usually be negotiated at a bank at minimum charge, but on a clear understanding that their use is to be exceptional. Dividends, or earnings record, over the latest five years, are necessary to establish legality for insurance company, pension fund and trust company investments. (See Appendix II). In exceptional circumstances, it may be possible for a corporation who does not qualify under the various Acts, to borrow money via this medium.

Obviously, any short term borrowing must be in accord with any trust deed restrictions within the corporate borrowing structure.

A prior condition to all other requirements for the issuance of Commercial paper is that a borrower have a SOUND CAPITAL STRUCTURE, GOOD WORKING CAPITAL AND STRONG REPUTABLE MANAGEMENT.

COMING TO THE MARKET

An offering memorandum is prepared prior to any commercial paper borrowing. It should be available several weeks in advance of actual requirement to build up market acceptance. If there is a group of dealers, a selling group meeting should be held at this time, the details of the offering outlined, and an itemized procedures sheet provided to each dealer.

The Manager of a group usually clarifies at this stage that he will make all preparatory coverage of a list of major institutions; this list is given to all participants and counters any initial duplication and consequent confusion by the multiple coverage of all participants.

Borrowings should build up quickly to the expected level, and initial rates should be set slightly above the market to activate this. This establishes the borrower immediately with a broad number of the lenders approached, and captures substantial funds which can henceforth be held on rollovers at normal market rates.

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DOCUMENTATION

An offering memorandum is prepared, in consultation with the borrower, issuing dealer and company lawyer. The offering memorandum consists basically of five documents (See Appendix III).

1. Resolution of the Corporation, which outlines the maximum amount of notes to be issued and some of the terms such as type of notes, minimum amounts, and terms of maturity. It also authorizes the appointment of certain company officials as signing authorities to these notes.
2. Extract of General Borrowing By-laws of the Corporation which merely authorizes all types of borrowings, including short term notes.
3. A Certificate of Incumbency supplying facsimile signatures and titles of the signing officers to notes.
4. A Legal Opinion supplied by an independent legal firm which states that the borrowing by-laws and resolution have been investigated, and the opinion of the good standing of the corporation, together with the ability to borrow by this method. General reference is made to the Corporation's financial activities and any outstanding litigation. The Opinion also refers to the type of the note to be issued and to the signing authorities. One of the most important sections of the Legal Opinion is the reference to legality for Insurance Companies and Trust Companies, etc., after due consideration of the various Federal and Provincial Acts.
5. Accompanying these documents would be the Financial Statements as provided by the Annual Report of the borrower.

We have found that the average time for the preparation and completion of these documents is three to four weeks. To display an expertise and to create a good public relations impact, it is our opinion that it is to the advantage of the borrower to present these documents in printed form. (See example). The cost of having 500 sets of documents prepared ranges between \$800 - \$1,000.00 and it would be our estimate that, including legal fees, the total cost of entering the paper market would be a maximum of \$1,500.00 - \$2,000.00. Once these documents are completed, it would be the Manager's job, in consultation with the borrower, to form a small group of senior Money Market dealers to assist in marketing. The size of this group would depend upon the amount of outstandings that have been authorized.

A. E. Ames & Co.  
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This section is to provide a general idea of day-to-day operations when issuing commercial paper. A completely detailed check list of operating procedures is available once the decision to issue paper has been made, and individual written procedures are prepared to promote clarity and efficiency.

Each morning at 8:45 - 9:00 a.m. our trading desk would confirm with the borrower his daily requirements for funds (including maturing notes). Interest rate structure would be recommended and agreed upon at this time. Details of all negotiated notes (including rate, maturity and registration) would be given to the borrower around 11:00 a.m. for issuance. At approximately 12:30 p.m. our messenger would arrive at the borrower's office to pick up the notes and exchange cheques. The time of his arrival would determine the latest time at which a late order could be booked.

Any short fall in the borrower's requirements would be met by temporary bank borrowing, or by issuing a demand note to A. E. Ames & Co. Limited which would be redeemed upon future sales. Any surplus above the borrower's requirements could be reinvested on a demand basis in acceptable credits and used to meet maturities.

If a group of dealers is involved, it is recommended that one be appointed Manager, whose responsibilities would be, in part, to liason with the borrower and the group, the cash requirements and rates each day thereby eliminating unnecessary phone calls to the borrower.

In a group, individual dealer total of outstanding notes should be made available each month to all members. Commissions are billed to the borrower monthly or for other periods by mutual consent.

It has become recent practice for a borrower to arrange for all notes to be delivered through a Chartered Bank, after counter signature. This system provides many advantages, but mainly, notes can be held in all financial centres, such as Montreal, Toronto and Vancouver, to be available for same day delivery. This service is available through most Chartered Banks for a nominal cost of approximately \$10.00 per note issued, including acceptance and payout of funds and transfer of funds from one point to another.

Once a short term note operation is set up it can be handled satisfactorily by a good junior officer for amounts up to \$10,000,000. Even for larger amounts up to \$100,000,000 the procedure is simple and requires little expertise or a great addition to normal finance department staff.



A. E. Ames & Co.  
Limited

WHAT WE PROVIDE AND CHARGES

Our basic function is to keep the borrower advised at all times on market conditions and to suggest rate structures and to market the required notes. We assist in the preparation of the initial documents and supervise their form and wording, but printing and legal opinions are at the borrowers expense. All advertisements are at our expense. The initial promotion of the corporate name to lenders is our responsibility, but the borrower may be asked to participate on a limited basis, dependant upon the promotional requirements of the borrower.

