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**A PRELIMINARY INVESTIGATION OF
THE INFORMAL RISK CAPITAL MARKET
IN OTTAWA - CARLETON**

by

Dominique M. Short, B. Comm (Honours)

A Thesis submitted to
the Faculty of Graduate Studies and Research
in partial fulfillment of
the requirements for the degree of
Master of Management Studies

School of Business

Carleton University

Ottawa, Ontario

May 4, 1987

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The undersigned recommend to the Faculty of Graduate
Studies and Research acceptance of the thesis

"A Preliminary Investigation of the Informal Risk Capital Market in Ottawa-Carleton"

submitted by Dominique M. Short, B.Comm. (Honours)
in partial fulfillment of the requirements for
the degree of Master of Management Studies

A handwritten signature in cursive script, reading "Allan R. Reering", written over a horizontal line.

Thesis Supervisor

A handwritten signature in cursive script, reading "Prof. J. Gault", written over a horizontal line.

Director, School of Business

Carleton University

May 4, 1987

ABSTRACT

This research examined the Ottawa market for informal risk capital to assess the feasibility of establishing a clearinghouse for facilitating the identification of investment opportunities. Informal investors and entrepreneurs of small high-technology firms were surveyed to investigate the low end of the equity market.

Despite the contribution of the small-business sector towards economic development and job creation, these firms face difficulty in finding adequate sources of capital. This research provides evidence that informal investors provide a major pool of capital for small ventures. Although these investors reported substantial investments, there appeared to be too few to support the requirements of small firms in Ottawa. There also appeared to be a dilemma matching individual needs of small businesses with investment objectives of informal investors.

Investors and entrepreneurs demonstrated an interest in participating in an information clearinghouse; however, its success will require a higher investor participation rate than that predicted.

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LIST OF ABBREVIATIONS

ACVCC	Association of Canadian Venture Capital Corporations
COATS	Canadian Over-the-counter Automated Trading System
COIN	Computerized Ontario Investment Network
FBDB	Federal Business Development Bank
OTC Market	Over-the-counter Market
RRSP	Registered Retirement Savings Plan
SBDC	Small Business Development Corporation
VCN	Venture Capital Network Inc.

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CHAPTER 1: INTRODUCTION

1.1 PURPOSE AND ORGANIZATION OF THE STUDY

The purpose of this study is to investigate the economic feasibility of establishing an information clearinghouse in the Ottawa-Carleton area which would act as a means of introducing informal investors and entrepreneurs. In this context, economic feasibility can be defined as being synonymous with financial self-sufficiency, in that the estimated operating revenues would cover the estimated operating costs of this service.¹ This definition implies the fulfillment of two conditions, namely:

- i) there exists a sufficient demand for the services of an information clearinghouse; and,
- ii) the services of the clearinghouse would be considered to be of sufficient value that local informal investors and entrepreneurs would be willing to pay a fee to acquire those services.

In order to investigate the climate of the risk capital market in the Ottawa-Carleton community, the following five objectives were addressed:

- to determine the extent and nature of criteria used by informal investors to evaluate investment opportunities with the view to profiling the characteristics of investors;
- to identify the communication channels which currently link local entrepreneurs and informal investors;
- to assess investors' and entrepreneurs' perceptions of the effectiveness of existing information networks;
- to assess investor and entrepreneur willingness to participate in a referral service designed to broaden the range of bona fide investment opportunities available for their consideration; and,
- to identify investor and entrepreneur preferences for the structure of such a referral service.

¹ It should be noted that, even if the demand for the referral service was such that revenues did not cover operating costs, it might nonetheless be "feasible" in the sense that its benefits to the community (i.e. more jobs, a larger tax base, technological innovation) might still argue in favour of its implementation.

The first chapter provides a progression from the necessary background material through to the articulation of the hypotheses addressed in this study. This progression begins with some detail about the risk capital market and provides a review of the literature pertinent to the operation of these markets, in order to identify alternative hypotheses for explaining the problems which small firms face in raising capital. Chapter two describes the research design, site, and methodology employed for examining the research objectives and hypotheses under study. An analysis of the results of administering questionnaires to informal investors and to entrepreneurs is contained in the third chapter. The fourth and final chapter summarizes the research findings, acknowledges some of the limitations of the study, and provides a discussion of certain aspects of this research which offer opportunities for future analysis.

1.2 A BRIEF BACKGROUND TO SMALL BUSINESS FINANCE

"Large private sector businesses in Canada have little difficulty in obtaining financing. If funds are sought in the public markets, the transactions are large enough to overcome the fixed costs of complying with securities regulations. If funds are sought in the private markets, large businesses can afford the expertise to prepare data for evaluating their transactions. Such is not always the case with the small business sector." (Neave, 1981, p. 281)

One of the predominant difficulties faced by small- and medium-sized firms in Canada is that of raising funds for financing corporate growth.² While financing is a source of concern for all business enterprises, it represents a particularly acute problem for emerging firms attempting to survive the start-up stage of development. One reason for the prominence of the financing problem is that larger firms have more financing options and that the fixed cost component and relative costs of obtaining funds decline as the firm grows (Loo, 1985). It is possible to identify four levels of financial requirements during the development of most successful firms.

Initially, start-up funding is typically provided from the principals themselves. In most cases, start-up capital comes from the founders, be it from their personal assets and borrowings, from family, or from social acquaintances. Problems may arise because these sources are limited; however, if the firm is at all successful, its working capital requirements continue to rise. Firms facing this situation must therefore look to outsiders for the funding necessary to survive and grow beyond the start-up stage. Once this source is exhausted, firms must resort to external sources of financing. Those firms surviving to the second stage of development may be able to

² There is considerable documentation relating to the difficulties which small firms face in locating adequate sources of capital. In a study of the growth and development of business in Canada, the TSE noted that financing is perceived to be businesses' single most important problem in their early years (Toronto Stock Exchange, 1980). At least four other studies report that entrepreneurs hold the view that capital is hard to come by, and that locating capital is an especially severe problem (see, for example White, 1984, MacDonald, 1985, Wetzel and Wilson, 1985, and Venture Economics Canada Ltd., 1986).

The severity of the financing problem is not easily measured, as it is often both the cause and a symptom of a number of other managerial problems. Typically, the entrepreneur assumes all management functions of the firm. If the management functions are performed inefficiently, the future viability of the firm may be compromised (Poapst, 1986). With limitations on management resources and time, there is a trade-off between the amount of effort which the entrepreneur expends for locating sources of capital and the amount of effort which is directed toward other managerial functions. The problem is further compounded by the fact that sources of capital which are appropriate to the particular needs of small firms are not well known. As a result, many valuable hours may be wasted seeking capital from inappropriate suppliers (for a more detailed discussion of this issue, see Osgood and Wetzel, 1977, Kostuch, 1976, Private/Public Ventures, 1980, and Venture Economics Canada Ltd., 1986. For an empirical analysis of the severity of this problem, see Wetzel and Wilson, 1985).

seek funds from such sources as venture capital companies, secured bank lending, leasing, factoring, suppliers, and government programs. In the third stage of corporate development, firms have expanded to the point where an initial public offering of equity to the public market is contemplated or realized. Finally, established and mature firms, typically listed on stock exchanges, are able to raise funds from well-developed capital markets

The stages of corporate growth are not continuous; rather it is in the transition from one stage to another that financial requirements become constraints. The focus of this study relates to the critical transition from the first to the second of these stages, a transition which typically occurs after the start-up capital has been exhausted, and one which typically requires funding in the range of \$50,000 to \$300,000.

For the purposes of this study, risk or venture capital is defined as equity capital invested in new or young businesses with high growth potential which are unable to obtain sufficient or adequate financing from conventional sources. Those investors willing to supply funds to emerging firms with high growth potential are referred to as venture, or risk capital, investors. The risk capital supply is typically comprised of venture capital companies, public equities markets, and individuals or informal investors. In the U.S., the rate of institutional venture capital investing is approximately \$2.5 billion per year. This compares to annual public underwritings which are estimated at \$3.7 billion. Still, it has been suggested that informal risk capital investing may be in the order of \$5 billion per year (Wetzel, 1985).³ In Canada, it has been estimated that formal venture capital activity was approximately \$141.5 million, in 1985 (ACVCC, 1986). No comparable estimates regarding the extent of informal investment appear to be available.

As part of their overall investment strategy, venture capital companies examine the exigencies of the economy in order to decide whether they will assume an aggressive or a defensive position in their investments. In turn, their position determines where in the development stage of the firm they will invest. Reports of activity by the Association of Canadian

³ The definition of informal risk capital investing also encompasses the actions of private individuals who invest their experience as well as their capital in young or start-up companies.

Venture Capital Companies (ACVCC) indicate that there has been an upward trend in both the size and the stage of development of investee companies over the last four years. In 1985, only 22% of all investments by ACVCC members were in start-up situations (ACVCC, 1986). The reluctance of professional venture capitalists to invest in infant firms arises because the potential return on an investment of less than \$300,000 does not usually warrant the time and expense associated with the evaluation and nurture of the investment. Moreover, there is a potential conflict of interest between the venture capital company and the entrepreneur for management control and the sharing of realized and future gains. Negotiations to resolve this conflict may not always result in a mutually acceptable investment agreement.

The high fixed costs of complying with the registration and prospectus requirements of the securities legislation can also be prohibitive for small firms seeking funds in the public markets (White, 1984). As a result, small firms with financial requirements ranging from \$50,000 to \$300,000 cannot usually access the public equities markets to raise this level of financing. Such companies must rely on informal investors to secure the capital which they need.

The informal investor segment of the market is comprised of wealthy individuals who are willing to provide start-up capital. Their role in the risk capital market in Canada is undefined and unsubstantiated by readily available data regarding the nature and extent of informal risk investment. This research provides a preliminary assessment of the importance of informal investors in the Ottawa-Carleton area.

1.3 SMALL BUSINESS FINANCING PROBLEMS

1.3.1 Introduction

This initial study attempts to link the disparate theories pertinent to the financing difficulties of the small business sector. The concepts advanced in the literature may be classified under three broad categories: capital market gaps; the efficiency of capital markets; and, informational asymmetries. While these three categories are interrelated, it is useful to examine their theoretical bases and relationship to the study.

1.3.2 Small Business and Capital Market Gaps

For most of the major intermediaries, the institutional and legal arrangements for supplying funds to business are not congruent with the arrangements which the entrepreneurial sector can provide. For many of these intermediaries, the proportion of their portfolios comprised of risk capital investments is restricted. In addition, there may also be restrictions placed on the nature of permissible risk capital investments. The high fixed costs of investigating credit-risk and of monitoring investment in small firms constrain the ability of small, yet creditworthy, firms to secure institutional investment (Poapst, 1986). In a study of high growth firms in New Hampshire, Wetzel and Wilson (1985) found that the institutional markets were inaccessible to all classes of businesses, but particularly to those firms with less than 100 employees, with less than \$5 million in annual sales, and with growth rates in excess of 30% *per annum*.

Popular conventional wisdom holds that there are important impediments in the financial markets that affect the flow of capital to the small business sector (Facsym Research Ltd., 1981). Such differences between the supply and demand for funds are often referred to as capital market "gaps" (Neave, 1981). Under such a broad definition, the notion of capital market gaps extends to market dysfunctions arising from both the "supply" side and the "demand" side. If a "supply" side gap exists, the market is characterized by real shortages in the supply of risk capital. This shortcoming in the operation of capital markets precludes firms from obtaining financing at

costs commensurate with their risk. In effect, government initiatives encouraging investment in small business are illustrative of the sort of external measures necessary if the gap is to be reduced by increasing the supply of capital.⁴

On the "demand" side, capital market gaps may arise whenever a business arbitrarily restricts its external financing to an amount that is less than it could profitably use to support capital investment (Facsym Research Ltd., 1981). An arbitrary restriction may be imposed by the entrepreneur for personal reasons which are inconsistent with profit-maximizing goals. Gaps on the "demand" side may also result when the search for capital to finance projects is performed in an inefficient manner. In this case, financing may be more costly and projects may be dropped. The existence of "demand" gaps suggests an need to improve the quality or to increase the quantity of the financial expertise in small businesses.

The flow of funds to the small business sector may also be affected when expectations on the "supply" side are inconsistent with those on the "demand" side. "Expectations" gaps are alleged to exist in the situation when the supplier of funds and the firm seeking investment cannot reach an agreement on what constitutes an equitable financing arrangement. Regardless of how much capital is available to the small business sector, these firms may not secure adequate levels of capital if negotiations fail because of differing views on the nature, terms, or value of the proposed investment.

Despite such a broad definition, capital market gaps are commonly referred to in the literature as shortages in the supply of capital available to the small business sector (Private/Public Ventures, 1980). In this study, the notion of capital market gaps is restricted to the more traditional "supply" side definition. This restriction provides for an examination of the causes underlying small-business financing problems.

Arguments supporting the existence of capital market gaps, or shortages in the supply of capital, are usually based on the observed behavior of investors such as financial institutions,

⁴ An example of this type of initiative is loan guarantees, in which the government insures loans to targeted borrowers and thus reduces the risks of default. With lower default risks, borrowers can obtain funds at costs which are lower than would otherwise be attainable.

venture capital companies, and pension funds. Recently, however, two counter-arguments have been set forth which suggest that capital market gaps on the "supply" side may be more apparent than real!

The first of these counter-arguments is based on Wetzel's (1983) work. Wetzel argues that the investment record of informal investors is underestimated and, as a result, an examination based solely on institutional investment may suggest the existence of capital market gaps. At the start-up stage, small businesses rely heavily on private sources of capital (i.e. individuals) to provide the necessary financing. The extent and nature of this informal investment, however, is not readily apparent or quantifiable. By conducting a survey of 133 informal investors in the New England area, Wetzel provides evidence which suggests that the informal risk capital investor may in fact represent one of the largest pools of venture capital in the United States. Wetzel also found that such investors tend to invest in those areas identified as experiencing so-called capital market gaps. Wetzel concludes that while the perception of "gaps" is understandable, actual shortages in the supply of risk capital may not exist! Wetzel's conclusions are supported in his later work with Wilson (Wetzel and Wilson, 1985). In this study, those high growth firms which had survived to be interviewed had been successful in securing informal investment, an important alternative to the more traditional institutional investment.

A second argument which questions the presence of capital market gaps relates to the demand for funds by those firms seeking them. It has been suggested that the capital allocation process may be sub-optimal because small businesses lack the technical ability to effectively inform potential investors about themselves (Private/Public Ventures, 1980). Moreover, this problem is compounded by the fact that there is a high cost in managerial time if entrepreneurs are to be fully aware of available sources of funds and if investors are to be made aware of opportunities. Evidence to support this argument can be found in Navarre and Janoff (1986) who, in their study of the Canadian informal risk capital market, found no shortage of capital; rather

they noted a 'lack of awareness' on the part of entrepreneurs for tapping into the informal risk capital pool.

Thus, problems in communication between the business and the sources of financial resources may fuel perceptions that there are shortages in the risk or venture capital markets. Part of the problem, however, may simply be a mechanical deficiency in matching willing investors with the principals of emerging firms.

According to this argument, the effects of capital market gaps (i.e., an inability for small firms to raise affordable capital) may be generated by informational asymmetries between those who supply and those who demand risk capital. Entrepreneurs are aware of the quality and distinct characteristics of their firms. However, it may be expensive or even impossible for outside parties to investigate the quality and characteristics of those firms. Without the transfer of this knowledge between the two parties, capital markets perform poorly as entrepreneurs find they cannot obtain capital at affordable rates (Leland and Pyle, 1977). According to a model of the risk capital marketplace described by Chan (1983), there is a clear linkage between informational asymmetry and real or perceived capital market gaps. Chan's theoretical model suggests, *inter alia*, that investors exit the marketplace as long as they must pay a finite cost of searching for investment opportunities.

In summary then, the essence of the small-business financing problem may not be so much one in which there are actual shortages of risk capital supply; rather, the root of the problem may be poor communication among risk capital market participants. In a recent study for the Small Business Financing Review, it was noted that there are conditions which suggest that supply gaps exist, but which are also consistent with the absence of gaps (Facsym Research Ltd., 1981). If gaps do not exist, measures aimed at increasing the supply of risk capital by making this type of investment more attractive may not satisfactorily achieve the desired result. Inappropriate linkage may result in a situation where investors are not fully aware of the opportunities available to them and where entrepreneurs lack an ability to identify the most useful sources of capital (Kostuch,

1976). Thus, informational differences may be at the root of the inefficiency in informal risk capital markets. Given this possibility, it is useful to examine the notion of the efficiency of capital markets.

1.3.3 Efficient Capital Markets

Capital markets exist to bring together spending and saving units.⁵ An efficient market will direct capital quickly and accurately to where it will be most productive. The efficient market hypothesis states that asset prices fully and instantaneously reflect all relevant information and therefore are reliable signals for capital allocation. Asset prices determined in an efficient market serve to channel capital from saving units to investments which promise the highest rate of return for a given level of risk. Thus, in efficient markets, equally risky investment arrangements will yield equal rates of return.

In efficient capital markets, asset prices continually adjust as new information about the characteristics and nature of those assets becomes available. This occurs because buyers and sellers of capital are informed about all possible sources of funds and investment opportunities. In such a market, the price adjustment is a process which works to equate supply and demand for capital. As a result, firms are able to raise necessary funds at a cost which reflects the true riskiness of the venture. The market works to drive prices to equilibrium values consistent with all

⁵ Spending units are comprised of individuals or firms having insufficient funds in order to take advantage of all investments with expected returns which exceed the market-determined borrowing rate. Saving units include those individuals and firms with excess funds after considering all investments that promise rates of return higher than the market-determined lending rate. The borrowing/lending rate which prevails in the market serves as a benchmark for evaluating various investment opportunities. In other words, investments will be undertaken just until the returns they generate, adjusted for risk, offset the opportunity cost of borrowing or lending (Fisher, 1930 as described in Copeland and Weston, 1983).

the relevant information available to the market, because investors take action to make profits when prices are out of line (Copeland and Weston, 1983).⁶

If such an environment were to exist for small businesses, they would be able to obtain financing at a fair cost. This means that corporate growth of the small-business sector could be realized, and not stifled by what may seem to some to be a capital market gap.