Day-to-day financing, when maturities are not exactly covered, are best handled by bank borrowing. A. E. Ames & Co. Limited can bridge these gaps by buying demand notes in some circumstances. (These notes to be replaced by term money as it becomes available).

Delivery on both new notes and the payment of old notes can be handled by our Company at our expense or by arrangements with a Chartered Bank. (see page 7).

Regular discussions are held between the borrower and our senior department staff on changing credit conditions, alternative forms of borrowing, and methods of operation.

Our charges are either  $\frac{1}{8}\%$  or  $\frac{1}{4}$  of 1% per annum on the par value of notes sold. The rate for corporation borrowers is  $\frac{1}{8}\%$  which reflects the commission expense not being a deductible item for tax purposes. (See Appendix IV). In cases of small amounts or longer terms, however, the charge may be  $\frac{1}{4}\%$  per annum.

Finance companies are charged  $\frac{1}{4}$  of 1% per annum which is a tax-deductible expense.

A. E. Ames & Co.  
Limited

GUARANTEES OR SIMILAR

The normal guarantee is unconditional as to principal and interest, and is usually inscribed on the back of the note.

There may be some choice as to who the guarantor is. Captive finance companies may be guaranteed by the parent manufacturing or merchandising corporation, or by a parent foreign finance company which, in turn, is a subsidiary of the ultimate operating company. For instance, Simpson-Sears Acceptance Company Limited is guaranteed by Simpson's-Sears Company Limited, but General Motors Acceptance Corp. of Canada Limited is guaranteed by General Motors Acceptance Corp.

When a parent company cannot guarantee debt for trust deed, or other reasons, a similar effect can be achieved in a "solvency agreement" or "keep fit covenant". In these cases, the parent company covenants with a trustee to maintain certain debt-equity ratios in the subsidiary. Any decline in the borrower's net worth is thereby made good by the parent infusing new capital or paying off the debt to maintain the covenanted ratios.

The possibility also exists of trusteeing very low risk receivables, such as Export-Credit Insurance Corporation guaranteed notes, and issuing notes in some proportion to the market value of these notes.

A. E. Ames & Co.  
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RATING SERVICES

There are two rating services available in Canada for commercial and finance paper. National Credit Office, a subsidiary of Dun and Bradstreet, rates borrowers "prime", "desirable", "satisfactory", or "acceptable" for an annual fee of approximately \$400.00. Standard & Poor's Corporation rates corporations A1, A2, A3, B, C, D, for a variable fee dependent upon the analysis required. Either of these services are recommended since the investing public is becoming more aware of their existence and are beginning to rely on such ratings. If U.S. pay notes are to be issued, it would be mandatory to receive a "prime" rating from one of these services since so many of the major investors in the U.S.A. are controlled by by-laws requiring such a rating.

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DESCRIPTION OF THE MONEY MARKET

1. Main Participants by Category

20 Provincial & Municipal Governments  
10 Banks  
18 Major Trust Companies & Mortgage Corporations  
40 Major Corporations  
6 Life Companies  
18 Major Finance Companies  
15 Money Market Dealers - 6 or 7 active

2. Approximate Amounts Outstanding

	Millions of Dollars			%
	<u>1969</u>	<u>1968</u>	<u>1967</u>	<u>Increase</u>
Govt. of Canada Treasury Bills	2,895	2,825	2,455	18
Short Canadas (under 3 years)	5,191	4,651	3,895	33
Prov. & Mun. Notes & T. Bills	800	700	500	60
Chartered Bank Deposits	18,481	17,858	15,280	21
Bankers' Acceptances	182	112	149	22
Bank Swap Deposits	1,577	817	904	74
Trust Companies - G I C's	N.A.	3,207	2,739	17
Commercial Borrowers	900	450	320	195
Sales Finance & Consumer Loan	1,453	1,219	912	59

Five major dealers would account for 75-80% of the market's volume with a much larger number around the periphery.

The principal lenders to the market are corporations, trust companies, banks, insurance companies, governments, mutual and closed-end funds, pension funds and public institutions. American lenders in these categories are a major factor in the market, accounting for up to 25% (est.) of the total amount outstanding.

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REPRESENTATIVE LIST OF SHORT TERM BORROWERS

The following borrowers have signified their intention of utilizing A. E. Ames & Co. Limited's facilities from time to time to assist in their short term requirements from the Canadian markets.

Governments (Including Crown Corporations) Bills & Notes

Commission des Ecoles Catholiques de Montréal  
Province of Manitoba  
Province of New Brunswick  
Province of Newfoundland  
Province of Nova Scotia  
Province of Prince Edward Island  
Province of Saskatchewan  
Hydro Electric Commission of Ontario  
Manitoba Hydro-Electric Commission  
Newfoundland and Labrador Power Commission  
The Protestant School Board of Greater Montreal  
Quebec Hydro-Electric Commission  
City of London, Ontario  
City of Montreal, Quebec  
City of Vancouver, British Columbia  
The Corporation of the District of North Vancouver  
The Municipality of Metropolitan Toronto  
The Metropolitan Corporation of Greater Winnipeg