With inefficient risk capital markets, the ability of small firms to secure necessary financing at reasonable costs may be impeded, and their contributions to job creation, technological innovation, productivity, and the level of skill in the labor force may not be realized. The problems often cited by entrepreneurs in financing growth from the first stage of development to the second stage, and poor communication between entrepreneurs and willing investors, suggest that the efficient market hypothesis is unlikely to hold for informal risk capital markets.

The "state of the art" in research on informal risk capital markets is at an exploratory stage (Wetzel, 1985). A serious constraint for conducting research in this field is a poor appreciation for the magnitude of informal risk capital investment caused by a lack of readily available data which captures the prices at which risk capital assets are bought and sold. For this reason, the relative efficiency of informal risk capital markets is an hypothesis which remains to be tested. It has already been suggested, however, that informational asymmetries in this market may serve as impediments to its efficient operation (see also Wetzel, 1984).

There is a critical link between information and capital market efficiency. Implicit in the definition of efficient markets is the notion that information is widely available to investors. By

⁶ A considerable amount of empirical work has been done to test the hypothesis that capital markets are efficient. The empirical evidence for and against efficient market hypotheses can be classified into two broad areas based on the nature of the tests employed. The first category of empirical tests involves the formulation of trading rules to examine whether they can be used to generate abnormal profit. In these simulations, strategies for buying, holding, and selling securities are devised on the basis of information about the underlying firm or historical price patterns. Presumably, markets are efficient if abnormal profits from following these trading rules will be insignificant because the information used to formulate the rules is already impounded in the security prices. The second category of empirical tests for studying the efficient market hypothesis involves an examination of investors who, by reason of their position, have access to privileged information which may be used to earn abnormal profit on a systematic basis. In these tests, privileged information includes any information not available to the public.

Most evidence indicates that capital markets are efficient in the sense that security prices seem to embody all relevant information in the public domain. It should be noted, however, that the preponderance of the research draws on data from markets which are universally agreed to be well-developed. Efficient market tests require continuously traded and liquid investments. Thus, any conclusions drawn from these studies may not hold for smaller, less developed markets such as those for informal risk capital (Copeland and Weston, 1983). At present, virtually no published research on the efficiency of informal risk capital markets is available.

transacting on the basis of available information, investors drive market prices toward values which impound that information. This is the essence of the efficient market hypothesis.

The degree of information reflected in the price system is dependent on the number of investors in the market who are informed (Grossman and Stiglitz, 1980). If the number of uninformed investors is large (as in the case where informational asymmetries are large), prices may not reflect the true nature of the underlying asset (i.e., the firm). In this situation any information about the firm and its potential is useful to investors for deciding whether or not to invest in it. That is, information about the future occurrence of events is valuable if investors can use it to make better, more profitable trading decisions. In an inefficient market, relevant information has economic value.

1.3.4 Informational Asymmetries

The problem of informational asymmetry is one in which entrepreneurs possess information about their firms which is valuable but which is unavailable to investors. Without this information, investors are unable to identify the true nature of the firm (i.e. its riskiness) until it becomes established. As a result, the entrepreneur will obtain less for securities than their "fair value" reflected in the riskiness of the enterprise suggests, if the securities are sold (Barnea, Haugen, and Senbet, 1985).

Investors who lack information about the enterprise are unable to distinguish high-quality firms from those of a lower quality. As a result, they are forced to value these firms on the basis of the average quality of all companies requiring funds in the marketplace. If the market definition of average quality is set too high, there is an incentive for entrepreneurs of low-quality firms to misrepresent the quality of their company and to make a profit. However, the opportunity for misrepresentation causes investors to adjust their definition of average quality downwards. Leland and Pyle (1977) argue that the result is that entrepreneurs who merit financing can only obtain the necessary funds at extremely high costs, if at all. At the extreme, if the informational

asymmetry is substantial, and when there is a large supply of poor-quality firms seeking funds, capital markets may fail to exist at all! The inactivity of Canada's over-the-counter market for junior securities is consistent with this conclusion.

Moreover, investors may not be aware of the full range of investment opportunities available for their consideration, let alone the "true nature" of particular opportunities. By extension, entrepreneurs may not have information to even identify the most appropriate sources of risk capital. The probability that the market will direct capital to its most productive use is likely to be very low without market awareness of investment opportunities and sources of informal risk capital. That is, the market may be inefficient without the transfer of this information between those who supply and those who seek informal risk capital investment.

Chan (1983) has developed a theoretical model of the risk capital marketplace in which investors are imperfectly informed about the quality of products or projects offered by entrepreneurs. The policy implications of his model are important for examining the role of information in the operation of the risk capital marketplace. First, Chan concludes that when investors are uninformed, and when there exists a non-zero cost for gathering information, there is incentive for entrepreneurs to introduce inferior products or projects, the famed "lemon" problem (Akerlof, 1970). Investors, in an attempt to recover the costs of searching for risk capital investments, may revise their expected value of the investment opportunity. When investors and entrepreneurs hold different views on the "fair" value of the opportunity, the market may be characterized by what has been referred to as an expectations gap. In this situation, investors exit the market and allocate funds to more low-risk investment opportunities. The resultant allocational inefficiency leads to the discouragement of entrepreneurs and to the reduction of investor participants in such a market.

With the introduction of at least one informed investor facing zero costs for identifying the attributes of investment opportunities, entrepreneurs are induced to introduce higher return

opportunities. Thus, investors will remain active in the risk capital market. In Chan's work, the role of an informed investor is assumed by an intermediary.

Much of the empirical work in this area is exploratory in nature and involves the use of survey research. However, in his review of research on informal risk capital markets, Wetzel (1985) provides compelling evidence which suggests that, in the U.S., the existing systems for generating and disseminating information in the informal risk capital markets are ineffective and may therefore inhibit the efficient operation of this market. To build his case, he reports on the survey results of Bean, Schiffel, and Mogue (1974), Charles River Associates (1976), and Seymour and Wetzel (1981). These studies all conclude that the extent of information available to participants in the informal risk capital market appears insufficient. In their particular study of informal risk capital investors in New England, Seymour and Wetzel found that 51% of sampled investors were dissatisfied with existing communication channels. They also found that over 80% of investors surveyed expressed an interest in an experimental referral service which would direct investment opportunities to their attention. In response to these findings, Wetzel is conducting an ongoing experiment for improving the efficiency of the informal risk capital market in New Hampshire (Wetzel, 1984). He has been instrumental in establishing the Venture Capital Network (VCN), an experimental information clearinghouse for introducing local entrepreneurs and informal investors. Despite a relatively small sample scattered throughout Canada, Navarre and Janoff (1986) provide some evidence to suggest that there is need to facilitate communication between informal investors and entrepreneurs in Canada.

1.3.5 Summary

In summary, two hypotheses have been advanced in the literature to explain the difficulties which small firms face in finding adequate sources of capital: capital market gaps and informational inefficiencies. Even though these hypotheses are related to each other and to the general topic of weaknesses in the operations of the risk capital markets, they can be

differentiated. The underlying rationale for each of the hypotheses differs with respect to the nature of risk capital supply in the market.

The first hypothesis rests on the notion of capital market gaps. It is argued that the high costs of investigating credit risk and of monitoring investment in small firms reduces the attractiveness of this type of investment. The theory also suggests that there are institutional and legal reasons which prevent some types of investors from investing in the small-business sector. The reluctance of investors translates into shortages in the supply of risk capital available to infant firms.

This hypothesis, however, excludes an examination of the investment record of individuals, or informal investors. In the U.S., there is evidence that informal investors may comprise a substantial supply of risk capital (Wetzel, 1985). Moreover these individuals tend to invest in precisely the area cited as experiencing capital gaps. If these investors do exist, it appears that measures aimed at increasing the supply of risk capital are inappropriate. These counter-arguments lead to the development of a second explanation.

The second hypothesis suggests that informational asymmetries, or even a lack of information, about those who supply and those who seek informal risk capital investment may create the effects of capital market gaps. If this hypothesis is true, informational differences may be at the root of the inefficiency in the operation of the risk capital market. An inefficient market hampers both the ability of small business to secure the funds necessary for corporate growth and the allocation of capital to its most productive use. To alleviate this inefficiency requires the effective exchange of information about the sources of capital and the investment opportunities available in the market.

These hypotheses are not mutually exclusive. It is possible that the risk capital market may be plagued by both "supply" gaps and ineffective communication channels. Moreover, it is also conceivable that the problems described by one hypothesis may encourage those problems associated with the other. For example, informational differences may be so substantial that

investors, unable to identify investment opportunities, exit the market. If enough investors withdraw, there may be an excess of demand for funds in the marketplace: a capital market gap!

Regardless of the commonality between these two hypotheses, each provides different recommendations for policies aimed at mitigating the financing problems of the small business sector. The following section describes the implications and recommendations presented under these hypotheses. For simplicity and clarity, the corrective actions prescribed under each hypothesis are discussed on the assumption that the particular hypothesis holds to the exclusion of the other.

1.4 POTENTIAL REMEDIAL MEASURES

Each of the two hypotheses presented in the previous section provides a different explanation of the small-business financing dilemma. For this reason, each hypothesis differs with respect to the remedial actions required to aid the small-business sector in locating capital. The purpose of this section is to examine the potential remedial measures prescribed by both the capital market gap hypothesis and the information inefficiency hypothesis.

If the capital market gap hypothesis is valid, then the financing problems of small firms are best addressed by increasing the supply of funds available to these firms. Measures to induce suppliers of capital to invest in infant firms usually require direct or indirect intervention by the government sector. Government programs designed to increase the supply can take many forms. In the past, governments have implemented policies which involve the provision of loan guarantees or direct subsidies to small businesses in need of financing. In addition, they have also given assistance to the small-business sector by providing grants or tax credits to eligible investors. One of the shortcomings of these programs is that they may provide funds to businesses which otherwise would not warrant them. In other words, they rely on the ability of public agencies to accurately screen the financing proposals presented by small businesses, so that resources are allocated to where they will be most productive.⁷

The credit risks of individual firms within the small-business sector may be quite different. A loan guarantee program for the small-business sector tends to ignore these risk differentials, and therefore provides high-risk firms with an unfair advantage over those of a lower risk class. "Thus, loan guarantees artificially sustain marginal establishments in operation and prevent their better managed competitors from capturing a bigger slice of the total production and from expanding their market shares" (Government of Alberta, 1985 page 37)

⁷An example of this problem is provided in Poapst (1986). In his assessment of traditional public lending practices, he noted that the Federal Business Development Bank has run deficit lending and investment operations for the last five years.

A second shortcoming relates to the provision of tax incentives to eligible investors. Tax shelters on certain types of investments are valuable, in that they serve to effectively reduce the tax liability of an individual. However the value of the tax shelter may affect the price of the investment vehicle to which it is attached (Kurtz, 1973). A recent example of this phenomenon is the tax shelter program for encouraging investment in multiple unit residential buildings (R A Short, Finance Canada; March 3, 1986, personal correspondence)

The May 1985 federal budget announced certain incentives which permitted pension fund managers and holders of registered retirement savings plans to direct some assets to the small-business sector. The incentive for pension funds is that, for every dollar invested in an eligible small business, an additional three dollars can be placed in foreign investments. It has been suggested that these incentives may create a pool of \$5 million to \$10 million for investment in small- and medium-sized businesses. In addition, it is anticipated that individuals with self-administered *RRSP*'s are likely to provide investment to firms seeking \$5,000 to \$100,000 (The Financial Post, September 14, 1985). However, if there are problems of inadequate information, the full effect of these measures may not be felt.⁸

If the informational inefficiencies hypothesis is valid, there are shortcomings in the processes for generating and disseminating information in the risk capital market. As a result, the necessary corrective measures should focus on improving communication channels which link investors with investment opportunities. There are a number of alternate mechanisms for creating a more informationally efficient market. These include:

- mutual funds;
- organized markets;
- government agencies; and,
- information clearinghouses.

⁸Additional problems may be brought on by legal restrictions on investment in unlisted firms (which are typically small). Together, these problems may create a need for investors to form consortia for risk capital investing in order to ensure that they receive adequate information about opportunities and that the resultant investment meets legal requirements.

Mutual funds can act as an intermediary to align the interests of investors and entrepreneurs. They are investment companies which sell shares to the public and which invest the proceeds mainly in the common stocks of other businesses. Mutual funds are, in a sense, agents for making decisions on behalf of investors. They also often provide management advice to young investee companies. The major disadvantage of mutual funds is that they do not necessarily promote the informational efficiency of the market. By assuming the investing role for investors, they do not ensure that investors are better informed about opportunities available in the market. A second disadvantage stems from the potential for a conflict of interest between mutual fund managers and entrepreneurs over management control and the sharing of realized and future profit. If unresolved, the parties may not reach an acceptable financing agreement. Furthermore, the successful operation of these funds relies heavily on the ability of their managers in screening prospective financing proposals and in administering the fund.⁹

A second avenue for addressing the problems of inadequate information is through the establishment of a regional stock exchange or the enhancement of over-the-counter (*OTC*) markets. A regional stock exchange provides service mainly for small local businesses whose securities are not widely held. The *OTC* market is an informal exchange organized by stock brokers who trade in junior securities which do not satisfy the listing requirements of a formal stock exchange. Both regional stock exchanges and *OTC* markets are secondary markets and are, therefore, important for providing liquidity, valuation, and a record of price volatility.

One major advantage of these markets is that the public is provided with an uniform information set on each firm registered. However, the *OTC* market in Canada is relatively inactive. The introduction in 1986 of the *COATS* system (Canadian Over-the-counter Automated Trading System) by the Ontario Securities Commission is likely to have a positive impact on the operational effectiveness of the *OTC*. For smaller firms, it may provide the exposure and liquidity

⁹ An unfortunate example is the failure of the Kanata Genesis Fund. In this case, a mutual fund was established to channel capital to young or start-up high technology firms located in Kanata. The administrators of the fund had overestimated the community demand on the part of investors, as well as that of local small firms for this type of investment vehicle. As a consequence, the performance of the Kanata Genesis Fund has been poorer than that which was originally anticipated.

needed to attract investment (Venture Economics Canada Ltd., 1986). On the other hand, regional stock exchanges are not simply established arbitrarily. Moreover, both the *OTC* and regional exchanges involve high cost infrastructures which require ongoing administration and monitoring. The success of these markets also depends on continued support from the investment banking community. Finally, these measures do not directly alleviate the problems and costs of informational asymmetry.

A third way to improve the informational efficiency of the market is through government programs. An important federal initiative has been the establishment of a venture or risk capital investment division at the Federal Business Development Bank (*FBDB*). The *FBDB*'s main purpose in the area of risk capital is to act as a catalyst for risk capital investment by attracting equity for growth firms through its own participation. Despite the *FBDB*'s attempt to revise its image as a 'last-resort lender', it faces "... an uphill battle to regain favor with the sector it was established to serve" (The Financial Post, September 14, 1985, p. s1). It has also been suggested that competition in the risk capital market between the *FBDB* and private sector entities may cause the private sector to lobby for restrictions on the *FBDB*'s risk capital investment activities (Venture Economics Canada Ltd., 1986).

The *FBDB*'s activities also include a financial matchmaking service for investors and small- or medium-sized businesses. Currently there are 370 investors and 400 small- and medium-sized businesses across Canada registered with the *FBDB* matchmaking service on its data base. The service operates to match investors and 'opportunities' on the basis of their investment needs and preferences. For an annual fee of \$200, a representative of the *FBDB* will screen a listing of registrants in their data base to select investors and firms with similar interests. The representative arranges a meeting with the two parties and sits in on the meeting to facilitate discussion. The investor data base comprises a wide variety of individuals and firms from Canada and abroad. The average investment in firms registered with the *FBDB* service is approximately

\$300,000 (personal correspondence with J. Mc Naulty of the *FBDB* in Montreal, March 18, 1986).

An Ontario government program allows the creation of Small Business Development Corporations (*SBDC*). These are special venture capital companies which are created under license from government to pool funds for investment in small businesses. In short, the *SBDC* program provides an incentive to individuals or firms to invest in smaller venture capital deals.¹⁰ Since 1979, \$295.4 million has been invested in 1,500 businesses across Ontario. It has been estimated that small businesses in the Ottawa-Carleton area have received investments totalling \$6.2 million. Currently, the minimum capital requirement for an *SBDC* is \$50,000, and the *SBDC* is restricted to holding a minority interest in the investee company (Ontario Ministry of Industry, Trade, and Technology, 1986 p. 7). As of February 1986, there were 568 active *SBDC*'s registered with the Ontario government, 29 of which had been established in Ottawa. The average size of investment per *SBDC* to a single business is approximately \$400,000 (personal correspondence with S. Maksym of *SBDC* in Toronto, March 19, 1986).¹¹

In his investigation of these programs, White (1984) found that both operate quite autonomously. Moreover, neither the *FBDB* program nor the *SBDC* program is actively promoted as a possible source of capital and, as a consequence, neither is easily located by small businesses which seek financing or by those individuals who are looking to place their funds in this market. Finally, while both operate some form of matchmaking service, there is no linkage between the two programs.

A final mechanism for facilitating the flow of information is through the introduction of an intermediary as purported by Chan (1983). This intermediary may take the form of a systematic referral service designed to bring together investors and entrepreneurs at a relatively low cost. In this form, the intermediary would act to reduce the costs of investigating investment opportunities.

¹⁰ A 30% grant or tax credit.

¹¹ This is contrary to the findings reported in Gadbois (1986). In his assessment of provincial venture capital corporations, he noted that a large portion of investments made through these vehicles fall within the \$50,000 to \$250,000 range. Gadbois' results, however, are based on averages across all provinces in Canada.

The Venture Capital Network (VCN), now operating in New Hampshire, is an experimental information clearinghouse designed by Wetzel (1984) to introduce local investors and entrepreneurs. It operates successfully on a regional level to serve the surrounding community. The VCN experiment was designed to expedite the financing of young emerging firms by performing the following functions:

- to solicit, compile, and profile opportunities for investment in small firms;
- to identify investors and their investment objectives; and,
- to provide a confidential, timely, and objective referral service to investors and entrepreneurs.