Corporations

Atlantic Sugar Refineries Company Limited  
B. C. Central Credit Union  
Bell Canada  
B. F. Goodrich Canada Limited  
British Columbia Packers Limited  
Building Products of Canada Limited  
Canada Packers Limited  
Canadian General Electric Company Limited  
Canadian Industries Limited  
Canadian Pacific Securities Limited  
Canron Limited  
Collins Radio Company of Canada Limited  
The Consumers' Gas Company  
Distillers Corporation Limited  
Dominion Bridge Company Limited  
Dominion Textile Company Limited  
DuPont of Canada Limited  
Firestone Tire & Rubber Company of Canada Limited  
Genstar Limited  
Grain Companies  
Great Canadian Oil Sands Limited

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Honeywell Holdings Limited  
Hudson's Bay Company  
Imperial Oil Limited  
Imperial Tobacco Company of Canada Ltd.  
Industrial Life Insurance Company  
Joseph E. Seagram & Sons Limited  
Kelly, Douglas & Company, Limited  
MacMillan Bloedel Limited  
Maple Leaf Mills Limited  
National Cash Register Company of Canada Limited  
Petrofina Canada Ltd.  
Robin Hood Multi-Foods Limited  
Robert Morse Corporation Limited  
Rolls Royce of Canada Ltd.  
Rupert's Land Trading Company  
Simpsons Limited  
Standard Brands Limited  
Steinberg's Limited  
Union Gas Company of Canada Limited  
Uniroyal Ltd.

Finance Companies

Associates Acceptance Company Limited  
Avco Financial Services Limited  
Beneficial Finance Co. of Canada  
Canadian Acceptance Corporation Limited  
Canadian General Electric Credit Limited  
Chrysler Credit Canada Ltd.  
Commercial Credit International Limited  
The T. Eaton Acceptance Co. Limited  
General Motors Acceptance Corporation of Canada Limited  
IAC Limited  
International Harvester Credit Corporation of Canada Limited  
Laurentide Financial Corporation Ltd.  
Massey Ferguson Finance Company of Canada Limited  
Niagara Finance Company Limited  
Personal Finance Company Ltd.  
RoyNat Ltd.  
Simpsons Sears Acceptance Company Limited  
Traders Group Limited  
Transamerica Financial Corporation of Canada Limited  
United Dominions Corporation (Canada) Limited

Trust Companies (Guaranteed Investment Certificates) & Mortgage Corporations

Canada Permanent Trust Company  
Canada Permanent Mortgage Corporation  
Canada Trust Company  
Crédit Foncier Franco-Canadien  
Crown Trust Company  
Guaranty Trust Company

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International Trust Company  
Kinross Mortgage Corporation  
Montreal Trust Company  
National Trust Company  
The Royal Trust Company  
The Royal Trust Company Mortgage Corporation  
Société de Fiducie du Québec  
Trust Général du Canada  
Victoria & Grey Trust Company  
Waterloo Trust Company

Bank Deposit Receipts

Canadian Imperial Bank of Commerce  
The Royal Bank of Canada  
Bank of Montreal  
The Toronto-Dominion Bank  
The Bank of Nova Scotia  
Banque Canadienne Nationale  
La Banque Provinciale du Canada  
The Mercantile Bank of Canada  
Bank of British Columbia

## GLOSSARY OF TERMS

### MONEY MARKET

Similar to any other market - it is a central point of contact for persons who have a desire to exchange a commodity. Specifically the Money Market is the exchange of cash or value representing cash. Many vehicles are utilized in this exchange, viz - Government of Canada Treasury Bills, short term bonds (maturities less than three years), Provincial and Municipal short term securities, bank and trust company short term notes, commercial and finance company notes.

### SHORT TERM COMMERCIAL & FINANCE PAPER

Commercial paper is the unsecured promissory notes issued by various companies of established reputation and financial soundness.

Finance paper is very often secured by pledge of 112% of receivables or is guaranteed by a U.S. parent.

### DAY TO DAY LOANS (D.D.L.'s)

Are special low cost loans granted to the 15 Money Market dealers by the Chartered Banks to enable the dealers to carry Canada Treasury Bills and short Government issues under three years. It also enables banks to invest their cash float and D.D.L.'s qualify as secondary reserves in the banking system.

### CALL LOANS

Special loans granted by banks and other financial institutions to all dealers to enable banks to invest over reserves of cash and dealers to carry all inventories.

### B.D.N., B.D.R., G.I.C.

Bearer Discount Notes, Bank Deposit Receipts, Guaranteed Investment Certificates, are the short term notes issued by banks and trust companies.

### AGENCY TRANSACTIONS

This is the most simple and frequent type of deal. The dealers act as the agents who bring together the borrower and lender. \$1 million invested for one day at  $8\frac{1}{4}\%$  brings a return of \$226.00. For one month the return is \$7,007.00.



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### BUY-BACK

When paper is sold out of dealer inventory for a specified period of time, not necessarily for the full term of the note, at a given yield and simultaneously repurchased for the termination date.

### DELAYED DELIVERY

When an account knows that he will have "X" amount of funds for investment at some future specified time and the current market rates are attractive in his opinion, a note is sold now for delivery in the future. Until such time of delivery the paper is carried in our inventory on a call loan, usually in the "Country Banks" or alternately the paper, for the short period of time, can be sold on a buy-back with another account.

### BANKING ARRANGEMENTS

This is used to assist an account should he be required to make unforeseen heavy capital outlays for short periods of time during the term the note is outstanding. The broker will bank the note for the account charging a rate above the call loan rate as a recompense for tying up his own lines of credit.