The VCN may be more effective in addressing informational inefficiency than the FBDB or SBDC programs for three reasons. First, it is a community-based organization. Seymour and Wetzel (1981) found a strong community sense in investors surveyed; 75% invested in firms located within 300 miles of the investor. In a Canadian study of the venture capital industry, it was noted that venture capital investors typically confined their investments to firms within a reasonable proximity of their home base (Venture Economics Canada Ltd., 1986). In addition, experience with the FBDB matchmaking service has been that investors prefer to invest in their own area. The prime objective of the VCN is to introduce investors and entrepreneurs who seek financing in the range of \$50,000 to \$300,000. Some of the evidence previously discussed suggests that both the SBDC and the FBDB programs are targeted at firms requiring investment in excess of \$300,000. Secondly, VCN fosters a high level of integrity or "earnestness" in its data base of registrants by levying user fees. In a sense, the fee structure acts as a screening mechanism to discourage those who do not intend to use the service properly from registering with VCN. Finally, in New Hampshire, it has improved the flow of information between investors and entrepreneurs. From July 1984 through October 1985, VCN initiated 812 investor introductions for 136 entrepreneurs.

Given a critical review of the alternatives, the simplest, most direct way to address the problem of inadequate information appears to be a VCN-type of matching service. This study will

investigate the Ottawa-Carleton area in an attempt to determine whether a VCN can effectively mitigate the identified inefficiencies in the risk capital market. For this reason, the following section is dedicated to describing the VCN operation in some detail.

1.5 THE VENTURE CAPITAL NETWORK - A SUCCESSFUL U.S. MODEL

The Venture Capital Network is a private, non-profit corporation which has been established in New Hampshire to address some of the problems faced by local business in the initial stages of financial development. Its essential purpose is to ease the flow of information by introducing entrepreneurs and active, informal investors.

The network consists of a computerized data base of both entrepreneurs and investors whose needs are compared in the effort to match opportunities and interests, for a fee. Entrepreneurs and investors are registered on the data base both as a result of application by the individuals themselves and through referral by a network of intermediaries (bankers, accountants, and lawyers) who are aware of the VCN. The VCN maintains strict confidentiality for all registrants on the data base.

All matches are communicated only to the relevant investors, who then have the option of deciding whether to pursue further a particular venture. If requested by the investor, a summary of the entrepreneur's business plan is sent by the VCN. After this round of preliminary information has been reviewed by the investor, and if further information is desired, the name and address of both parties are exchanged, again at the option of the investor. The VCN's involvement ceases at this point, and the parties may follow up the opportunity through direct contact. The emphasis on investors to initiate the consultative process serves to maintain strict confidentiality.

The VCN plays no screening or investment advisory role. Moreover, it does not provide a source of clients for investment intermediaries, consultants, brokers, or others who charge fees for services to entrepreneurs. As a result, problems associated with the U.S. or state securities legislation have been minimized. The VCN has received assurances of "no action" by all affected jurisdictions.

Over 90% of the entrepreneurial ventures registered with the VCN are less than five years old, while a similar proportion of investors are unaffiliated individuals (although some venture

capital and industrial corporations are also registered). The VCN has almost three times as many investors as entrepreneurs in its data base. This illustrates a substantial supply of informal risk capital, at least in the U.S.. In its first year, there were over 12,000 first stage matches of entrepreneurs and investors and approximately 800 actual face-to-face meetings, an average of about six potential investors for each entrepreneur registered (VCN Inc. Newsletter, December 10, 1985).

The VCN charges both entrepreneurs and investors a small fee to be included in the data base. The fees for registering have a screening effect for ensuring that the investors and the entrepreneurs are earnest in their application. Under this fee schedule, the VCN operates on a fully self-sufficient basis. Initial implementation costs were modest, approximately \$200,000 (US), and were funded by the Business and Industry Association of New Hampshire and the New Hampshire government.

The "not-for-profit" aspect of the VCN, its commitment to confidentiality, and its sponsorship by a broad-based community business group provide the VCN with a great deal of credibility and have contributed significantly to its success. The VCN is acknowledged in the U.S. as a prototype for a successful matching network. An exact copy of the network has already been introduced in Oklahoma, and the establishment of several more is under consideration.¹² At the time of the undertaking of this research, the first such referral service was introduced in Canada as the Computerized Ontario Investment Network (COIN). This service was founded by the Ontario Chamber of Commerce and was intended to serve investors and entrepreneurs across the entire province.

In summary, the VCN is a highly attractive, successful model for matching investors and entrepreneurs which can be easily transported to the Ottawa-Carleton area. Although the VCN does not monitor the number and size of the actual transactions which have transpired because of its matching function, there is indirect evidence of its success. First, it has initiated an average of

¹² Logan (1986) provides a list of those areas in the U.S. which have commenced or completed the implementation of VCN-type referral services.

6-1
six investor introductions per entrepreneur. Second, the VCN is fully self-sufficient with registration fee revenues covering its operating costs, after only sixteen months of operation. Finally, the VCN concept has been adapted in a number of other areas in the U.S. By making the contact between informal investors and entrepreneurs a more efficient and productive process, it presents a means for enhancing the role of the informal capital base in local economic development.

1.6 IMPORTANCE AND BENEFITS OF THE STUDY

The *VCN* represents a successful and transportable prototype which has been introduced as the *COIN* in Ontario. Despite these realizations, there are four reasons why a preliminary feasibility study should preface the adoption of a similar service to the Ottawa-Carleton area.

At present, it has not been resolved whether the financing difficulties faced by small firms in the Ottawa-Carleton area are the result of capital market gaps, inefficient communication networks, or both. Given this uncertainty, it may be premature to implement measures, such as the *VCN*, for addressing informational inefficiencies. Without the completion of a feasibility study, the chances of misspecifying the real problems are unnecessarily high. In his review of research pertaining to informal risk capital, Wetzel (1985) noted that there may be regional differences in the nature and effectiveness of the networks which link investors and entrepreneurs. Research in New England revealed a substantial degree of dissatisfaction among survey respondents with the effectiveness of existing communication channels (Seymour and Wetzel, 1981). However, in a similar study of the San Francisco Bay area, the opposite was found (Krasner and Tymes, 1983, as reported in Wetzel, 1985). While the reasons for this difference are not stated, the evidence suggests that informal networks may be more effective in some areas than in others. This feasibility attempts to investigate whether such differences exist between New England and Ottawa-Carleton.

In addition, there are differences in the Ontario and the U.S. securities regulations which may affect the operation of a *VCN*-type of mechanism. At the onset, it should be noted that the success of the *VCN* in the U.S. can, in part, be attributed to an hospitable regulatory environment. The heart of this environment in the U.S. is Regulation D, which has served to simplify the process of raising funds by small businesses and to reduce the associated costs. Perhaps more significantly, Regulation D has introduced the "accredited investor concept" which defines a class of investors who are deemed able to fend for themselves (White, 1984). Similar

regulation does not exist in Ontario. The Ontario securities legislation is more restrictive in its definition of sophisticated investors (see Appendix 1 for a more detailed discussion of the pertinent Ontario securities regulations). While both securities laws aim to provide protection to investors, the means for achieving that protection differ. In sum, a more restrictive legal environment in Ontario implies that a VCN in Ottawa-Carleton may not enjoy the same level of success. Unfortunately, a low success rate of the VCN may mean that critical information is not available to investors and entrepreneurs. The consequence of uninformed market participants may actually be a lower degree of investor sophistication in Ottawa-Carleton!

There is also a widespread folklore that Canadians are less likely than their American counterparts to invest in risky ventures. Evidence of this may be found in differences in the degree of investor protection afforded in regulations in both countries. A 1984 survey of Canadian shareholders concludes that Canadians are unduly concerned with risk and that they lack an understanding about stock investment (Toronto Stock Exchange, 1984). Thus there may be regional differences in investor populations which have potential repercussions on the success of a VCN in Ottawa-Carleton. This study attempts to identify the characteristics of informal investors and the resultant implications for the establishment of a VCN, and to provide conclusions regarding the degree of sophistication of Canadian investors and their resultant need for protection in securities regulations.

Finally, it is agreed that the role of the small-business sector is crucial to attaining economic development and job creation objectives. A pressing problem for any small business is that of locating funds at affordable costs to finance growth. There are four reasons for being concerned with the ability of the small-business sector to grow. First, small- and medium-sized firms account for the majority of new jobs created in the private sector. In the second place, the small-business sector plays an important role in product and process innovation. Research in the U.S. shows that: small firms produce more than double the number of innovations relative to the number of people employed than do larger firms; small firms bring innovation to the market more

quickly than large firms; and, they produce four times as many innovations per R&D scientist as large firms (as presented in MacDonald, 1985). The third result of growth in the small-business sector is that innovative small firms exhibit productivity gains which outstrip the rest of the economy by a large margin (Toronto Stock Exchange, 1980). Finally, technological entrepreneurship, a large part of the small-business sector, produces skilled employment. Thus, a disproportionate amount of employment created by this sector implies that the proportion of "educated" labor in the workforce is also growing.

As a result, this problem is receiving an increasing amount of attention from both the policy and research standpoint. Currently the understanding of the small-business financing problems is at an exploratory stage. While this study may not provide definitive answers to all the questions, it represents one step towards increasing knowledge about the role of informal investors and the efficiency of less developed markets. Although the results of this study may have been partially preempted by the introduction of the *COIN* in Ontario, they provide important considerations for ameliorating and perhaps measuring the *COIN*'s success. Moreover, the findings of this study may provide useful information in the event of the *COIN*'s failure, or for a revision of its structure and implementation. At the very least, it provides a starting point and data base for further analysis.

1.7 ***A PRIORI*** HYPOTHESES

The preceding sections and the review of the theory provide the foundations for identifying several hypotheses to be tested in the course of this study.

On balance, arguments advanced in the literature support the contention that the small-business financing problems are founded in poor communication between risk capital market participants. Filling the gap effectively requires the establishment of systematic and efficient channels for linking investors and entrepreneurs. While this contention has a strong theoretical basis, it has yet to be tested empirically. As such, it presents a basis for formulating an important testable hypothesis.

Hypothesis 1: Local small firms face difficulties in finding adequate sources of funds predominantly because of ineffective information networks which link investors and investment opportunities.

If this hypothesis proves to be valid, the adoption of a VCN to Ottawa-Carleton may improve the efficiency of the risk capital market. In addition, the verification of this hypothesis has other important implications.

If the existing systems for generating and disseminating information are inefficient, investors and entrepreneurs are uninformed about the investment opportunities available to them. The availability of this information enables market participants to make better, more informed, investment and financing decisions. If an information clearinghouse enables the transfer of information, it can help to improve the quality of these types of decisions. Thus, it can be postulated that the services of a referral service are valuable to market participants. This provides two subsequent hypotheses.

Hypothesis 2: Local informal investors and entrepreneurs will be willing to participate in a referral service which provides them with a range of opportunities for their consideration.

and,

Hypothesis 3: The services of an information clearinghouse are perceived to be of sufficient value to informal investors and entrepreneurs, that they would be willing to pay a fee to acquire the information which it could provide.

Testing these hypotheses had important implications for assessing the economic feasibility of implementing a systematic referral service in Ottawa-Carleton. Specifically, accepting these hypotheses as realistic would imply a favourable environment for introducing the service. The remainder of this study is focussed on obtaining information to profile the characteristics and attitudes of investors and entrepreneurs from Ottawa-Carleton. Given that some of this information has previously been collected in the U.S., it was possible to compare results from these studies. In this respect, this study generates other testable hypotheses for future consideration. In addition, the study also provides a forum for evaluating aspects of the Ontario regulatory setting. The following chapter describes the methodology employed for addressing these research objectives and hypotheses.

CHAPTER 2: RESEARCH DESIGN, SITE, AND METHODOLOGY

Chapter two sets forth the research design, site, and methodology of this study. The first section presents a description of the research design employed to address the objectives of the study. An outline of the procedures for selecting an appropriate sample is contained in section two. Section three describes the research methodology, data needs, and procedures for analyzing the data collected. In section four, the discussion is focussed on the construction of the data collection instruments employed in this research. Section five details the approach taken for pretesting the survey instruments and for conducting a pre-analysis of the pretest results. The procedures for contacting respondents and administering the questionnaires in the field are contained in the concluding section.

2.1 RESEARCH DESIGN

The purpose of this study is to assess the economic feasibility of establishing an information clearinghouse, similar to the VCN, in Ottawa-Carleton. It has been noted that economic feasibility requires that a sufficient demand for the services of such a clearinghouse exist in Ottawa-Carleton and that the services of the clearinghouse are perceived to be of sufficient value that investors and entrepreneurs would be willing to pay to acquire those services. As a result, these conditions have been treated as testable hypotheses. In order to assess whether these conditions exist in Ottawa-Carleton, the following five more specific research objectives are addressed in this study:

- to determine the extent and nature of criteria used by informal investors in evaluating investment opportunities with the view to establishing a profile of the characteristics of informal investors;
- to identify the communication channels which currently link local entrepreneurs and informal investors;
- to assess investors' and entrepreneurs' perceptions of the effectiveness of communication channels which currently link investors and entrepreneurs;
- to assess investor and entrepreneur willingness to participate in a referral service designed to broaden the range of opportunities available to them for their consideration; and,
- to identify investor and entrepreneur preferences for the structure of such a service.

As such, the study represents an assessment of the feasibility, or market potential, of establishing a systematic matchmaking service in the Ottawa-Carleton area. Given these objectives and the purpose of the study, a descriptive survey research design is employed in this study, an approach prompted by two considerations.

First, the objectives and nature of this study are similar in spirit to more traditional marketing studies aimed at assessing market demand and potential. As the emphasis of this

study is to identify investor and entrepreneur perceptions and preferences for a referral service, it is comparable to studies in the field of new product development. These studies typically seek to explore consumer needs and preferences (Urban and Hauser, 1980) using survey research. Marketing studies of this nature often rely on the interrogation of respondents to obtain information on the characteristics of marketing phenomena and to determine the frequency of occurrence (Kinnear and Taylor, 1983). Secondly, a number of previous studies of informal risk capital have employed survey research to describe the operations of the market;¹³ the use of such techniques would therefore permit a comparative analysis of results. Given that most of the research in this area is at an exploratory stage, descriptive research is required to provide the foundation for future empirical work.

The research involved a two-phased approach for the collection of contemporary data from investors and entrepreneurs in the Ottawa-Carleton area. In the first phase, a sample of local investors and entrepreneurs were personally interviewed. The second phase was aimed at questioning a further sample of investors and entrepreneurs via telephone interviews and mail surveys. These survey techniques involved the use of structured, direct interviews. The choice of appropriate survey techniques required explicit consideration of the complexity of the subject matter, the amount of data to be collected, accuracy, sample control, speed, and potential non-response.

Interviewing allowed for interaction with respondents which was deemed important for obtaining a measure of community interest in a systematic referral service. The requirement to introduce and explain the nature of such a service was facilitated through personal contact between interviewer and respondent. Moreover, it was anticipated that a good rapport between the interviewer and the respondent would enhance the likelihood of identifying other potential respondents for the second phase of the research. In both personal and telephone interviews the respondent-interviewer contact was established. Personal and telephone interviewing also

¹³For a review of the informal risk capital market research performed or currently underway in the U.S., see Wetzel (1985)

provided the respondents with an opportunity to obtain clarification immediately and to provide more detailed answers to the questions asked. Given the nature of this research, these attributes were regarded as extremely advantageous. Mail surveys, albeit a less flexible technique than telephone or personal interviews, proved satisfactory in the second stage of the data gathering process because of the highly structured nature of the questionnaire.

Sample control was also viewed as an important consideration for conducting the first phase of the survey. The accuracy of the results was dependent, to a large degree, on the sample respondents chosen. Because the nature and size of the investor population was unknown, it was especially critical that sample investors meet specified criteria prior to completion of the interview. The primary criteria for the selection of sample investors was that they had to have invested in one or more young or start-up firms within the last five years. Personal interviewing offered the most potential control over who was actually interviewed. Telephone interviews were almost as effective. Control was maintained by conducting interviews "at the office" to ensure target respondents were actually reached (Tull and Hawkins, 1980). As the first phase of the research yielded an explicit sampling frame comprised of names, telephone numbers, and addresses of potential respondents, a reasonable degree of control was achieved over the administration of the mail surveys.

As the potential impact of a low response rate is critical for survey research, every attempt was made to administer the interviews in person or by telephone. These methods tend to generate a higher response rate than do mail surveys (Kinnear and Taylor, 1983). It was suggested that personal interviews would be the most desirable means for data collection, given the complexity of the subject matter and the time constraints (Wetzel, January 22, 1986, personal correspondence).

While personal interviewing was the preferred vehicle for obtaining the data required, resource constraints and the requirement to reach a sample sufficiently large to enable useful generalizations precipitated the two-phased approach. In addition, several respondents who

participated in the first phase expressed a desire to complete questionnaires themselves for convenience. In the first phase, respondents were interrogated to obtain the required data and to identify potential respondents for the second phase. The purpose of phase two was to collect data from a wider audience. As a result, the second phase of the study was comprised of telephone and mail surveys to a selection of investors and entrepreneurs. To accommodate respondents' preferences, they were afforded the opportunity to complete a questionnaire themselves or with the investigator by telephone. As discussed in the following chapter, the survey results exhibited a low degree of variability, regardless of the method for questionnaire administration.

Non-response error, caused by a systematic difference between those who respond to a survey and those who do not, represents one of the most serious potential problems in survey research (Tull and Hawkins, 1980). In order to reduce non-response, an introductory letter outlining the nature and purpose of the research preceded all interviews. It was anticipated that this form of initial contact, endorsed by the Ottawa-Carleton Board of Trade, would enhance respondent interest in and, hence, motivation for participating in the research. For both phases of the research, an effort was made to reduce non-response error through the use of prequestionnaire and follow-up letters, and a series of call backs.