### CALL FEATURES

This is used to accommodate an account who feels he might need the funds during the term of the note - a call feature is put on the note for a specified date which entitles the account to call the note prior to maturity - usually at a penalty from the established rate. The call feature can be put on the note either by the issuer or the selling broker.

### HOUGHNUT

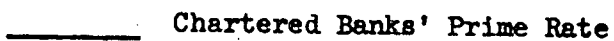
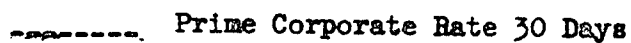
This is arranged to accommodate an account who wishes to buy a piece of paper for a specified term but for certain interim periods within the term of such note does not want to have it on his books, i.e., for reporting periods - or periods of heavy capital outlays.

At the time of the sale of the notes it is specified that the selling broker will buy back the note on the day desired and resell it to the account when the term of such "hole" is terminated. This term is usually three days to a week.

### BACK TO BACK

This is generally employed to accommodate a lender of funds whose restrictions compel him to deal in the generally lower rate paper issued by trust companies, bank deposits, etc. A back to back is arranged with such institutions by selling to them finance or similar type paper bearing a much higher rate of interest than their own paper enabling them to take a margin of profit, usually a  $\frac{1}{2}$  of 1%, and to issue a note of their own at higher rates than they would otherwise pay for cash.

### Chartered Banks' Prime Rate



## APPENDIX I

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EXTRACT FROM:

TRUST COMPANIES ACT  
Section 68 (1)(g)

debentures or other evidences or indebtedness of a corporation incorporated in Canada that has paid regular dividends on its preferred or common stock for a term of at least five years immediately preceding the date of investment in such debentures or other evidences of indebtedness;

THE LOAN AND TRUST CORPORATIONS ACT (ONTARIO)  
Section 137 (1)(h)

the bonds, debentures or other evidences of indebtedness of any company or bank that has paid regular dividends on its preferred or on its common stocks for not less than five years immediately preceding the date of the purchase or investment, or the bonds, debentures or other evidences of indebtedness of any company or bank that are guaranteed by a company or bank that has paid regular dividends on its preferred or on its common stocks for not less than five years immediately preceding the date of the purchase or investment, provided that at the date of the purchase or investment the amount of bonds, debentures and other evidences of indebtedness so guaranteed is not in excess of 50 per cent of the amount at which such preferred or common stocks, as the case may be, are carried in the capital stock account of the guaranteeing company or bank,

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APPENDIX III  
(Also refer to accompanying  
specimen offering memorandum)

DOCUMENTS REQUIRED FOR THE ISSUANCE OF SHORT TERM NOTES

1. Independent legal opinion as to the constitution and the powers of the company to borrow.
2. Certified copy of the By-law, authorizing the company to borrow by way of promissory note.
3. Certified copy of the Resolution, appointing the signing authorities, and form of note to be issued.
4. Audited annual statement and quarterly statements if available.
5. Certificate of Incumbency and facsimile signatures of signing officers.
6. Specimen of notes to be issued.

In addition to the above, we require,

1. The current bank borrowing and the total of bank credit lines.
2. Total amounts of notes outstanding at least once per month.

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EXTRACTS FROM INCOME TAX ACT

Deductions Allowed in Computing Income

Section 11 (1)(c)

Interest - an amount paid in the year or payable in respect of the year (depending upon the method regularly followed by the taxpayer in computing his income), pursuant to a legal obligation to pay interest on

- (i) borrowed money used for the purpose of earning income from a business or property (other than borrowed money used to acquire property the income from which would be exempt or to acquire an interest in a life insurance policy),
- (ii) an amount payable for property acquired for the purpose of gaining or producing income therefrom or for the purpose of gaining or producing income from a business (other than property the income from which would be exempt or property that is an interest in a life insurance policy), or
- (iii) an amount paid to the taxpayer under
  - (a) an Appropriation Act and on terms and conditions approved by the Treasury Board for the purpose of advancing or sustaining the technological capability of Canadian manufacturing or other industry, or
  - (b) the Northern Mineral Exploration Assistance Regulations made under an Appropriation Act that provides for payments in respect of the Northern Mineral Grants Program,or a reasonable amount in respect thereof, whichever is the lesser.

## APPENDIX C

This Appendix is composed of copies of recent issues of the weekly money market newsletters produced and distributed by A.E. Ames & Co. Limited and Wood Gundy Securities Limited.

# The Money Market

March 4, 1971

## NEW CANADA ISSUE

Preliminary details of new Government of Canada financing to refund \$225 million 6% April 1, 1971 and \$200 million 6¼% April 1, 1971 should be released on March 12. The Chartered Banks appear to hold approximately 40% of the two maturities and the Bank of Canada \$100 to \$150 million.

From \$600 million in requirements estimated as recently as two months ago, Ottawa's residual cash needs for the fiscal year ending March 31, 1971 may now be near zero. A number of developments seem to be responsible, the most significant of which is the performance of Canada Savings Bonds. Between December 2 and February 24 Canada Savings Bonds outstanding increased by \$112 million whereas net redemptions normally approach that amount during the same period in any given year. Secondly, Ottawa raised \$150 million new cash with its February 15 long term issue and continues to take in \$10 million net each week via increases in the treasury bill auction. Certain fiscal 1970-71 federal government expenditures, moreover, are likely to be carried into the next fiscal year. In this latter context Finance Minister Benson has revised fiscal 1971-72 cash requirements upwards, from \$1.9 to \$2 billion.