All phases of the data collection process involved the administration of highly structured, direct questionnaires. Although this approach tends to restrict the amount of data which can be solicited from respondents, it was adopted for three reasons. First, structured, direct interviews minimize interviewer bias effects. Second, the success of this approach does not depend as heavily on the interviewing skills of the investigator as does an unstructured, indirect approach. Finally, a structured, direct questionnaire format could be followed both in personal and telephone interviews as well as in mail surveys, thereby precluding the need to redesign and tailor questionnaires for each phase of the data collection process.

2.2 SAMPLING PROCEDURES

The information necessary to fulfill the research objectives was obtained from a sample of informal investors and young or start-up firms within the Ottawa-Carleton area. For purposes of this survey, informal investors were defined as financially sophisticated individuals who have invested, on their own behalf, in new or growing small firms within the last five years. Typically, these individuals are linked through friendship and business networks. Professional venture capitalists and other institutional investors were excluded.

The population of new or growing small firms was accessed by approaching principals or founders involved in business ventures which do not qualify for access to traditional venture capital sources or public equity markets. Firms of this nature tend to be less than five years old, expanding at rates between 10% and 30% *per annum*, and generating sales under \$20 million (personal correspondence, Wetzel, May 1986).

The preliminary selection of respondents from both groups required the assistance of local professional groups (i.e., lawyers, accountants, and bankers), the Ottawa-Carleton Board of Trade, and the Research Centre for High Technology Management. Similar research in the U.S. had indicated that professional intermediaries are useful in obtaining initial contact with investors (Wetzel, 1984). On the basis of that initial sample, many of the U.S. studies employed "nominated sample" or referral sample selection techniques.

Investors have been found in clusters linked through friendship and business networks; locating one investor typically leads to the identification of other potential investor respondents (Wetzel, 1985). In addition, entrepreneurs may also represent an effective means for identifying potential investors (Gaston and Bell, 1986). This snowball search or nominated sample process is currently being used in a number of similar studies in the U.S. (see Wetzel, 1985, for a listing of these studies). This technique was used to identify respondents for both phases of the research. More detail about each step of the sampling process is provided in Appendix 2.

In sum, potential investor respondents were identified through a referral system from three distinct groups:

- local professionals;
- entrepreneurs interviewed; and,
- other investors.

This procedure yielded a possible sample of 57 informal investors. Of the 57 investors identified, 7 were deemed ineligible to participate in the survey resulting in a total of 50 eligible investors identified by either of the three sources listed above. Each investor nominated for the study, as well as those entrepreneurs and professionals who nominated investors for the study, was assigned specific identifier codes. These codes were used to keep track of who had nominated which investors and how many times each investor was nominated for participation in the study. Table 1 provides the results of the investor sample selection technique by illustrating the number of eligible investors nominated by each source.

TABLE 1
NUMBER OF INVESTOR RESPONDENTS NOMINATED FOR STUDY BY EACH SOURCE

<u>SOURCE</u>	<u>INVESTORS NOMINATED</u>
Local professionals	11
Entrepreneurs	21
Other investors	37
Total	69
Less: Overlap among sources*	(19)
TOTAL ELIGIBLE INVESTORS	50

* Some investors were identified by more than one source, hence the requirement to eliminate the overlap for calculating total sample size.

The total number of firms deemed eligible for interviewing was 60. A comprehensive analysis of the results of the sample selection techniques as well as response rates is provided in chapter three.

2.3 RESEARCH METHODOLOGY AND DATA ANALYSIS TECHNIQUES

For purposes of this study, the regional referral service would be considered economically feasible if the community demand for the service was such that projected revenue from registration fees was sufficient to cover estimated operating costs. An assessment of the economic feasibility of establishing a regional referral service in Ottawa-Carleton would therefore require a measurement of community demand. At present, operating costs have been estimated at \$80,000 per year (Ottawa Board of Trade Committee for a Regional Stock Exchange, personal correspondence, January 24, 1986). With a measure of the level of interest in a regional referral service and an indication of the amount which investors and entrepreneurs would be willing to pay to be registered with that service, it would be possible to predict whether the referral service could operate on a self-sufficient basis.

The capital requirements of small businesses are generally not met by a one-time infusion of funds. Ongoing operations and growth aspirations are often substantial capital drains. To meet these needs, entrepreneurs often require financing from a number of different investors. Experience with the VCN in New Hampshire is consistent with this notion and has shown that investors are the key to its successful operation (Wetzel, 1983). Specifically, the effectiveness of the VCN has been dependent on a large database of investors. Currently, it is estimated that investor registrants with the VCN outnumber entrepreneur registrants by three to one. An assessment of economic feasibility was therefore predicated on the operational requirement for a large number of 'willing' investors relative to 'willing' entrepreneurs. As a result, three methods for investigating the investor community demand for the referral service were employed: demographic extrapolation; a comparison with the U.S. experience; and, the sample selection process. Lastly, an assessment of both investors' and entrepreneurs' requirements for a regional referral service was conducted through direct measures of entrepreneur and investor interest.

The following sections describe each of the methods as well as the nature of the data required under each method.

2.3.1 Demographic Extrapolation

Under this method, the level of interest in a regional referral service identified by sampled investors was extrapolated to the Ottawa-Carleton population given comparable demographic attributes. This method required the collection of two sets of data from sampled investors: 1) investor demographic attributes; and, 2) data reflecting investors' perceptions of the existing informal marketplace linking investors and entrepreneurs, as well as data reflecting the degree of their willingness to participate in a formal and systematic regional referral service (see Table 2 for a list of the specific information required under this method).

Given similar demographic attributes for both the sample of informal investors and a subset of the Ottawa-Carleton population, the degree of willingness to participate in a regional referral service, and, the degree of willingness to pay a fee to register with such a service demonstrated by the sample were used to draw inferences about individuals in the Ottawa area who exhibit the same demographic characteristics. That is, on the basis of demographic attributes of the Ottawa-Carleton population, the willingness of investors to participate in a regional referral service was extrapolated to the population at large.

2.3.2 Comparison with the U.S. Experience

According to this method, the sampled investors from Ottawa-Carleton were compared with some of their U.S. counterparts. Given that investors sampled in New Hampshire demonstrated a strong interest in participating in the Venture Capital Network, if the Ottawa investors "resembled" the New Hampshire investors, this would provide an indirect test of

economic feasibility. Conversely, any identified differences between the two investor groups provided the opportunity for assessing the potential impact of these differences on the economic feasibility of establishing a referral service in Ottawa-Carleton similar to the Venture Capital Network.

The comparison of the two groups of investors required the collection of three sets of data from Ottawa area investors: 1) investor demographic attributes; 2) data reflecting investors' perceptions of the existing informal risk capital marketplace, as well as data reflecting their willingness to participate in a formal and systematic referral service; and, 3) investors' investment criteria and objectives (the specific data needs under this method are provided in Table 2). Given that similar data sets were collected for the two groups of investors, a comparison of the summary measures of that data was made. For purposes of comparing Ottawa investors with the "typical" U.S. investors, descriptive statistical techniques were employed.

2.3.3 Sample Selection Process

A referral system technique for generating the sample proved to be useful for verifying the results of the other methods. According to this technique, sample respondents were asked to nominate other potential subjects for the research. Given the *a priori* assumption that investors tend to be found in clusters linked by informal networks of friends and business associates, it was likely that these individuals would be renominated as the interviewing process progressed. With an estimate of the renomination rate, it was possible to impute the size of the underlying population of informal investors using capture-recapture statistical techniques. Conceptually, this was similar to the biological problem of estimating the number of squirrels in the woodlot by tagging (G. Haines, conversation of March 19, 1986). A key feature of these techniques is that they provide a means of controlling for sample dependencies which can arise when certain respondents are highly "visible" or "invisible" in a social context (Bishop, Fiendberg, and Holland,

1975). On the other hand, if individuals were not renominated during the sample selection process, it could be reasonable to conclude that the population must be large. With an estimate of the size of the population and a representative sample of that population, it was possible to estimate the level of community interest in a systematic matchmaking network (Table 2 provides the specific data requirements under this method).

Table 2.

**Specification of Data Required under Various Methodologies for Measuring
Investor Interest in a Regional Referral Service**

Methodology

Data Required from Investors	Demographic Extrapolation	Comparison with the U.S.	Sample Selection Process
1 Demographics			
-occupation	X	X	X
-age	X	X	X
-education level	X	X	X
-income level	X	X	X
-size & type of investment portfolio	X	X	X
-previous experience with start-ups	X	X	X
2 Marketplace			
-existing referral sources	X	X	X
-satisfaction with existing sources	X	X	X
-willingness to participate in a regional referral service	X	X	X
-willingness to pay a fee to register with service	X	X	X
3 Investment Objectives			
-number of future investments in small firms	-	X	-
-size of those investments	-	X	-
-geographical constraints on investments	-	X	-
-investment interest by age/lifecycle of firm	-	X	-
-investment interest by industry of the firm	-	X	-
-participation with other investors	-	X	-
-preferred investment partners	-	X	-
-preferred form of investment vehicle	-	X	-
-preferred form of investment income	-	X	-
-liquidity expectations	-	X	-
-risk/return expectations	-	X	-

an X symbol indicates that the data listed are required in order to undertake a particular method.

2.3.4 Investor and Entrepreneur Interest

In addition to the three previously described methods, a direct assessment of the economic feasibility of establishing a matchmaking network was performed. Under this method, respondents were asked directly about their willingness for or interest in a regional service. Sample investors and entrepreneurs were also solicited for their views on alternative fees which could be levied for participation in such a network. The answers to these questions had obvious implications for evaluating the overall community need for a mechanism to improve information networks, and hence, the feasibility of a VCN-type of network. In addition to measuring interest levels, entrepreneurs were requested to provide information relating to their firms, their experiences in raising risk capital for their firms, and their perceptions on the availability of risk capital to young and start-up companies. Data of this nature was necessary for drawing conclusions about entrepreneurs' views on the functioning of the informal risk capital in Ottawa-Carleton.

Using descriptive statistical techniques, the data provided a measure of the value entrepreneurs and informal investors place on a formal regional referral service. This data enabled the use of inferential statistics to investigate whether there was a relationship between the willingness of respondents to participate and their attitudes towards paying a fee to register in a regional referral service.

In order to gauge investors' and entrepreneurs' perceptions on an optimal structure for a regional referral service, respondents were asked to identify their preferences on the nature of affiliates of the service, on the geographic scope of the service, on the profit/non-profit aspect of the service, on the registration fee schedule for the service, and on confidentiality of registrants.

2.4 QUESTIONNAIRE DESIGN

The previous section outlined the requisite information for addressing the objectives of the research. In summary, the data to be obtained through the administration of surveys to sample respondents can be classified into four broad categories:

- the demographic characteristics of investors and entrepreneurs;
- the criteria and objectives used by investors in making risk capital investment decisions;
- the financing history and experiences of entrepreneurs with respect to raising capital for their firms; and,
- investors' and entrepreneurs' perceptions of the existing informal marketplace and their willingness to participate in a formal and systematic regional referral service.

The design of the questionnaires for obtaining the requisite data followed an iterative process which involved close interaction between the investigator and a working committee of three faculty members from the School of Business.¹⁴ The following subsections describe salient questionnaire design considerations (copies of the actual questionnaires are provided in Appendix 3).

2.4.1 The Investor Questionnaire

The investor questionnaires were designed: 1) to enable the collection of information necessary for addressing the objectives of this study and, in turn, for undertaking the four methods of assessing feasibility; and, 2) to ensure that the information gathered from investors was sufficient to allow for a comparison with the information obtained from similar studies in the U.S.. For these reasons, the investor questionnaire was modelled after two questionnaires used

¹⁴This committee was comprised of Professors Heslop, Jog, and Kiggundu. Construction of the questionnaires took about one and one-half months to complete. The process began with an analysis of the data requirements for addressing the study's objectives and hypotheses. Once the information requirements analysis was completed, three questionnaires previously developed for other studies were considered with respect to their potential application to this research. Where possible, the questionnaires were adapted to suit the particular requirements of this study.

in U.S. studies of the informal risk capital market. The questionnaire used by Wetzel (1983) in a study of the market in New England provided the foundation for the investor questionnaire employed in this research. The survey instrument developed by Kobernick and MacMillan (1986) for a study of the New York market not yet completed was also drawn on, to a lesser extent however, as it was somewhat similar to that used by Wetzel.

In order to tailor the questionnaire designed by Wetzel to suit the nature of this study, it was necessary to modify Wetzel's questionnaire to reflect three considerations:

- 1) That this survey would be administered by personal and telephone interviews as well as through the mail;
- 2) That this survey would be administered in Canada, not in the U.S.; and,
- 3) That, for purposes of this study, risk capital was defined to represent equity or equity-type capital in young and start-up firms without making a distinction between various types of young firms.

The resultant questionnaire developed for informal investors had five sections which corresponded to the five research objectives under study. Appendix 4 illustrates the linkage of the objectives and hypotheses to each section in the survey. In the following paragraphs, the discussion pertains to questionnaire design considerations for each of the five sections.

The questions in sections A and B were designed to determine the extent and the nature of the criteria used by informal investors to evaluate risk capital investment opportunities. Section A focussed on investments in young and start-up companies made within the last five years. In this section investors were requested to recall the size of past investments, the industry or type of business in which they made these investments, the extent of their involvement with the investee firms, the geographic location of the investee firms, and any investment proposals which they had rejected in the past.

Section B of the questionnaire was intended to measure investors' objectives for future risk capital investments in terms of the items listed above. A deliberate effort was made to ensure

that the presentation and the wording of the questions in sections A and B was similar, except for the verb tense used in questions. Section A dealt in the past tense to measure past investment behavior, while section B was written in the future tense to focus on anticipated investment activity. Maintaining consistency between these two sections had two advantages: it facilitated a comparison of past behaviour and future intentions, and it reduced the complexity of the questionnaire by making it relatively easy to follow.

In addition to containing questions on future investment objectives, section B included questions for assessing investors' perceptions on two federal government initiatives designed to stimulate risk capital investment. These initiatives included the tax incentive for directing funds in Registered Retirement Savings Plans (RRSP's) to small business, and the \$500,000 capital gains tax exemption allowed for individuals. Other questions in this section were designed to document investors' liquidation expectations, and to gauge their risk/return estimates for risk capital investments. Risk and return measures were obtained through the use of hypothetical portfolios of risk capital investments.

Section C included questions designed to identify the communication channels which currently link informal investors with entrepreneurs. The first question in this section contained a list of seven potential sources of information about risk capital investment opportunities. Investors were asked to categorize each source as either a frequent, an occasional, or a non-source. Question two required investors to identify the single most important source for generating leads on possible investment opportunities. Finally, investors were asked whether they were satisfied with the effectiveness of the communication channels linking themselves with entrepreneurs seeking risk capital.

The concept of a systematic matchmaking network similar to the VCN was introduced in Section D. Questions in this section were designed to assess respondents' willingness to participate in such a network and their perception about how the network should best operate. The construction of this section was not predicated on surveys developed for other research

endeavors. For this reason, the following paragraphs describe in detail the major design decisions.

The first question in this section requested respondents to indicate their level of interest in participating in the network, given the background material provided.¹⁵ A modified five-point Likert scale was developed for describing interest levels with descriptive anchors at both ends and in the middle of the scale. The use of a Likert-type scale yielded two important advantages. First, a scale of this nature is relatively easy to construct and to administer. Second, it tends to generate reliable estimates (Tull and Hawkins, 1980). Respondents were asked to choose a number from 1 to 5 which best described their interest level, where a 1 signified strong interest, a 3 signified moderate interest, and a 5 signified no interest in participating in the network at all. If interviewees did not express any interest in participating in the network, they were directed to the next section of the questionnaire.

The second question in section D was designed to assess the effects of possible characteristics of the network on respondents' willingness to participate in the network. These characteristics included the geographic scope of the network, the confidentiality of registrants in the network, its method of operation (i.e., government-run versus non-profit versus profit corporation), and various registration fees. A non-comparative, itemized rating scale was

¹⁵ The working committee, together with the investigator, considered three alternative approaches for introducing the matchmaking network concept to respondents. The first approach was to relay the concept by first discussing the investor network operated by the Federal Business Development Bank (FBDB). This approach however was rejected for two reasons.

- it provided an opportunity to introduce bias as respondents' perceptions of the FBDB may have influenced their reaction to the hypothetical network; and,
- the referral service operated under the auspices of the FBDB may not have been familiar to all respondents. This situation was likely to occur given the results of White's (1984) investigation of this program. As a result, this approach may not have been a useful means for identifying interest in the service.

A second approach considered, though subsequently rejected, was to introduce the concept indirectly by asking respondents a series of 'leading' questions. Under this approach, the concept would have been introduced gradually, without identifying to respondents the reasons for posing certain of the questions. The use of an indirect approach was rejected because it was felt that it would not have provided respondents with an uniform perception of the network. In addition, indirect questioning required a relatively skilled interviewer. The investigator's lack of experience in this area was viewed as an impediment to the success of this approach.

As a result, it was deemed appropriate to commence this section of the questionnaire with a brief description of the matchmaking network. This background information was intended to outline only the basic operation of such a network. Discussion of any attributes of the network not essential to its operation was excluded from the background information. As respondents were provided with an advance copy of the survey, this background could be digested by respondents prior to the actual interview.

developed to focus on respondents' attitudes toward the possible attributes of the network. A neutral midpoint category was provided in the scale in order to accommodate those cases where respondents were indifferent to certain characteristics. Each characteristic was listed on the vertical axis and respondents were requested to indicate, on a scale of 1 to 5, whether the presence of the characteristic increased, decreased, or left unchanged their interest in participating in the network. For purposes of assessing how various attributes affected interest, this scale was adequate as the analysis focussed on each individual attribute rather than on a total score across all attributes.

The final section of the investor questionnaire was constructed to solicit demographic data necessary to compile a profile of respondents. Bibliographic data included age, sex, family income, assets and net worth, occupation, level of education, and previous experience in the management of start-up companies. Finally, respondents were asked to nominate other informal investors for this study in order to assist in the generation of the informal investor sample.

2.4.2 The Entrepreneur Questionnaire

The questionnaire administered to entrepreneurs had four parts, the first of which was designed to document the financing history of respondents' firms over the past three years, and the sources of information which had yielded financial resources. The second section was designed to measure entrepreneurial interest in the matchmaking network. The intent of the third section was to identify problems, if any, related to any perceived shortage of risk capital. The construction of the fourth and final section was predicated on the requirement to compile demographic characteristics of respondent firms. Appendix 4 illustrates the link between each of these four sections and the stated research objectives and hypotheses. The following paragraphs outline major questionnaire design considerations.

In section 1, entrepreneurs were asked to recall the recent financing history of their firms. To set the stage, the first question required respondents to describe the capital structure of their firms by estimating the proportion of debt and risk (equity or equity-type) financing, as well as the proportion of financial resources which were provided from other sources. Subsequent questions focussed solely on the sources of risk capital relevant to each respondent in order to respect the objectives and hypotheses of this study. These questions dealt with the identification of specific sources of risk capital, the relative importance of those sources, and the perceived adequacy of those sources of capital in terms of meeting the financial requirements of respondents' firms.

In order to obtain a measure of the relative importance of various risk capital suppliers, respondents were asked to rank each of the risk capital sources listed on the questionnaire according to the amount of capital supplied by that source to their firm. A rank order rating scale was used to reflect the "importance" criterion. For this scale, a rating of 1 was to be assigned to the single most important source supplying the largest amount of risk capital; a rating of 2 was to identify the source supplying the second largest amount of risk capital and so on. The higher the rating, the lower the importance of that source in terms of the magnitude of risk capital supplied. Those sources which did not supply any risk capital to respondents' firms were to be assigned a zero rating.

Entrepreneurs' perceptions about how well they felt their firms' financing needs had been served were measured through the use of itemized rating scales. Respondents were asked to rate each source of risk capital listed on the questionnaire on an unbalanced, forced-choice scale in terms of three attributes: overall ability to service financing needs, timeliness, and the reasonableness of the financing terms offered. A 'not applicable' category was appended to the rating scale to accommodate cases in which the sources listed did not actually supply risk capital to the respondent's firm and, hence, could not be rated. Respondents were then asked to identify, from a list of possible sources of risk capital, those whom they felt they would approach if their

firms required financing today. This question was modelled after one contained in a questionnaire administered by Facsym Research Limited (1981) to a sample of small businesses across Canada.

The final three questions in the first section focussed on the sources of information through which entrepreneurs became aware of potential investors. These questions were similar to those contained in the third section of the investor questionnaire in order to facilitate a comparison of results obtained for each of the two samples.

The construction of section two of the entrepreneur questionnaire and of section four of the investor questionnaire was identical. A deliberate effort was made to ensure that these two sections were consistent in order to permit a meaningful comparison of investor and entrepreneur interest in a systematic matchmaking network. A detailed discussion on the design of these questions was presented in section 2.4.1.

Section three was designed to document recent experiences of entrepreneurs in the raising of risk capital for their firms. Questions in this section related to the availability of risk capital to young or start-up companies, and any consequential effects of availability on the operation of those firms. Specifically, respondents were asked to identify any problems which they had experienced in raising adequate levels of capital, to estimate the number of offers of financing which they had refused, and to discuss whether they had been turned down by investors or other risk capital suppliers. These questions were, for the most part, adapted from the Facsym survey of small business financing and revised as necessary to suit this particular study (Facsym Research Limited, 1981).

The final section of the questionnaire was comprised of questions regarding the demographic attributes of respondent firms. These questions focussed on the age, size, and growth rate of the firm, and the nature of the services or products which it provides to the general public. As in the case of the investor questionnaire, the final question requested respondents to identify investors for inclusion in the sample of informal investors.

2.5 THE PRETEST

Before the questionnaires were administered in the field, they were pretested on a sample of 8 respondents who were subjectively deemed similar to the target respondents of this study. Given that the nature of the informal investor population was unknown, the identification of a pretest sample required the assistance of the Ottawa-Carleton Board of Trade Committee for a Regional Stock Exchange and the Research Centre for High Technology Management. The pretest was to involve interviews with 4 investors and 4 entrepreneurs as this was deemed to be representative of the final study. In all, 3 investors and 4 entrepreneurs participated over a three week period in the pretest.

Respondents for the pretest were approached with the cooperation and assistance of the Ottawa-Carleton Board of Trade and the Research Centre for High Technology Management. An introductory letter, together with a copy of the pretest questionnaire and research synopsis, was sent to all respondents. The pretest was comprised of personal interviews except for one of the investor pretest respondents who mailed back a completed questionnaire. All of the personal interviews were conducted at the respondent's place of employment. During the completion of the pretest questionnaires, respondents were asked for their input regarding format, question wording, response categories, and any other general comments. Respondents were also encouraged to indicate whether they understood what was asked of them. As several of the participants demonstrated a strong interest in the nature of the research study and/or the investigator's graduate studies, some of the pretest interviews were considerably more lengthy than originally anticipated. The time taken to complete the interviews ranged from 1 1/2 hours to 3 hours. The pretest revealed the necessity for two minor modifications to the design of the final

questionnaires. The first of these revisions dealt primarily with changes to the wording of some questions for the sake of clarity and simplicity.¹⁶

The second series of modifications dealt with questions pertaining to the referral service and therefore affected the design of both the investor and the entrepreneur questionnaires. Specifically, during the administration of the pretest questionnaires, respondents were asked to indicate their interest in the referral service given various characteristics. In this question, 14 attributes of the service were listed and respondents were to identify their interest level on a Likert-type scale ranging from 1 to 5. A rating of 1 signified a strong interest in the referral service exhibiting a certain attribute, and a rating of 5 signified no interest in the service with that attribute. It was discovered that this rating scale was awkward to adhere to because in some cases, respondents were indifferent to certain of the referral service attributes. The resultant effect of characteristics on their initial interest in the service was therefore unchanged; however, the rating scale used could not accommodate this situation.

In addition, some of the pretest respondents revealed that the presence of certain attributes would significantly alter their initial interest levels. It was therefore decided to modify the rating scale used in this question to request respondents to indicate how various attributes of the referral service influenced their level of interest in participating in the service, and to provide a neutral midpoint answer category. The result of this modification was the rewording of the question so that respondents could indicate, on a scale of 1 to 5, whether a particular characteristic increased, decreased, or did not affect their interest level.

Although not asked formally via specific questions contained in the interview guide, some respondents indicated that they felt that the referral service should operate as a commercial

¹⁶For example, in Section C of the entrepreneur questionnaire, respondents were asked if they felt that problems in raising risk capital had inhibited their firm's ability to grow. Throughout the pretest, entrepreneurs indicated that it was difficult to answer this question negatively, and that perhaps the question should focus on the severity of the problem for corporate growth. It was therefore decided that the question had to be reworded in order to determine whether entrepreneurs felt such financing problems had a serious effect on their firm's growth.

entity. As a result, "commercial corporation" was appended to the final listing of referral service attributes to be considered by interviewees.

The pretest data was used in a trial analysis in an attempt to verify that the right questions were being asked to address the relevant issues. A preliminary analysis of results was discussed in a workshop setting at the Atlantic Schools of Business Conference 1986, held in Fredericton, N.B., on October 23-25, 1986. Although not all of the results were discussed at the conference, this exercise proved to be useful in reviewing the information collected to date and in testing the appropriate data analysis procedures. As a result of the preanalysis, both the investor and entrepreneur questionnaires were further revised to reflect answer coding requirements.

Aside from the modifications to the questionnaire design and answer coding structure, the field procedures appeared to be satisfactory. As a considerable amount of information was recorded during the pretest interview sessions, the data from pretest respondents could be used in the final sample for analysis purposes. Participants in the pretest were asked to nominate potential investor respondents. This procedure resulted in the identification of 20 possible interviewees. Accordingly, the interviews began as soon as the necessary revisions to the questionnaires were finalized.

2.6 FIELD PROCEDURES

For both phases of the study, contact with potential respondents was initiated by an introductory letter from the Past-Chairman of the Ottawa-Carleton Board of Trade. Attached to the introductory letter was a survey package which included a brief synopsis of the research effort and a copy of the questionnaire. A copy of the introductory letter and survey package is contained in Appendix 5. The purpose of providing potential respondents with a survey package in advance of conducting the interviews was two-fold:

- i) to convey to respondents the nature and objectives of the study. The research synopsis provided background information and operational definitions necessary for ensuring that all respondents had the same frame of reference. In addition, the survey package was intended to emphasize that the research formed part of the investigator's graduate studies; and
- ii) to afford respondents with an opportunity to prepare for the actual interview and assemble any background information (i.e. corporate financial reports) necessary for their effective participation in the interview. The survey package also stressed that individual responses would be confidential. Given the personal nature of some of the information requested of participants, assurances of confidentiality were considered instrumental in obtaining favourable response rates.

The research synopsis provided to respondents was similar to the one designed for Wetzel's investigation of the informal risk capital market in New England (Wetzel, 1983). Two modifications were required in the synopsis to meet the particular needs of this survey. First, the synopsis had to be revised to accommodate the various methods by which the questionnaires would be administered. In Wetzel's study, participants were asked to complete the questionnaires themselves and to mail their responses back to the University. Second, for the purposes of Wetzel's research, it was necessary to classify small firms into four types according to stages of corporate development: start-ups; infant; young; and, established firms. This was not deemed to be required given the nature and objectives of this feasibility study. As a result, this

survey examined the investment in and the financing history of young and start-up firms without distinguishing between the various types of firms described by Wetzel. It should also be noted that the research synopsis provided to both investors and entrepreneurs was the same.

The introductory letter was followed up by telephone to determine whether the recipient would be interviewed and to arrange an agreeable time and place for the interview. The nature and objectives of the research, as well as its role in the completion of the investigator's Master's thesis, were reiterated at the commencement of each telephone and personal interview. It was also explained that the Ottawa-Carleton Board of Trade hoped to see the results of this study, but only in an aggregate form, as no individual responses would be made available. On average, the personal and telephone interviews took one hour to complete. At the conclusion of each interview and at the end of the questionnaire, respondents were asked to nominate potential informal investors for this study, and to indicate their interest in obtaining the executive summary of the research results which would be prepared for the Ottawa-Carleton Board of Trade.

In some cases, recipients of the survey package indicated that they were too busy to participate in a formal interview, and that they would prefer to complete the questionnaire and return it by mail. Every effort was made to schedule an interview; however, respondents' preferences were accommodated. A follow-up by telephone was done for each case where the completed questionnaire was returned by mail, in the event that some answers were incomplete, unclear, or lacking.

Shortly after the interview was completed or the questionnaire was mailed back, respondents were thanked on behalf of the Ottawa-Carleton Board of Trade for their participation in writing, signed by the investigator. Attempts were made to ensure that field procedures followed were uniform across all interview sessions. In total, the completion of the two phases of the data collection process took five months.

2.7 SUMMARY

In sum, the research design used in this study was based on descriptive survey techniques, an approach prompted by two considerations. First, this study was similar in spirit to more traditional marketing studies in the area of new product development, as it placed emphasis on measuring investor and entrepreneur perceptions and preferences. Second, many previous investigations of the U.S. risk capital marketplace employed survey techniques.

The research objectives and hypotheses were addressed using a two-phased approach. In the first phase, a sample of investors and entrepreneurs from Ottawa-Carleton were interviewed by personal means. The second phase encompassed the administration of telephone and mail surveys to a second sample of investors and entrepreneurs. Initially, sample selection involved the cooperation and support of local professionals, the Ottawa-Carleton Board of Trade, and the Research Centre for High Technology Management. Subsequently, the interviewees were asked to nominate other potential candidates for the study. This procedure resulted in the identification of 50 informal investors and 60 young and start-up firms, all of which appeared to meet sample selection criteria.

The information required from both investors and entrepreneurs in order to address the objectives of the study was classified into four broad areas: investor and entrepreneur demographic attributes; criteria and objectives used by investors for evaluating risk capital investment opportunities; the financing history and experiences of entrepreneurs with respect to raising funds for their firms; and investors' and entrepreneurs' perceptions of the existing marketplace and their willingness to participate in a systematic matchmaking network. On the basis of the data collected from investors, three methods for assessing economic feasibility were employed: demographic extrapolation, comparison with the U.S. experience, and the sample selection process. In addition, economic feasibility was addressed by asking investors and entrepreneurs directly about their interest in such a network.

The questionnaires administered to investors contained five sections. The first section attempted to measure the extent and nature of previous risk capital investments in young and start-up firms. The second section was designed to measure the extent and nature of investors' objectives for future risk capital investments. Perceptions on the effectiveness of existing channels of communication between investors and entrepreneurs were the focus of the third section. The fourth was intended to estimate investor interest in a systematic matchmaking network. Selected demographic attributes were compiled in the fifth and final section.

The entrepreneur questionnaire was constructed to contain four parts. Section one documented the recent financing history of the company and the sources of information which had yielded potential capital suppliers. The second section was intended to measure entrepreneurial interest in a systematic matchmaking network. Problems and difficulties related to perceived capital shortages were the subject of the third section. In the final section, several demographic attributes of the respondents' firms were compiled.

The questionnaires were pretested on a sample of 3 investors and 4 entrepreneurs. The analysis of pretest results identified two necessary modifications to the survey instrument: minor wording and answer coding revisions; and, changes to the rating scales used to approximate respondent interest in the systematic matchmaking network.

Contact with potential respondents was initiated by an introductory letter from the Past Chairman of the Ottawa-Carleton Board of Trade. Both a brief synopsis of the research and a copy of the questionnaire were attached to the introductory letter. The introductory letter was followed up by telephone to determine whether the recipient would participate in the survey and through which means. Shortly after the interview was completed or after the questionnaire was mailed back, respondents were thanked by the investigator in writing, on behalf of the Ottawa-Carleton Board of Trade.

CHAPTER 3: ANALYSIS OF RESULTS

This chapter provides a discussion of the empirical findings of the study. The first section contains an analysis of the response rates to both the investor and the entrepreneur questionnaires. In the second section, the empirical results are provided in terms of the specific research objectives or hypotheses to which they relate. The results of the methods for assessing economic feasibility are contained in section three. In order to provide a basis for the discussion contained in the fourth chapter, the final section provides an overall summary of the empirical analysis.

3.1 RESPONSE RATE

The response rate statistics are presented in Table 3. Non-response rates are computed three ways:

- as a percentage of all eligible respondents identified for the study;
- as a percentage of all eligible respondents both identified and contacted; and,
- as a percentage of all eligible respondents identified, contacted, and able to respond prior to the cut-off date for the return of questionnaires or completion of interviews.

Those respondents deemed ineligible to participate in the study were not considered as 'non-responders' as they did not meet the prespecified sample selection criteria. Investor respondents were deemed ineligible if (a) they were not based in the Ottawa-Carleton area at the time the questionnaires were distributed or, (b) if they indicated that they had not invested in young or start-up companies, on their own behalf, within the last five years. Ineligible entrepreneur respondents included principals or founders of those firms which were in the process of becoming public corporations.

The response rates for the investor and entrepreneur samples, calculated according to the first, and most conservative method are 56.0% and 37.7% respectively. This method did not permit any distinction between the four non-response categories. According to methods 2 and 3, those cases for which the investigator was unable to arrange for the successful completion of the questionnaires are excluded from the response rate analysis. The conscious exclusion of these cases is, to a large degree, a subjective decision on the part of the investigator (Facsym Research Limited, 1981).

Despite small sample size, the response rates were favourable. This result is contradictory to the speculation that informal investors would typically maintain a very low profile

(Venture Economics Canada Limited, 1986) and hence, would not generally be receptive to discussing their investment decisions.¹⁷

TABLE 3.

RESPONSE RATES

RESPONSE CATEGORY	INVESTOR SAMPLE	ENTREPRENEUR SAMPLE
1. Interviewed	25	23
2. Interested, but not able to meet deadline	6	7
3. Unable to contact	8	6
4. Too busy/ not interested	7	20
5. Refused for confidentiality reasons	4	4
TOTAL ELIGIBLE RESPONDENTS	50	60
Ineligible to participate	7	2
TOTAL IDENTIFIED RESPONDENTS	57	62
RESPONSE RATE COMPUTATIONS		
- counting 2 and 3 as non-response	50.00%	37.71%
- not counting 3 as non-response	59.52%	41.82%
- not counting 2 or 3 as non-response	69.44%	47.92%

One possible explanation for the favourable response rate obtained for the informal investor sample in this study stems from the sample selection technique employed. When respondents are asked to nominate other candidates for participation in the study, the resultant sample tends to contain a disproportionate number of cooperative subjects (Greeno, Sommers, and Haines, 1976). More detail about the results of the sample selection process is provided in section 3.3.3.

Table 4 displays the breakdown of the total number of respondents according to the method of the questionnaire administration. A pre-analysis of results conducted at various stages of the study revealed low variability in responses. It is, therefore, reasonable to conclude that the

¹⁷ Although Venture Economics Limited did not survey informal investors directly, they based their speculation that few investors would respond, on the finding that many of the entrepreneurs they interviewed treated private company status seriously and would not therefore divulge information concerning those investors who provided capital at the early stage of formation.

conclusions were robust regardless of the method employed for administering the survey instrument.

TABLE 4
NUMBER OF RESPONDENTS IN EACH PHASE OF THE DATA COLLECTION PROCESS

	Investor Respondents	Entrepreneur Respondents	Total
Phase I: Personal Interviews	13 (52%)	11 (48%)	24 (50%)
Phase II: Telephone Interviews	3 (12%)	2 (9%)	5 (10%)
Mail Surveys	9 (36%)	10 (43%)	19 (40%)
	25	23	48

3.2 OVERVIEW OF RESULTS

The complete and itemized responses to the questions based on 25 completed investor questionnaires and on 23 completed entrepreneur questionnaires are tabulated in appendix 6. In the following subsections, the empirical findings are reviewed and presented according to the specific research objectives and hypotheses of this study.

3.2.1 Investors' Evaluation Criteria

The first objective was to determine the extent and nature of criteria used by informal investors to evaluate investment opportunities. The investment objectives and criteria were identified in terms of past investment behavior and future investment intentions.