Despite the foregoing, and the current comfortable level of government balances (\$1.7 billion), Ottawa may raise some new money with this refunding. If the 1971 CSB campaign yields \$800 million, some \$1.2 billion of requirements must be financed in the next 12 months. Also consideration must be given at some point to pre-refunding a portion of the \$1 billion 4¼% September 1, 1972 still outstanding.

With this in mind, and noting the recently revived policy of monetary ease, the April financing might be set at \$550 million. In selecting appropriate maturities, it should be noted that the chartered banks purchased some \$90 million Canadas in the two weeks ended February 24, the bulk of which appeared to be intermediate term bonds. This implies that a reasonable degree of term extension might be successfully attempted. April 1974 seems a good date for a money market anchor issue and, coupled with a 6 - 8 year bond, would form an attractive package.

Brian Steel

CANADIAN FINANCE COMPANIES

CANADIAN PAY +	Demand	1-29 days	30-59 days	60-89 days	90-119 days	120-179 days	180-269 days	270-365 days
General Motors Acceptance Corp. of Canada †	-	-	4½	4½	4¾	4¾	5	5
Ford Motor Credit Co. of Canada †	-	-	4¾	4¾	4¾	4¾	4¾	4¾
Avco Financial Services †	-	-	4¾	4¾	5	5	5½	5½
Beneficial Finance Co. of Canada †	-	-	4¾	4¾	5	5	5½	5½
Canadian Acceptance Corp. †	-	*	*	*	*	*	5½	5½
Commercial Credit International Ltd. †	*	*	*	*	5½	5½	5½	5½
IAC Limited	-	-	4¾	4¾	5	5	5½	5½
Laurentide Financial Corporation Ltd.	-	5	5½	5½	5½	5½	5½	5½
Massey Ferguson Finance Co. of Canada Ltd.	-	5½	5½	5½	6	6	6	6
Niagara Finance Co. Ltd.	-	-	5	5	5½	5½	5¼	5¼
Sperry Rand Financial Corp. Can. Ltd. †	-	5¾	5½	5½	-	-	-	-
T. Eaton Acceptance Company Limited	-	-	4¾	4¾	4¾	4¾	4¾	4¾
Traders Group Ltd.	-	-	4¾	4¾	5	5	5½	5½
Transamerica Financial Corp. Canada †	*	*	5	5	5½	5½	5	5
Union Acceptance Corp. Ltd.	-	-	5½	5½	5½	5½	5½	5½
United Dominions Corp. Canada Ltd.	-	-	5	5	5½	5½	5¼	5¼

U.S. PAY

IAC Ltd.	-	-	4.00	4.00	4.125	4.50	4.50	4.50
Niagara Finance Co. Ltd.	-	-	4.125	4.125	4.25	4.625	4.625	4.625

COMMERCIAL PAPER

Bell Canada	-	-	5	5	-	-	-	-
B P Oil Limited †	5	5	5½	-	-	-	-	-
British Columbia Packers Limited	5½	5½	5¼	-	-	-	-	-
Cafo Limited	-	-	-	-	-	-	-	-
Canadian General Electric Company Limited	4¾	4¾	-	-	-	-	-	-
Canadian Pacific Securities Limited †	-	-	5	5	4¾	4¾	5½	-
Canron Limited	5½	5½	5¼	-	-	-	-	-
Consumers Gas Company	4¾	4¾	5	-	-	-	-	-
John Deere Limited †	-	-	5½	-	-	-	-	-
Distillers Corporation Limited †	4¾	4¾	5	5¼	5¾	-	-	-
Dominion Textile Company Limited	5	5	5½	-	-	-	-	-
Dupont of Canada Limited	4¾	4¾	4¾	-	-	-	-	-
Federal Grain Limited	5¼	5¼	5¾	-	-	-	-	-
General Foods Ltd.	5	5	5½	-	-	-	-	-
GenStar Limited	5½	5½	5¼	-	-	-	-	-
Imperial Oil Limited	-	-	4½	4¾	-	-	-	-
Imasco Limited	5	5	5½	-	-	-	-	-
International Nickel Company of Canada, Limited	-	-	-	-	-	-	-	-
Kelly Douglas & Company Limited	5¾	5¾	5¾	-	-	-	-	-
MacMillan Bloedel Ltd.	-	5	5½	5¼	-	-	-	-
Maple Leaf Mills Limited	5½	5½	5¼	5¼	-	-	-	-
Noranda Mines Limited	4¾	4¾	4¾	-	-	-	-	-
Petrofina Canada Limited	-	-	5¼	-	-	-	-	-
Philips Electronics Industries Limited †	-	-	-	-	-	-	-	-
Robin Hood Multifoods Limited	5½	5½	5¼	-	-	-	-	-
Royal Trust Mortgage Corporation	-	-	5¼	5¾	5¾	5¾	5¾	-
Roymor Limited	-	5	5½	-	-	-	-	-
Roynat Leasing Ltd.	5½	5½	5¼	-	-	-	-	-
Roynat Ltd.	5	5	5½	-	-	-	-	-
Saskatchewan Wheat Pool	5½	5½	-	-	-	-	-	-
Simpsons Limited	-	-	4¾	4¾	4¾	-	-	-
Steinberg's Limited	5	5	5½	-	-	-	-	-
Texaco Canada Limited	4¾	4¾	5	5	-	-	-	-
United Grain Growers Limited	5¼	5¼	5¾	-	-	-	-	-
UniRoyal Ltd. †	-	-	-	-	-	-	-	-
Woodward Stores Ltd.	-	-	-	-	-	-	-	-

+ Discounted Yield Available; † Parent Guarantee; \* Rates on Application

PROVINCIAL AND MUNICIPAL NOTES

Ontario Hydro	-	-	4.75	5.10	5.20	5.20	5.30	5.40
Quebec Hydro	-	-	5.00	5.10	5.20	5.25	5.35	5.45
Saskatchewan	-	-	-	-	5.25	-	-	-
Alberta Municipal Financing Corp.	-	-	-	-	5.25	-	-	-



# RATES - TO 1 YEAR IN TERM (CONT'D)

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	1-15 DAYS	16-29 DAYS	30 DAYS	60 DAYS	90 DAYS	180 DAYS	270 DAYS	365 DAYS
<b>CHARTERED BANKS</b>								
CDN. DOLLAR DEPOSITS	3.75	4.50	4.90	4.90	4.90	5.00	5.00	5.00
CDN. DOLLAR "SWAPPED" DEPOSITS			5.10	5.10	5.20	5.70	5.75	6.00
<b>TRUST COMPANIES</b>			5.00	5.25	5.25	5.50	5.50	5.50
<b>BANKERS ACCEPTANCES</b>								
Bid	-	-	4.95	5.00	5.05	-	-	-
Offered	4.75	4.80	4.85	4.90	4.95	-	-	-

# RATES - 1 YEAR TO 6 YEARS

	1-1½ Years	1½-2 Years	2-2½ Years	2½-3 Years	3-4 Years	4-5 Years	5-6 Years
<b>CHARTERED BANKS</b>	5¾	5¾	6¼	6¼	6¾	6¾	-
<b>FINANCE COMPANIES</b>	5¾	5¾	6¼	6¼	7	7	7½
<b>TRUST COMPANIES</b>	6¼	6¼	6½	6½	6¾	7	7½

# SELECTED CANADIAN FINANCIAL STATISTICS

	Recent Week	Prev. Week	Prev. Month	Year Ago
<b>CHARTERED BANKS</b>				
Secondary Reserves (%) (Min Cash & Second.		16.5	16.2	15.6
More Liquid Assets (%) Req. 15.27% Feb.)	A	30.9	30.6	25.4
Day To Day Loans (\$ Mlns.)	V	305.	341.	276.
Call Loans To	A			
Investment Dealers (\$ Mlns.)	I	473.	446.	173.
General Loans (\$ Mlns.)	N	15,990.	15,815.	14,871.
Loans/Deposits (%)	O	63.9	64.5	69.3
<b>MONEY SUPPLY</b> (\$ Mlns.)	T	32,316.	31,923.	28,630.
<b>GOVT. OF CANADA BALANCES</b> (\$ Mlns.)	A	1,789.	1,502.	1,107.
	B			
	L			
	E			

# GOVERNMENT OF CANADA TREASURY BILLS

	Due Date	Bid %	Asked %		Due Date	Bid %	Asked %
1 week	12 Mar.	4.80	3.80	14 week	11 Jun.	4.10	3.95
2 week	19 Mar.	4.50	3.80	15 week	18 Jun.	4.10	3.95
3 week	26 Mar.	4.20	3.80	16 week	25 Jun.	4.10	3.95
4 week	2 Apr.	4.10	3.80	17 week	2 Jul.	4.10	3.95
5 week	8 Apr.	4.00	3.80	18 week	9 Jul.	4.10	3.95
6 week	16 Apr.	4.00	3.80	19 week	16 Jul.	4.10	3.95
7 week	23 Apr.	3.95	3.80	20 week	23 Jul.	4.10	3.95
8 week	30 Apr.	4.00	3.85	21 week	30 Jul.	4.10	3.95
9 week	7 May	4.05	3.90	22 week	6 Aug.	4.05	3.95
10 week	14 May	4.00	3.90	23 week	13 Aug.	4.05	3.95
11 week	21 May	4.00	3.90	24 week	20 Aug.	4.05	3.95
12 week	28 May	4.00	3.90	25 week	27 Aug.	4.05	3.95
13 week	4 Jun.	4.00	3.95	* 26 week	3 Sep.	4.03	3.98

Latest Maturities

# GOVERNMENT OF CANADA BONDS TO 3 YEARS IN TERM

ISSUE	BID	ASK	YIELD %	ISSUE	BID	ASK	YIELD %	ISSUE	BID	ASK	YIELD %
6 1 Apr. 1971	100.00	100.07	5.12	6 15 Dec. 1971	100.75	100.85	4.86	7 1 Feb. 1973	103.60	103.70	4.95
6¼ 1 Apr. 1971	100.00	100.10	5.04	6½ 1 Apr. 1972	101.60	101.70	4.87	7 1 Apr. 1973	103.90	104.00	4.95
8 1 June 1971	100.60	100.70	5.14	7¼ 1 Apr. 1972	102.30	102.40	4.95	6½ 1 Jul. 1973	103.35	103.45	4.92
5 1 June 1971	99.90	100.00	4.97	4¼ 1 Sept. 1972	99.10	99.20	4.81	6¾ 1 Jul. 1973	103.90	104.00	4.91
6¼ 1 Oct. 1971	100.70	100.80	4.90	5¼ 15 Dec. 1972	100.45	100.55	4.93	5 1 Oct. 1973	100.10	100.20	4.92
8 1 Oct. 1971	101.70	101.80	4.83	8 1 Feb. 1973	105.30	-	5.06	6¼ 1 Dec. 1973	103.20	103.30	4.95