Past Investment Behavior:

The sample of 25 informal investors reported risk capital investments totalling about \$16.6 million between 1981 and 1986. On average, each investor participated in one deal every year over the five year period for a total of 156 risk capital investments. The average size of their investments was approximately \$109,000, while the median size fell within the \$25,000 to \$50,000 category. Twenty-eight percent of past investments involved less than \$10,000; five percent were in excess of \$250,000. The size categories of the 156 investments made by the sample of investors is illustrated in Figure 1. On average, the portion of investors' personal assets represented by risk capital investments was about 16%.

FIGURE 1

Breakdown of Investments
by Size

While the 156 investments encompassed a broad range of industries, almost 70% involved the high-technology manufacturing sector. Construction and real estate accounted for another 13.5% of past investments. More than 85% of past financing was provided to young or start-up firms located within 50 miles of the investor's home or office. Eleven percent of investments were placed in firms located beyond 300 miles of the investor, typically in warmer climates.

In 61% of past financing deals, respondents participated with other individuals for risk capital investing. Venture capital companies were involved in 22% of the investments deals reported. Of the 156 investments made by investors in the sample, 134 afforded less than 25% immediate or potential voting control in the investee firm. With respect to their involvement in the investee firms, informal investors served on the board of directors in about 37% of the cases.

The breakdown of how performance expectations had been realized for 128 of the 156 investments is given in Figure 2.¹⁸ For 41 investments, performance exceeded expectations, while it fell below expectations in 51 cases.

¹⁸ For 28 investments, investors indicated that it was 'too soon to tell' about performance.

FIGURE 2

Performance Realizations
for 128 Investments

All but one respondent stated that they would be willing to invest in a young or start-up company again. Of those, 10 indicated that the potential for substantial returns was the primary reason for wanting to continue investing in young or start-up companies. Nine respondents stated that they would invest again because of the challenge and enjoyment which they experienced in previous investment situations.

The twenty five investors, while selecting 156 investments, had rejected more than 795 other opportunities, an average of 6 rejections per investor per year. A lack of confidence in managerial abilities to succeed was almost universally cited as a reason for rejecting proposals.¹⁹ Figure 3 provides the breakdown of reasons cited for rejecting investment opportunities.

Future Investment Intentions:

During the next two years, investors who were surveyed anticipated the addition of between 37 to 56 new risk capital investments to their portfolio involving approximately \$2.8 million, an average investment of about \$68,000. In over 80% of the cases, the investors expected that their maximum involvement in the management of the investee firms would be limited either to serving as members on the board of directors or to providing consulting help on an 'as required' basis.

Twenty-four of the respondents were willing to participate with other individuals in

¹⁹ Eighty-eight percent of the investors interviewed identified a lack of confidence in management or management's abilities to succeed as one reason for declining to invest in opportunities.

providing future risk capital to young or start-up firms. Fourteen investors felt that venture capital companies were acceptable investment partners; 12 said they would participate with government agencies; and 19 indicated that small business development corporations were acceptable partners.

Forty-four percent of investor respondents stated a preference for investing in young or start-up firms which were located within 50 miles of their office or residence, while another 36% did not place any geographical constraints on future investments. With respect to industry preferences, the sample of investors felt they would concentrate on the high-technology manufacturing sector (37.5%), and the construction and real estate sector (17.9%).

When asked whether they anticipated investing a portion of their *RRSP* funds into young or start-up companies, 23 of the 25 investors responded in the negative. The two investors who did anticipate directing some of their *RRSP* funds into these firms estimated investing an average of 20% of their *RRSP*'s. A total of 60% of all investors surveyed did not hold the opinion that the lifetime personal capital gains tax exemption of \$500,000 influenced their decisions to invest in young or start-up companies.

FIGURE 3

Reasons Cited for Rejection
of Investment Opportunities

Twenty of the twenty-five investors in the sample expressed a preference for capital gains as the form of return earned on risk capital investments. Eighty-four percent of respondents indicated that their investments should include common stock. For 16 of the investors, liquidation provisions would not usually be included in the initial investment agreement. Finally, investors expected to hold their investments for a mean of 5 years, with a range extending from 1 to 15 years as shown in Figure 4.

FIGURE 4

Holding Period
Expectations

The investors surveyed required an average annual rate of return on a portfolio of investments in young or start-up firms of 31.6%. The average return on "winners" was estimated to be about 350%, while "middle of the road" investments were expected to yield, on average, a 20.9% compound annual return. Institutional venture capital companies expected that 20% of risk capital investments would turn out to be "winners", 20% would be "losers", and 60% could be considered as the "walking wounded" (Fells, 1984). In contrast, the 25 investors surveyed expected 27% to be "winners", 29% to be "losers", and 48% of investments to be "middle of the road".

3.2.2 Communication Channels: Identification and Assessment

The second and third objectives of this study relate to the communication channels which currently link informal investors and entrepreneurs. The second objective was to identify those channels; the third objective was to assess their perceived effectiveness. These objectives are implied by the hypothesis that the difficulties which small firms face in securing capital are predominantly the result of ineffective communication channels.

Identification of Communication Channels

Among investors, business associates were found to be the predominant means of communication. More than 70% of the informal investors surveyed cited business associates as a "frequent" source of investment proposals over the previous five years. In addition, almost 46% cited friends as a "frequent" source, and 33% cited lawyers. The next two most common sources, accountants and 'direct contact by entrepreneurs', were cited by only 25% of the investor sample. Sixteen percent cited brokerage houses as a "frequent" source of information about investment opportunities. None of the investor respondents identified bank managers as frequent sources of risk capital investment information.

Among entrepreneurs however, 52% identified 'active personal search' as their primary means of acquiring information about potential sources of risk capital. Thirty-nine percent cited business associates as a "frequent" source, almost 22% named friends, and 17% identified accountants. All other sources, including lawyers, brokerage houses, venture capital companies, and bank managers, were less important as sources of information about risk capital suppliers.

For both the investor and the entrepreneur samples, the most useful source of information for risk capital investment opportunities was clearly 'business associates', as illustrated in Figure 5. Approximately 35% of investors cited business associates as the most useful source, while 22% identified friends. For entrepreneurs, business associates were cited as the most useful source in 30% of the cases; twenty-six percent of respondents cited 'active personal search' as the most useful source.

FIGURE 5

**Most Useful Sources of Information for
Investment Opportunities**

Satisfaction with Communication Channels

Figure 6 shows the levels of satisfaction with existing communication channels expressed by both investors and entrepreneurs.

Investors:

The results indicate that as many investors were satisfied with the effectiveness of existing information networks as were dissatisfied. The 33% of investors who expressed some form of dissatisfaction explained that the scope of the informal risk capital marketplace was suboptimal. The following comments reflect the range of reasons related to the scope of the market:

- "...there is no central pooling of information about investment opportunities..."
- "...only a subset of all opportunities is brought to my attention..."
- "...bringing investors and entrepreneurs together is a hit-and-miss process..."

Thirty-three percent of the informal investors expressed satisfaction with the state of the marketplace because they felt that they were tapped into information networks which provided them with a sufficient number of investment opportunities for consideration. The balance of the investor sample (33%) were neither satisfied nor dissatisfied with the effectiveness of information networks.

Entrepreneurs:

In contrast to the finding that as many investors were satisfied as not, dissatisfied

entrepreneur respondents outnumbered satisfied entrepreneur respondents by a two-to-one ratio. As in the case of dissatisfied investors, the principal reason for dissatisfaction cited by entrepreneurs related to their perception on the scope of the marketplace. The second most frequently cited reason for dissatisfaction was a lack of understanding between investors and entrepreneurs about risk capital investing.

FIGURE 6

Informal Risk Capital Market:
Investors' & Entrepreneurs'
Levels of Satisfaction

The above results led to tests of the hypothesis that financing difficulties experienced by small firms are predominantly the result of ineffective communication channels. In addition to assessing their perceptions on the effectiveness of those channels, entrepreneurs were also asked about their recent financing experiences. The combination of these two sets of results enabled a more comprehensive test of the hypothesis about financing difficulties.

Of the twenty-three entrepreneur respondents, thirteen had secured risk capital investment for their firms from informal investors; twelve had obtained risk capital from their friends; and, five had been successful in raising risk capital from venture capital companies. Figure 7 provides a breakdown of the sources of the respondent firms' risk capital.

FIGURE 7
Sources of Risk Capital

In contrast to what is shown in Figure 7, risk capital from informal investors was found to rank equally with the principals' own resources in importance to growing firms as measured by the dollar amount of capital supplied to the firm. In thirteen instances, respondents identified informal investors as supplying the largest or second largest amount of risk capital. In only five cases have venture capital companies provided the largest infusion of capital, while friends tended to supply the second largest amount of risk capital in five of the respondent firms.

Informal investors were generally rated as being better able to service financing requirements than were the other sources of risk capital; funds from informal investors were considered to be available in a more timely manner and on more reasonable terms. When asked which potential sources of capital they would approach if their firms needed financing, thirteen of the respondents said that they would approach their firms' own shareholders, twelve indicated that they would solicit financing from informal investors, and eleven felt that they would approach either a venture capital company or a banking or near-banking institution. Figure 8 illustrates the frequency of the sources which entrepreneurs felt they would approach.

FIGURE 8

Potential Sources of Capital

Of the twenty-three entrepreneurs surveyed, 13 indicated that they had experienced problems raising risk capital. Of the thirteen, sixty-nine percent felt that problems raising risk capital had seriously inhibited the growth of their firms. Other problems attributed to the difficulty in raising capital were cashflow problems (43.5%), and an inability to expand (21.7%). In fifteen cases, entrepreneurs had to resort to using short-term financing in order to meet long-term needs. Typically, this approach was adopted because short-term financing was the only option available at the time (8 cases) or because it represented a viable temporary measure (6 cases).

A total of 65.2% of entrepreneurs questioned in this study held the opinion that there is a shortage of risk capital available to young and start-up companies. The reason they most frequently cited for the shortage of risk capital available in the market was that small businesses are too risky and that Canadians were reluctant to take on risk (7 respondents). The second most frequently provided explanation for such a shortage was that investors lacked the technical expertise necessary to understand technology-based businesses (4 respondents).

Over the past three years, the twenty-three entrepreneurs had seriously considered 73 firm offers of risk capital financing, an average of one offer per entrepreneur per year. Eleven of the respondents had rejected firm offers of risk capital financing, typically for reasons not related to the terms of the financing. During the same period, 48.8% of entrepreneurs in the sample had been turned down by investors or other suppliers of risk capital. The most common reason why

entrepreneurs thought that they had been rejected was that investment in small business was considered too risky (4 respondents). A second reason they cited was that potential investors were unfamiliar with the technology or the nature of the business or product (3 respondents).

Seventeen percent of the entrepreneur sample estimated spending more than 30% of their time searching for adequate sources of capital. Forty-eight percent had used less than 10% of their time in attempts to locate risk capital. On average, this search occupied 16% of entrepreneurs' time over the last year.

3.2.3 Interest in a Matchmaking Network

The last two objectives and hypotheses of this research dealt with the willingness of informal investors and entrepreneurs to participate in a systematic matchmaking network which would serve to broaden the range of investment opportunities available for their consideration. Objective four was to obtain a measure of respondents' willingness to participate; objective five was to identify their preferences for the structure of the matchmaking network. Addressing these objectives provided information to test the third and fourth hypotheses of this study: that respondents would, in essence, be willing to participate and that they would consider the service provided by the matchmaking network to be of sufficient value that they would be willing to pay a fee to acquire that service.

Figure 9 displays the results of a direct question, posed to both informal investors and entrepreneurs, about their interest in participating in a matchmaking network. Of the twenty-five informal investors in the sample, 19 expressed at least a moderate interest level (76%). In the entrepreneur sample, seventeen of the twenty-three respondents expressed a moderate to strong level of interest in participating in the matchmaking network (73.8%). Four investors and four entrepreneurs did not indicate any interest at all in the network.

FIGURE 9
Investors' and Entrepreneurs'
Interest In Matchmaking Network

Both sets of respondents were asked to indicate how a variety of potential attributes of the network would affect their level of interest in participating in the network. These attributes included the geographic scope of the network, the confidentiality of the registrants on the network, its operating structure, and the cost of registration with the network. Table 5 summarizes the results obtained from both the investor and the entrepreneur surveys by displaying the number of respondents who indicated that these attributes would impact on their interest in the network.

Geographic Scope:

From Table 5, it appears that most investors would prefer a regionally-based matchmaking network. This is consistent with the finding that informal investors tend to invest 'close to home'. On the other hand, the majority of entrepreneurs expressed a preference for a wider geographic scope. Presumably, a nation-wide network was thought to imply a larger base of potential investors.

TABLE 5
EFFECT OF POTENTIAL ATTRIBUTES OF THE NETWORK ON
INVESTORS' AND ENTREPRENEURS' INTEREST

Attribute	EFFECT OF ATTRIBUTE ON INTEREST			
	Investors		Entrepreneurs	
	Increase Interest	Decrease Interest	Increase Interest	Decrease Interest
1. Geographic Scope:				
Nation-wide	5	11	11	3
Regional	12	1	9	3
2. Confidentiality:				
Of Investors	13	1	10	6
Of Entrepreneurs	3	11	12	4
3. Operating Structure:				
Government-run	1	14	0	12
Non-profit corporation	14	2	10	0
Commercial corporation	3	7	6	2
4. Registration Fees:				
Only for Investors	4	12	6	4
Only for Entrepreneurs	7	3	6	4
For Both	3	7	10	1

Confidentiality of Registrants:

Most investors indicated that their interest would be higher if the network were to operate such that their identity would remain confidential. The proposal to maintain the anonymity of entrepreneur registrants reduced interest for 11 investor respondents. This preference is not surprising given that meeting the entrepreneur face-to-face was found to be an important consideration in their decision to invest.

Operating Structure:

Respondents in both samples indicated that a government-run matchmaking network would reduce their willingness to participate. On the balance, the establishment of a non-profit, non-government run referral service appeared to be the preferred option for both investors and entrepreneurs.

Registration Fee Structure:

The proposal to levy listing fees only on entrepreneur registrants had a positive effect on the interest level of 7 investors in the sample. Conversely, ten of the entrepreneurs surveyed indicated a higher level of interest when it was proposed that fees be paid by both investors and entrepreneurs. Figure 10 shows the interest levels for both sets of respondents as a function of the cost of registration in the matchmaking network. This graph illustrates that the entrepreneur sample expressed higher interest levels than did the investor sample across all fee ranges. Given the slope of the "demand" curve for entrepreneurs illustrated in Figure 10, the \$200 fee level can be considered as a threshold.

FIGURE 10

Level of Interest by Registration Fee

A synthesis of these findings leads to the following observations:

- the level of interest is not a strong function of geographic scope, confidentiality, or operating structure; and,
- beyond a registration fee of \$200 *per annum*, interest in participating in the referral service is reduced for both entrepreneurs and investors.

3.3 FEASIBILITY ASSESSMENT

In order to assess the economic feasibility of establishing a systematic matchmaking network in the Ottawa region, it was necessary to obtain a measure of the community demand for such a service. As discussed in chapter two, the economic feasibility of the matchmaking network is likely to depend on the participation of enough investors to satisfy entrepreneurs' requirements. Given that the operational feasibility of the network requires a large database of investors relative to entrepreneurs,²⁰ three methods were employed in order to approximate the willingness of informal investors in Ottawa-Carleton to participate in the matchmaking network: demographic extrapolation; comparison with the U.S. experience; and, the sample selection process. The results of these three methods are presented in the following subsections.

3.3.1 Demographic Extrapolation

According to this method of assessing economic feasibility, the level of interest in the matchmaking network identified by the sample of informal investors was extrapolated to the population of Ottawa based on a similarity of demographic characteristics.

A profile of the typical (median) informal investor is as follows:

- a) informal investors were males with a median age of 50 years;
- b) they tended to be well-educated, having university or college degrees in business, law, or engineering;
- c) most informal investors held senior managerial or administrative positions including entrepreneurs, lawyers, and managerial consultants;
- d) the majority of informal investors surveyed had an annual income of \$150,000 or more, two-thirds had an income in excess of \$100,000
- e) most informal investors had personal net worth in excess of \$1,000,000.

This demographic profile is consistent with the profile of high income families²¹

²⁰ At a registration fee of \$200 (see section 3.2) and estimated annual operating costs of \$60,000, it is seen that a total of 300 participants are required for break-even operation. In the New Hampshire VCN, investors outnumber entrepreneurs by a three to one ratio. Operating with this ratio implies that break-even operation in Ottawa-Carleton would require 225 investors and 75 entrepreneurs.

²¹ The group of census families beginning with a family income of at least \$93,200 in 1980 (the top 1 percentile) was labelled high income families by Statistics Canada for purposes of this survey.

compiled by Statistics Canada on the basis of census data (Statistics Canada, 1980). The mean age of the husbands (or lone parents) of 'high income families' was about 49 years in 1980. Most were engaged in management, health, legal, and sales occupations; at least one spouse had a university degree. Approximately one-half of 'high income families' were involved in entrepreneurial activity of some kind. Finally, seventy percent of 'high income families' were resident in large metropolitan centres with a population of 500,000 or over. Given comparable demographic characteristics between informal investors and 'high income families', it is conceivable that informal investors would comprise a subset of 'high income families' in the Ottawa-Carleton region.²²

Finance Canada estimates that approximately nine-tenths of one percent of the people in Ontario who filed tax returns for 1984 reported taxable earnings²³ of at least \$100,000 (Tax Policy and Legislation Branch, Finance Canada; personal correspondence, February 1987). On the assumption that the Ottawa metropolitan area can be considered to be a representative area in terms of the distribution of people in Ontario with earnings of \$100,000 or more, then a conservative estimate of the number of these individual falls within the range of 1,500 to 1,750.²⁴ Given that average income levels have been increasing steadily over the past years, the estimate provided is fairly conservative (Tax Policy and Legislation Branch, Finance Canada; personal correspondence, February 1987).