	Today	Last Week	Last Month	Last Year		Today	Last Week	Last Month	Last Year
<b>BANK RATES</b>					<b>CHARTERED BANK DEPOSITS</b>				
Canada	5½	5½	6	8	CDN. Dollar 3 Month	4.90	5.00	5.75	7.50
U. S. *	4¾	4¾	5	6	"Swapped" 3 Month	5.20	5.50	6.25	8.55
U. K.	7	7	7	8					
<b>PRIME RATES</b>					<b>REPRESENTATIVE SHORT TERM PAPER</b>				
Canada	6½	6½	7	8½	Canada 3 month	5.00	5.00	6.00	8.25
U. S.	5¾	5¾	6	8½	U. S. 3 month	4.00	4.00	4.50	7.75
<b>TREASURY BILLS (AVG. TENDER) %</b>					<b>FORWARD EXCHANGE HEDGE RATES (ANNUAL YIELD BASIS)</b>				
Canada 3 month	3.98	4.06	4.79	7.52	Canada To U. S. 3 month	+ .88	+1.12	+1.00	+ .20
6 month	4.03	4.08	4.94	7.48	U. S. To Canada 3 month	- .96	-1.20	-1.08	- .26
U. S. 3 month	3.34	3.49	4.11	6.86					
U. K. 3 month	6.78	6.78	6.78	7.37	<b>YIELD DIFFERENTIAL CAN. - U. S.</b>				
<b>BANKERS ACCEPTANCES</b>					<b>FEDERAL GOVERNMENT BONDS</b>				
Canada 3 month	4.95	5.15	6.10	8.35	5 year	.34	.36	-.15	.82
U. S. 3 month	3.875	4.125	4.50	8.125	LONG TERM (Average)	.70	.76	.67	1.66
					<b>CANADIAN DOLLAR</b>				
					In terms of U. S. †	99.38	99.38	99.23	93.23

\* Federal Reserve Bank of New York

† Former I.M.F. Parity Range 91.575 - 93.425  
Operational Range 91.74 - 93.24

## THE FOREIGN EXCHANGE MARKET

	1 Month	2 Months	3 Months	6 Months	9 Months	1 Year
<b>HEDGE RATES *</b>						
Canada to U. S.	+ .84	+ .84	+ .88	+ .74	+ .60	+ .58
U. S. to Canada	-1.18	- .96	- .96	- .80	- .70	- .66
<b>RELATIVE "COVERED" SHORT TERM YIELDS</b>						
<b>GOVERNMENT TREASURY BILLS</b>						
Canadian investing in U. S.	3.84	4.02	4.14	4.10	-	-
American investing in Canada	2.67	2.94	2.99	3.20	-	-
<b>FINANCE COMPANIES (Equivalent Credits)</b>						
Canadian investing in U. S.	4.34	4.34	4.88	4.86	4.97	-
American investing in Canada	3.94	4.21	4.17	4.45	4.55	4.59
<b>COMMERCIAL PAPER (Equivalent Credits)</b>						
Canadian investing in U. S.	4.59	4.58	4.88	4.74	4.60	-
American investing in Canada	3.82	4.18	4.18	4.32	4.42	4.46
<b>CANADIAN BANK - U.S. DOLLAR DEPOSITS</b>						
Canadian Residents	4.25	4.25	4.375	5.00	5.125	5.50
U. S. Residents	4.25	4.25	4.375	5.00	5.125	5.50
Third Country Residents	4.25	4.25	4.375	5.00	5.125	5.50
<b>EURO-DOLLAR DEPOSITS (in U. S. Terms)</b>						
U. S. BANKS	4.75	5.00	5.00	5.625	6.00	6.25
CANADIAN BANK	4.75	5.00	5.00	5.625	6.00	6.25
* Rates in Annual Yield Terms Pickup + Loss - Flat...						
	FRI.	MON.	TUES.	WED.	THURS.	
SPOT CANADIAN IN U. S. FUNDS	99.34	99.25	99.28	99.31	99.38	
SPOT £ STERLING IN U. S. FUNDS	2.4163	2.4153	2.4176	2.4189	2.4184	
FREE GOLD PRICE (London Afternoon Fixing)	38.78	38.75	38.70	38.77	38.77	

## CANADIAN BANKING RATES AND STATISTICS

BANK RATE—5¼%

CHARTERED BANKS' PRIME RATE—6½%

	W/E Mar. 10/71	W/E Mar. 3/71	W/E Feb. 10/71
Day-to-Day Loans			
Average of Closing Rates	3.70%	3.80%	5.15%

	Mar. 3/71	Feb. 24/71	Feb. 3/71
		(\$ Millions)	
Money Supply	\$32,538	\$32,365	\$32,062
General Loans	16,158	16,019	15,843
Call Loans to Investment Dealers	357	373	485
Liquid Asset Ratio	30.6%	30.8%	30.7%

## UNITED STATES TREASURY BILLS

	Mar. 9/71	Mar. 2/71	Feb. 9/71
3 Months Bills	3.307%	3.347%	3.845%
6 Months Bills	3.359	3.467	3.839

## FOREIGN EXCHANGE

Canadian \$ in New York—99.44 (Noon Mar. 12)