As all of the informal investors in the sample were males, it was necessary to estimate the proportion of individuals in Ottawa earning an annual income in excess of \$100,000 who were male. Statistics Canada has estimated that the ratio of males to females in the Ottawa metropolitan

²²It is not unreasonable to consider informal investors as a subset of high income families. Statistics Canada reports that nearly 25% of the total income received by high income families comes from investment income. This proportion is likely to be understated as the census concept of income excludes capital gains, a major portion of which is probably earned by high income families (Statistics Canada, 1980, p. 46). As a consequence, it is generally the high income families who hold large portfolios of securities. Given traditional theories about risk aversion, individuals with higher levels of wealth tend to exhibit lower degrees of risk aversion. If the decreasing relative risk aversion hypothesis is valid, it is conceivable that a portion of portfolios held by high income families may be represented by risk capital investments.

²³Taxable earnings include, among other sources, income from employment, dividends, and capital gains.

²⁴0.9% can be applied to the estimated 171,400 tax returns filed by Ottawa residents in 1984 to generate an estimate of those individuals residing in Ottawa who earned more than \$100,000. Use of this figure as an estimate of the population of individuals currently earning more than \$100,000 is based on the assumption that the net mobility of these individuals has been relatively constant since 1984, as have their income levels.

area in 1981 was about 0.95:1 (Statistics Canada, 1984). Applying this ratio, the number of individuals in the Ottawa area who exhibit demographic characteristics similar to those of investors surveyed for this study falls between 730 and 850. Obviously, the application of the 0.95:1 ratio involved the following two assumptions:

- that the average ratio of males to females in the total population is applicable to high income individuals; and,
- that this ratio has remained relatively constant since 1981.

The resultant estimate of the number of males in Ottawa reporting annual incomes of \$100,000 or more can be considered as a ceiling estimate of the number of informal investors residing in the Ottawa region who resemble the active investors surveyed for this study. This estimate, however, necessarily includes both active and potential informal investors.²⁵ However, this estimate excludes females because none were represented in the final survey. This implies that the above estimate of potential investors may be a conservative one by excluding females who represent a growing, albeit small, presence in the category of high income earners. Aside from their relative participation in the informal risk capital marketplace, it is unknown whether there are any other characteristics which distinguish active informal investors from their potential counterparts.

If potential investors were to express the same level of interest in the matchmaking network as active investors, and if the sample of active investors can be considered to be representative of the population of active investors, the interest level expressed by the sample can be extrapolated to the estimate of potential informal investors in Ottawa. Extrapolation of the results obtained in the survey (i.e., that 76% of informal investors indicated a moderate to strong interest in the network) yields an estimate of the size of the pool of potential informal investors who might be willing to participate in the matchmaking network to be in the range of 550 to 650.

²⁵ Informal investors were defined as private individuals who have invested in young or start-up companies within the last five years. As a consequence, investors who met this sample selection criteria are considered active in the marketplace. Conversely, potential informal investors would include those investors who have not invested in young or start-up firms within the last five years and those individuals who might undertake such investments in the future.

This estimate of the size of the pool of potential informal investors residing in the Ottawa-Carleton area was based on a chain of some fairly heroic assumptions, not all of which have been expressly addressed in this research. In terms of assessing the economic feasibility of the matchmaking network therefore, the estimate provided under this method should best be viewed, as an informed "ball park" estimate of the size of the pool of *potential* informal investors. Given that this pool may include passive investors, it is likely that some form of incentive to undertake risk capital investments may be required to increase their participation in the informal risk capital marketplace. The establishment of a systematic matchmaking network for facilitating the search for informal investment opportunities may provide one such incentive; however, it is not possible to conclude that, on the basis of the estimated size of the potential investor pool, there currently exists a sufficient community demand for the network on the part of investors. Two other methods for assessing the extent of investor demand, and ultimately economic feasibility, are considered.

3.3.2 Comparison with the U.S. Experience

A second assessment of economic feasibility involved the comparison of informal investors sampled from the Ottawa area with some of their U.S. counterparts. Given that a matchmaking network has been relatively successful in several regions in the U.S., it was postulated that any comparison between Ottawa investors and U.S. investors would provide indirect information about economic feasibility.

A comparison of the various groups of informal investors was performed on the basis of investors' demographic attributes, investors' investment criteria and objectives, and investors' perceptions of the existing informal risk capital marketplace. For comparative purposes, data similar to that which was collected for this research endeavor was available from two U.S.-based studies, one was conducted in the New England area (Wetzel, 1983), and the other over a number of states in the 'sunbelt region' (Gaston and Bell, 1986). Typical investor profiles,

compiled from the results of all three studies, are presented in Table 6. It should be noted that the profiles were constructed from mean, modal, and median values obtained from samples of informal investors which differed in size. The intent of compiling these profiles was to facilitate the comparison of 'typical' informal investors; any diversity among the individual investors in each of the samples may therefore be concealed.

Table 6 shows that, overall, the survey results are consistent across all three samples; however a few differences and similarities are worth noting:

a) All three 'typical' investor profiles suggest that informal investors are well-educated individuals of means, who have had experience at the management level in the start-up of new business ventures.

b) In all three regions, the average investor prefers to invest 'close to home' in the high-technology manufacturing or real estate sectors. In addition, the investor profiles reveal a preference for investing in common stock and for participating with other informal investors in the financing deal.

c) The typical investor in Ottawa has played a more active role in the risk capital marketplace than his U.S. counterpart, making an average of 1 investment per year (versus 1 every 2 years for the typical New England investor, and 2 every 3 years for the sunbelt region investor).

d) In Ottawa, the average value of investments was higher, although voting control assumed by typical investors was considerably less than that for other regions. The average Ottawa investor does not become as actively involved in the management of investee firms as do U.S. investors, usually restricting his involvement to representation on the board of directors.

e) The sample of investors from Ottawa appears to anticipate higher returns on their risk capital investments- 32% *per annum* versus 20% in New England and the sunbelt region. Moreover, the typical Ottawa investor seems to be more discerning than his U.S. counterpart, rejecting 4 out of 5 investment proposals. This may reflect a higher demand for capital in the Ottawa area. Typical investors in the U.S report rejecting an average of 2 investment opportunities out of

every three which they have considered seriously.

f) Typical investors in both the Ottawa and the sunbelt regions appear to be more satisfied with existing information channels than do those located in New England. Higher levels of dissatisfaction in the New England states may explain why more of these investors have expressed an interest in participating in a systematic matchmaking network. On the other hand, the majority of Ottawa investors surveyed expressed an interest in such a network despite their relative satisfaction with the status quo.

Overall, there appears to be a consistency across each of the three regions in terms of investor demographics and the nature of their investment criteria. Regional differences in investors' perceptions of the effectiveness of the existing risk capital marketplace have important implications for the assessment of economic feasibility. An equal number of Ottawa investors seem to be generally satisfied or dissatisfied with current communication channels linking themselves with investment opportunities. Most Ottawa investors were neither satisfied nor dissatisfied. Thus, the need for improving those channels is not clear. In New England, general dissatisfaction with the status quo on the part of investors prompted the introduction of a referral service to improve the risk capital marketplace. Although Ottawa investors have expressed an interest in participating in a referral service, their satisfaction with the existing marketplace seems to suggest that they may not consider the establishment of a such referral service essential to the operation of the market. Given this result, it is uncertain whether those investors in Ottawa who indicated an interest in the service would, in fact, participate in the service were it to be implemented.

TABLE 6
COMPARATIVE ANALYSIS OF 'TYPICAL' INVESTOR PROFILES

Characteristic	Sunbelt Region USA ¹	New England States ²	Ottawa- Carleton
Age	49 years	N/A	50 years
Sex	Male	N/A	Male
Education	College-Business or Engineering	College- Technical or Business/Economics	College-Business, Law, or Engineering
Family Income	\$70,000 US	N/A	over \$150,000 CDN
Net Worth	\$750,000 US	N/A	over \$1,000,000 CDN
Number of Past Investments	2 every 3 years	1 every 2 years	1 every year
Average Value of Investments	\$37,500 US	\$50,000 US	\$109,000 CDN
Involvement with Firm	Consulting help	Board of Directors or consulting	Board of Directors
Voting Control	50%	N/A	<10%
Preferred Investment Partners	Informal investors	Informal investors	Informal investors
Equity Instrument	common stock	common stock	common stock
Geographic Preferences	within 50 miles	within 50 miles	within 300 miles
Business/Industry	manufacturing, finance, real estate	high technology manufacturing,	high technology manufacturing, real estate
Rejected opportunities	2 per year	2-3 per year	6 per year
Minimum Required Rate of Return	20%	20%	32%
Liquidation Expectations	3-4 years	5-7 years	5 years
Future Investments	1 in the next year	N/A	1 in the next year
Primary Source of Opportunities	Friends, Business Associates	Friends, Business Associates	Business associates, Friends
Previous Start-up Experience	< 50% surveyed	75% surveyed	84% surveyed
Dissatisfaction with Existing Communication Channels	33% dissatisfied	65% dissatisfied	33% dissatisfied
Interest in Referral Service	N/A	88% moderate or strong	76% moderate or strong
	n = 158	n = 133	n = 25

N/A not available

¹ Gaston, R.J., and S., Bell Informal Risk Capital Market in the Sunbelt Region, Applied Economics Group Inc., Knoxville TN, 1986.

² Wetzel, W.E., "Angels and Informal Risk Capital", Sloan Management Review, Summer 1983.

3.3.3 Sample Selection Process

As indicated in Chapter Two, the investor sample selection technique required the identification of potential investor candidates from three alternative sources:

- local professionals;
- entrepreneurs who were interviewed; and,
- the investors themselves.

Informal investors were the most productive source of potential respondents, generating a list of 37 investor candidates for the survey. The entrepreneurs interviewed identified a total of 21 prospective investors; however, 10 of these investors had also been nominated by other investor respondents. Local professionals provided the names of 11 possible investors. Of these 11, nine had already been identified either by entrepreneurs or by other investors. The result of this 'referral' system was a list of 50 informal investors eligible for participation in the final survey.

Through the assignment of unique identifier codes to all individuals who participated in the sample selection process, it was possible to record who had nominated each investor and how many times any particular investor had been nominated as a candidate for the study by either of the three sources used for sample generation. Table 7 illustrates some of the results of the sample selection process, by providing a breakdown of investors by the number of times they were nominated for study. These results suggest that some of the informal investors nominated through the referral system are well-known in the risk capital marketplace.

Three of the findings presented in section 3.2 suggest that it is not surprising to find that active informal investors exhibit some degree of 'social visibility' in the community. First, it is conceivable that the entrepreneurs who were surveyed would have identified the informal investors who had invested in their firms. Second, the majority of informal investors participated with other individuals for risk capital investing and, hence, were members of investment consortia. Thus, it is reasonable to expect some degree of association between investors. Third, most of the surveyed informal investors tended to rely on business associates or friends for information about

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investment opportunities. Together, these findings suggest that informal investors exhibit some degree of social visibility. This is consistent with Wetzel's conclusion that these investors tend to be found in clusters, linked by informal networks of friends and business associates (Wetzel, 1983).

TABLE 7
FREQUENCY OF INVESTOR NOMINATION

Number of times Identified	Number of Investors (Frequency)	Cumulative Sum (Cumulative Frequency)
1	31	31
2	8	39
3	5	44
4	1	45
5	1	46
6	2	48
7	2	50

The degree to which informal investors are socially visible has important implications for estimating the portion of the population in Ottawa comprised of informal investors. Presumably, the more socially visible an individual is in the community, the higher the probability that that individual will be identified by someone else in the community. Thus, if informal investors are highly visible in a social context, then it is likely that the sample selection process would yield the names of those investors. At one extreme, the 50 investors nominated for this study may represent the entire informal investor population in Ottawa-Carleton. At the other extreme, if informal investors were socially invisible, the 50 investors identified through the sample selection process may represent a floor estimate of the investor population in Ottawa. In any case, the results of the sample generation techniques indicate that there are a minimum 50 active informal investors within the community.

Given the result that informal investors may exhibit some degree of social visibility, it was possible to employ three variations of capture-recapture techniques in order to estimate the size of the active informal investor population in the Ottawa area. The applicability of these techniques depended, to a large extent, on the various assumptions about the nature of the samples taken

from the population to be approximated. For this reason, the assumptions underlying the capture-recapture techniques deserve discussion. These assumptions, it will be seen, drove the selection of the particular variations of capture-recapture to be employed in this study.

Capture-recapture methods offered a means for estimating the total number of individuals in the informal investor population without having to undertake a complete census. In addition to requiring less effort than would a complete census, the capture-recapture approach was particularly useful because it provided a way of approximating an unknown population.²⁶

Under this technique, d samples of the population are taken and individuals included in the i 'th sample are subdivided into two groups: those who have been identified in previous samples, and those who have not. Assuming that each individual is uniquely identifiable, the data can be presented in a 2^d cross-classification table where absence or presence in the i 'th sample defines the categories for the i 'th dimension. The one missing cell in the table corresponds to the number of individuals absent in all samples, the variable to be estimated.

Traditional capture-recapture methods are based on three critical assumptions:

- that the samples are random;
- that the model which describes the observed individuals also describes the count of the unobserved individuals. Thus, the d samples must be independent; and,
- that the set of 2^d probabilities applies to all individuals in the population.

Violation of these assumptions can lead to biased estimators of the population. However, in the application of these methods, the assumptions may not be realistic. This is particularly true in the case of heterogeneous populations where samples may not be independent. That is, individuals may be selectively included (excluded) in the samples because of 'social' visibility (invisibility). If individuals in each of the d samples are uniquely identifiable, however, possible dependencies among the samples, arising because of social visibility, can be modelled in the analysis. Specifically, the nature of the visibility of individuals is reflected as an

²⁶This, and the discussion of the capture-recapture statistical methodology, its assumptions, and its applications are based on Bishop, Feindberg, and Holland (1975). The assistance of Dr. Roland Thomas is particularly, and gratefully, acknowledged; Professor George Haines is to be credited with the idea for the origin of this line of approach.

interaction term in the log-linear models used to describe the data contained in the cross-classification table.²⁷

For purposes of this study, three samples of informal investors were taken ($d = 3$); the first sample comprised informal investors who were identified by other previously sampled investors (sample 1); sample 2 included those investors who were nominated by entrepreneurs; finally, for the third sample investors were identified by local professionals or parties external to the survey. It was not possible to determine whether these samples were in fact random, although the referral system for generating samples is not normally considered synonymous with random sampling. Nonetheless, three variations of the capture-recapture methods were considered in order to estimate the size of the investor population in Ottawa-Carleton. The selection of appropriate variations was dependent on an *a priori* postulation about the nature of the dependencies between the three samples and, hence, about the log-linear model for describing the data obtained from the samples. Table 8 summarizes the data in the form of a 2^3 contingency table.²⁸

TABLE 8
IDENTIFICATION OF INFORMAL INVESTORS IN
THE OTTAWA-CARLETON AREA

Sample 1 Other Investors	Sample 3 External Parties			
	Identified		Not Identified	
	Sample 2 Entrepreneurs Identified	Sample 2 Entrepreneurs Not Identified	Sample 2 Entrepreneurs Identified	Sample 2 Entrepreneurs Not Identified
Identified	5	2	5	25
Not Identified	2	2	9	X

Where the X symbol indicates that the count for this cell is unknown.

²⁷ Although violation of the sample independence assumption can be accommodated through the use of appropriate models, there is no way to verify that the model which describes the observed data is also valid for those data not observed (Bishop, Feindberg, and Holland, 1975). Thus, the population size estimator may still be biased.

²⁸ A widely used rule of thumb that has often been applied to these types of Chi-square tests for contingency tables with more than one degree of freedom is that there be a minimum expected frequency of 5 in any one cell (Hays and Winkler, 1971). More recently however, Lamtz (1978) has shown that the Pearson statistic attains exact levels that are close to the nominal levels for a wide range of sample sizes and parameter values.

The unobserved cell in Table 8 represents those informal investors who were not identified in any of the three samples. That is, the total number of investors in the population who were not identified by other previously sampled investors, entrepreneurs or local professionals. The objective of this analysis was to estimate how many informal investors there were in this cell.

As Table 8 was comprised of seven cells with observed counts, capture-recapture techniques available for estimating the expected value of the missing cell are based on fitting log-linear models, having fewer than seven parameters, to the observed data. Four such log-linear models are admissible, the selection of which depends upon assumptions about the particular dependencies among the three samples of informal investors. In this study, three log-linear models were tested for goodness-of-fit.²⁹

First, it was postulated that there may have been dependencies between the sample of investors identified by entrepreneurs (sample 2) and the sample of investors identified by other investors (sample 1). The appropriate log-linear model based on this assumption is the following:

$$\log m_{ijk} = u + u_1(i) + u_2(j) + u_3(k) + u_{12}(ij)$$

where: m_{ijk} is the maximum likelihood estimator of the expected cell count in cell ijk ;
 $u_1(i)$, $u_2(j)$, $u_3(k)$ are the main effects of the first, second, and third samples, respectively; and,
 and, $u_{12}(ij)$ is the interaction term reflecting the two-factor effect between the first and second samples.

In this model, the third sample (i.e., the one of investors who were identified by external parties) was considered independent of the other two. It was anticipated that, because the third sample was provided by external parties who did not participate in the actual survey itself, this model would fit the data fairly well. The third sample independence model did not, however, provide a very good fit to the data. The Pearsonian Chi-Square statistic yielded a value of 8.6907 with 2 degrees of freedom which indicated poor fit. That is, it was not possible to accept the null

hypothesis that discrepancies between the observed data and those provided by the model were

²⁹ In capture-recapture methodology, goodness-of-fit is tested on the null hypothesis that the actual distribution of the data can in fact be represented by the model chosen, and that any discrepancies are due to chance. Thus, the lower the χ^2 value, the better the 'fit' because it implies that the null hypothesis cannot be rejected at a given level of significance. The significance level can be interpreted as the likelihood that the model would yield observed data similar to what was actually found.

due to chance. As a result, a second model was investigated.

The second model considered here included an additional interaction term, $u_{13(ik)}$, to reflect a possible dependency between the sample generated by external parties and the sample afforded by other investors. This model presumes that the two pairs of samples, samples 1 and 2, as well as samples 1 and 3, may be interrelated. The form of this log-linear model is as follows:

$$\log m_{ijk} = u + u_1(i) + u_2(j) + u_3(k) + u_{12(ii)} + u_{13(ik)}$$

This model also provided a poor fit to the data as it had little explanatory power with a large value $X^2 = 8.63$ for one degree of freedom. This result revealed that the inclusion of a second interaction term did not yield any significant improvement over the first model. As a result, it became apparent that an appropriate model would likely include a term to reflect interaction between the second and third samples.