Hedge rates showing gain (+) or loss(—) annual yield basis

	30 days	60 days	90 days	180 days	365 days
U.S. \$ in Canada	-.12%	-.30%	-.28%	-.34%	-.36%
Canadian \$ in U.S.	+.12%	+.18%	+.16%	+.28%	+.32%
Eurodollar Deposit Receipts	4.875%	4.875%	5.00%	5.50%	6.25%

**A. E. Ames & Co.**  
Limited

# THE MONEY MARKET

MARCH 12, 1971

**A. E. Ames & Co.**  
Limited

Business Established 1889

TORONTO		
MONTREAL	NEW YORK	LONDON, ENG.
PARIS	LAUSANNE	VANCOUVER
VICTORIA	WINNIPEG	CALGARY
EDMONTON	SASKATOON	QUEBEC
LONDON	HAMILTON	OTTAWA
KITCHENER	ST. CATHARINES	OWEN SOUND
	PETERBOROUGH	

# THE MONEY MARKET

March 12, 1971

Another round of reductions in the prime lending rates of major American banks to  $5\frac{1}{4}$ - $5\frac{1}{2}\%$ , because of weak loan demand, capped a week of falling money market yields. Most short Canadas fell by  $\frac{1}{4}$  of 1% in yield and 1-year Canadas now yield 4.50% compared with 7.50% a year ago. Treasury bills fell another 64 basis points to 3.34% the lowest yield at tender since July, 1963. Bank buying was evident in the market and day money got as low as 2.5% though currently (Friday) it is  $3\frac{1}{4}\%$ . In the finance and commercial paper market, rates fell  $\frac{5}{8}$  of 1% and trading was light with little demand for funds. The dollar ended the week at 99.44 cents U.S. although it did trade higher during the week. In the forward market the discount at 30 days disappeared at one point but has returned; all forward discounts, however, are lower than they were a week ago.

Though the mood of the market kept improving all week, the extent of the fall in bill yields was surprising and caused more than the usual speculation about the Government of Canada issue expected this weekend. Speculation also centred on possible changes in the U.S. discount rate and in the Canadian bank rate. The rate of increase in the money supply, broadly defined, rose at a seasonally adjusted annual rate of 22% from September through January, in the 3 months November to February the comparable rate of growth was 17%, which slowed down to 9% in February.

## CURRENT MARKET RATES

### GOVERNMENT OF CANADA

#### TREASURY BILLS

##### Average Tender Rates

	91 Days	182 Days
Mar. 11/71	3.34%	3.44%
Mar. 4/71	3.98	4.03
Feb. 11/71	4.61	4.68

#### BONDS DUE WITHIN ONE YEAR

##### Amount o/s

\$ Million	Coupon	Maturity	Market	Yield
225	6	Apr. 1/71	100.00-10	4.21%
200	$6\frac{1}{4}$	Apr. 1/71	100.01-11	4.27
350	5	June 1/71	100.00-10	4.51
75	8	June 1/71	100.65-75	4.53
200	$6\frac{1}{4}$	Oct. 1/71	100.85-95	4.50

### SHORT TERM NOTES AND DEPOSITS

	30-59 Days	60-89 Days	90-179 Days	180-269 Days	270-365 Days
	%	%	%	%	%
PROVINCIAL BILLS & NOTES	4.00-4.20	4.40-4.50	4.60-4.75	4.70-4.90	4.90-5.00
CHARTERED BANK DEPOSIT RECEIPTS	4.00-4.75	4.25-4.75	4.50-5.00	4.75-5.25	4.75-5.25
BANKERS' ACCEPTANCES	4.30	4.40	—	—	—
TRUST COMPANY DEPOSIT RECEIPTS	4.25-4.75	4.50-5.00	4.75-5.00	5.00-5.25	5.00-5.50
FINANCE COMPANY NOTES (Discount Rate)					
Associates Acceptance Company	4.375	4.375	4.375	4.375	4.375
Avco Financial Services (Canada) Limited	5.00	5.125	5.25	5.25	5.50
Beneficial Finance Company of Canada Ltd.	4.375	4.375	4.375 (to 120)	—	—
Commercial Credit International Limited	on application	4.625 (90-119)	4.875 (at 120)	4.875	4.875
Chrysler Credit Canada Ltd.	4.50	4.625	4.625	4.75	4.875
General Motors Acceptance Corporation	4.25	4.25	4.375	4.50	4.50
IAC Limited	4.25	4.25	4.375	4.375	4.625
International Harvester Credit Corp.	4.75	4.75	4.875	5.00	6.00 (at 300)
United Dominions Corporation (Canada)	4.75	4.75	4.875	4.875	5.00

### CORPORATE NOTES

	Demand	30 Days	60 Days	90 Days	180 Days
Bell Canada	—	4.25	4.25	—	—
T. Eaton Acceptance Co. Limited	—	4.25	4.25	4.25	—
Firestone Tire & Rubber Co. of Canada Ltd.	—	4.50	4.625	4.625	—
Honeywell Holdings Limited	4.25	4.50	4.625	4.625	4.625
Imperial Oil Limited	—	3.875	4.00	4.00	—
MacMillan Bloedel Limited	4.75	4.875	5.00	5.125	—
Massey-Ferguson Finance Co. of Canada Ltd.	5.125	5.375	5.50	5.625	5.75
National Cash Register Co. of Canada Ltd.	4.25	4.375	—	—	—
Simpsons-Sears Limited	4.375	4.50	4.625	4.75	—

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