As the variance of the population size estimate is minimized when the model contains the fewest parameters, the third attempt to model the data involved the inclusion of only one interaction term, $u_{23(jk)}$, reflecting possible dependencies between samples 2 and 3:

$$\log m_{ijk} = u + u_1(i) + u_2(j) + u_3(k) + u_{23(jk)}$$

This model reflected the social visibility of informal investors and, hence, a positive interaction between the list of investors provided by entrepreneurs and the investor list compiled by persons external to the actual survey, local professionals. By only reflecting interaction between these two samples, it was assumed that the sample of investors nominated by other investors was independent. This is a reasonable assumption. Of the 37 investors identified by other investors, 25 were not named by any other source. In contrast however, there was considerable overlap between the list of investors provided by local professionals and the list generated from entrepreneurs. This overlap is probably explained by the fact that local professionals were asked to provide the names of both investors and entrepreneurs for this study. It was likely that the investors identified were known to have invested in the firms owned by the entrepreneurs whom they also nominated.

This model provided a reasonably good fit in that the Pearsonian goodness-of-fit statistic

yielded a value of 2.3924 with two degrees of freedom, a value with a descriptive level of significance between 25% and 50%. That is, it was not possible to reject the null hypothesis that discrepancy between the actual and modelled distributions was due to chance. The P value for this model was .30% which implies that the data conform to the model selected. The estimate of the size of the active informal investor population in Ottawa under this model was 87, while the asymptotic standard deviation of this estimate was 13.

If the informal investors who participated in the survey can be considered representative of all active informal investors in the Ottawa-Carleton region, extrapolating the results of this survey (i.e., that 76% of active informal investors are interested in participating in the matchmaking network) to the population suggests a point estimate of approximately 66 active informal investors who would be interested in participating in a systematic matchmaking service. Given the operational requirement for a large database of investors relative to the entrepreneur database, this result does not have favorable implications for the economic feasibility of such a network.

3.3.4 Investor and Entrepreneur Interest

The three previous sub-sections focussed on the question of sufficient demand for the matchmaking network from the informal investor perspective. The purpose of this section is to link the results obtained by asking respondents directly about their interest in the network with the findings presented in previous subsections in order to evaluate the overall community need for establishing a mechanism for improving information networks.

Entrepreneurs:

The twenty-three entrepreneurs surveyed represented firms whose average age was approximately 5 years. On average, their firms employed 29 full-time employees in 1985. The median sales level in 1985 fell within the \$1million to \$5 million range. Typically, these firms have been experiencing rapid growth in annual sales. Eleven firms, or 48% of the sample, reported growth rates of sales in excess of 30% per annum. Six firms had experienced annual growth in

their sales of between 20% and 30%. The balance of the sample, six firms, estimated that the growth rate in sales had been below 20%.

The distribution of respondent firms by industry illustrates the domination of the firms in the sample by firms involved in the high-technology sector. Nine firms were engaged in the development of software, while eight of the firms were involved in high-technology manufacturing. Four of the 23 firms manufactured products not considered high-technology (i.e., bakery products, furniture, and vehicles) and two were service-oriented.

These results, together with the findings presented in section 3.2.2, indicate that small, rapidly growing, technology-based firms are experiencing problems securing risk capital for expansion. Over 65% of respondents believe that there is a shortage of risk capital available to firms in the Ottawa-Carleton area. More than one-half of the sample reported that they would pursue informal equity investment to satisfy future capital requirements. This suggests that entrepreneurs look, and will continue to look, to informal investors for providing financing for corporate growth. These results are consistent with those obtained from a sample of high growth ventures in New England (Wetzel and Wilson, 1985).

The search for adequate sources of risk capital has not been a satisfactory process for entrepreneurs. More than 50% were dissatisfied with the effectiveness of existing communication channels linking themselves with potential investors. It appears that these firms would benefit from a more efficient means of accessing informal investors, and this is confirmed by the entrepreneurs themselves: almost three-quarters displayed an interest in participating in a systematic referral service designed to broaden the range of potential sources of financing available to them.

In two previous studies, it was estimated that the total number of small firms³⁰ with manufacturing facilities in Ottawa-Carleton was approximately 200; while an estimated 160 firms in the area develop software (Ottawa-Carleton Economic Development Corporation, 1986 and 1987).³¹

³⁰In the Directory of Manufacturers small firms were described as employing fewer than 50 full-time employees

³¹In the software development field it has been estimated that there are 160 firms in Ottawa-Carleton employing 4,500 employees, for an average of 28 employees per firm.

Extrapolating the results of this study to the estimated population of technology-based or manufacturing firms provides an estimate of the number of entrepreneurs in the community who may be interested in participating in the matchmaking network. On the assumption that this sample of firms is representative of the population, it seems reasonable to estimate that there may be as many as 265 entrepreneurs willing to register their firms with the network.

Investors:

An analysis of the population of informal investors revealed that an estimate of the number of investors who might be willing to participate in the network ranges from a low of 66 to a high of 600. The range of the estimate of investors is large, and should therefore be treated cautiously for two reasons:

- The high estimate of 'willing' investors includes both active and potential investors. The size of the active investor population in the Ottawa region is estimated to be only 87 individuals. It is uncertain whether the pool of potential investors would support such a network; and,
- Given that as many investors are satisfied with the current marketplace as there are who are dissatisfied, it is unclear whether interested investors would actually participate in the network.

Feasibility:

The results of an assessment of demand show that:

- 66 investors are likely to be interested in the network;
and,
- 265 small firms may be willing to participate in the network.

In total therefore, the network may have generated interest for an estimated 331 participants. At a threshold fee level of \$200 per annum, this rate of participation implies that annual revenues might be as high as \$66,200, an amount large enough to cover the estimated annual operating costs of the network. On the surface, this suggests that the network may be feasible in an economic sense.

However, as previously noted, the operational success of the network depends, to a great extent, on a large database of investor registrants relative to the database of entrepreneurs. Financial self-sufficiency in the long term and, ultimately, success is therefore a function of the

ratio of investors to entrepreneurs who are listed with the networking service. A pro-forma estimate of investors to entrepreneurs was computed two ways:

- on the basis of the total pool of both active and potential investors in Ottawa-Carleton; and,
- on the basis of the population of only those investors who are currently active in the marketplace.

The first method suggests that the pool of potential investors outnumbered the population of small technology-based or manufacturing firms by almost two to one. Alternatively, the second method revealed that the ratio of active investors to these types of firms is 0.24 : 1.

Extrapolation of the survey findings, with respect to the proportion of investors who may be interested in the network relative to the proportion of 'interested' entrepreneurs, did not change the above ratios. That is, under both methods the ratio of 'interested' investors to 'interested' entrepreneurs was 1.7 : 1 and 0.24 : 1, respectively. As outlined in Chapter Two, the New Hampshire VCN operates with three times as many investors as entrepreneurs. Although the results show that there may be adequate demand for the network to be financially self-sufficient, clearly, the ratio of investors to entrepreneurs implies that the network would not be practical.

The operational requirement for enough investors to support entrepreneurs' needs does not appear to have been met.

3.4 SUMMARY

Despite small samples, the response rates for both the informal investor survey and the entrepreneur survey were favourable, at 50% and 38%, respectively. A higher response rate for the investor survey was expected, as the referral system used to generate the investor sample tends to yield a disproportionate number of cooperative respondents.

The survey findings were reviewed and presented according to the research objectives and hypotheses of the study: investors' evaluation criteria; identification and assessment of communication channels; and, interest in a matchmaking network.

The sample of 25 investors reported 156 past investments totalling \$16.6 million over the last five years; they indicated an intention to invest a further \$2.8 million during the next two years. Investors in the survey concentrated their investments in the high-technology and manufacturing sectors, a practice which they appear to be continuing. Typically, they prefer to participate with other investors by forming consortia for risk capital investing. The sample demonstrated realistic expectations about the risk/reward potential on risk capital investments. Investment proposals were usually rejected because of a lack of confidence in the management of investee firms. Most investors tended to keep their investments close to home, although one-third of the sample did not anticipate placing any geographic restrictions on future investments.

Business associates and friends were found to be the predominant means of communication among investors. More than one-half of the entrepreneurs surveyed acquired information about potential sources of capital by conducting an active personal search. For both investors and entrepreneurs, business associates provided the most useful leads on investment opportunities.

Entrepreneurs were more dissatisfied than investors with the effectiveness of existing communication channels. Although the sample of entrepreneurs viewed informal investors as an important source of financing, more than 50% had experienced problems in raising adequate levels of capital for their firms. A majority of entrepreneurs surveyed felt that there was a shortage

of capital available to small technology-based firms.

Both investors and entrepreneurs expressed an interest in participating in a matchmaking network. The investor sample revealed a preference for a regionally-based network which would operate as a non-government, non-profit corporation. Entrepreneurs seemed to prefer a wider geographic scope for the network, and the confidentiality of the registrants in the network was seen as an important attribute. The sample of investors reported a preference for levying registration fees on entrepreneurs who listed with the network. Entrepreneurs felt that all registrants listed on the database of the network should be required to pay for the service. A threshold level, beyond which entrepreneurs lost interest in the network, was found to be at approximately \$200.

Three methods for measuring the demand for the matchmaking network in the informal investor community revealed that:

- the pool of investors in Ottawa-Carleton who were similar demographically to the sample of investors may be as large as 650;
- the investors surveyed were similar to their U.S. counterparts in terms of their characteristics and investment evaluation criteria. On the whole, Ottawa investors were more satisfied with the existing communication channels; and,
- active investors are visible members of the community in a social context. The population of active informal investors in Ottawa Carleton was estimated at 87 using statistical methods that were based on the investor sample selection process.

These results suggest that, while there may be a substantial pool of potential investors, there are few who are currently active in the risk capital marketplace.

The entrepreneurs surveyed represented rapidly expanding firms with an average age of 5 years. The sample of entrepreneurs was dominated by technology-based firms involved in high-technology manufacturing or software development. Previous studies indicate that the number of small firms in this sector is about 360.

The number of 'willing' participants was found to be approximately 330 which, at an annual registration fee of \$200, results in estimated revenues sufficient to cover annual operating costs. Although this suggests that the network may be economically feasible, the ratio of active

investors to small firms is estimated at only 0.24 : 1. Given the operational requirement for a large database of investors relative to entrepreneurs, these results did not have favorable implications for the practicality or the long term economic feasibility of a matchmaking network designed to service the Ottawa-Carleton region.

CHAPTER 4: SUMMARY, CONCLUSIONS, AND IMPLICATIONS

4.1 CONCLUSIONS ABOUT INFORMAL INVESTORS

The interpretation of the results presented in chapter three suggests that informal investors who are active in the Ottawa-Carleton region, a region characterized by technological-based firms, have characteristics similar to those informal investors from a variety of regions in the U.S., surveyed in previous studies. The twenty-five investors who took part in this study were found to be wealthy, sophisticated, and well-educated. They also tended to be experienced in the management of start-up situations, a characteristic shared with investors in New England, California, and the Sunbelt region in the United States.

Ottawa investors seem convinced that the management team in a young or start-up company makes the difference between success and failure. This opinion appears to apply universally to all players in the risk capital marketplace. In their study of one hundred venture capital companies in the U.S., MacMillan, Siegel, and Subba Narasimha (1985) found that the 'quality' of the entrepreneur ultimately determined the venture capital financing decision. Ernst and Whinney (1984) confirm that the most successful companies financed by venture capital companies in Canada have achieved outstanding financial results because of commitment, skill, and dedication on the part of management. The implication for entrepreneurs is clear; securing capital from risk capital investors, formal or informal, will depend largely on the skill and the commitment of the entrepreneur's management team.

The twenty-five investors surveyed seemed to hold realistic expectations regarding the outcome of their risk capital investments. By recognizing the large degree of dispersion in the performance of small high-growth companies, these Ottawa investors have demonstrated an appreciation of the risks associated with investing in the small business sector. These individuals expressed risk/reward expectations which were consistent with those of investors from the San Francisco Bay area (Krasner and Tymes, 1983); however they perceived less risk in an

hypothetical risk capital portfolio than did New England investors. The similarity between the risk perceptions of Ottawa investors and their California counterparts may, in part, be explained by a concentration of technology-based firms in both areas, and by what Wetzel (1985) refers to as the "silicon valley" phenomenon. According to this phenomenon, individuals in areas dominated by high-technology firms would perceive these firms to be less risky than would individuals from areas not dominated by the high-technology sector.

Results of this study indicate that Ottawa investors are inclined to invest 'close to home' and to maintain a limited involvement, relative to their U.S. counterparts, in the management of the firms in which they invest. Ottawa investors seem to place less emphasis on becoming actively involved in the day-to-day operations. Further evidence of a reluctance to maintain active involvement is provided by examining investment objectives of Ottawa investors regarding the extent of their ownership in investee firms. The investors in this sample tended to have higher amounts of capital committed to individual investments, than did U.S. investors, although they typically assumed minority positions in investee firms. It seems likely that the higher levels of capital are a consequence of the Ontario security legislation. While Ottawa investors seemed to have higher standards than U.S. investors, as implied by the higher rate of rejection of investment opportunities, the ratio of investment opportunities to investors may be higher here.

The empirical findings of this study are supportive of the notion that informal investors are found in clusters linked by informal networks of friends and business associates. Three of the research findings imply that the bonds between informal investors are strong:

- an examination of investors' criteria and objectives has revealed a strong preference for participating in investment consortia consisting of two or more individual investor partners;
- the majority of investors were found to rely on their friends and business associates for information about potential investment opportunities; and,
- the sample selection process demonstrated investor awareness of other members of the informal investment community.

Overall, a comparison of investors' past investment experience with their intentions for the future has indicated that the sample of investors do not plan to alter the objectives and criteria which they have employed in the past for evaluating investment opportunities. Thus, the behavior of investors in Ottawa may be expected to be relatively stable. Although they plan to make fewer investments than they have in the past, the future activity of the 25 investors interviewed here may result in the injection of more than \$1.5 million of risk capital in technology-based firms located within 300 miles of Ottawa-Carleton within the next two years.

Together, these findings do not support the widespread myth that Canadians are less likely than Americans to invest in risky ventures. Although the investors who participated in this study appeared to maintain higher standards than their U.S. counterparts, their behavior did not indicate an undue concern with risk. The Ottawa investors expressed expectations about the performance of risk capital investments which were consistent with most of those of the U.S. investors surveyed by other researchers. Moreover, the investors who participated in this survey were more optimistic than the institutional venture capital community about the percentage of "winning" risk capital investments and more pessimistic about potential "losers". These comparisons illustrate that, while Ottawa investors recognize the risks inherent in investing in young or start-up companies, they do not appear obsessed with those risks.

On the whole, the sample of Ottawa investors has demonstrated a realistic yet sophisticated appreciation of risk capital investing. The resulting implication is that there does not seem to be any need to increase the level of investor protection currently afforded in the Ontario securities legislation. By extension, these findings lend support for considering the adoption of a less restrictive approach similar to the "accredited investor concept" in Regulation D of the U.S. legislation governing risk capital investment. Investigative attention may be profitably directed toward assessing the degree of investor sophistication across the province of Ontario. According to the results of this study, the Ontario government's proposal to enhance investor protection by raising minimum seed capital investment requirements may not be necessary.

Despite strong plaudits from the small business sector, two recent federal government initiatives for stimulating equity investment in this sector do not seem to have had a significant impact on the investment decisions of investors surveyed in Ottawa. Only two of the twenty-five investors in the sample anticipated directing a portion of their *RRSP*'s to small ventures. One possible reason for the reluctance of investors to convert *RRSP* investment to informal risk capital investment is an inconsistency in the objectives for making these two types of investment. Informal risk capital investments are viewed as offering a potential for large capital appreciation at a commensurate level of risk. On the other hand, *RRSP*'s are typically held as less risky investments to provide for a relatively stable future income. Given that the informal investors already hold risky investments, it may not be desirable for them to convert less risky *RRSP* funds, thereby increasing the risk of their total investment portfolio. This result suggests that further remedial measures may be required to unlock possible capital pools available to small businesses.

A select few of the investor respondents reported that the lifetime personal capital gains tax exemption of \$500,000 had in any way influenced their decision to invest in young or start-up firms. Although most of the investors surveyed expected to receive return on their risk capital investments as capital gains, this initiative does not appear to be an important consideration in the investment decision. It is conceivable that, by being active in the risk capital marketplace, some of these investors may have exhausted the full \$500,000 capital gains exemption. In addition, a couple of the investors expressed concern that the tax treatment of capital gains might change in light of federal tax reform initiatives. Regardless, this result does not imply that the stimulus provided through the capital gains exemption is not important for those investors who are less active in the risk capital marketplace than those who participated in this study.

4.2 CONCLUSIONS ABOUT ENTREPRENEURS

It was found that the sample of entrepreneurs representing small, rapidly expanding technology-based firms in Ottawa had raised capital primarily from personal resources, friends, and informal investors. Institutional venture capital firms, governments, and other financial intermediaries did not generally play a role.

Informal investors represented the single most important source of external risk capital for the sample of entrepreneurs in this study. In addition, this source of capital was generally rated as being better able to serve the financing needs of small high-growth firms than were other sources. The relative importance of the informal risk capital segment of the marketplace is consistent with the findings of Wetzel and Wilson (1985) concerning high growth firms in New England. Many of the entrepreneurs who participated in this study regarded informal investors as an useful alternative to institutional sources of risk capital and have succeeded in securing investment from informal investors. Given that most of the entrepreneurs surveyed indicated a preference for approaching informal investors for future financing requirements, it appears that the importance of this source of capital will likely remain at a high level. This research also revealed that entrepreneurs seemed obliged to rely on their own searches to uncover potential sources of risk capital.

With respect to recent financing experiences, the survey findings suggest that rapidly growing companies in the high-technology sector:

- are experiencing problems securing adequate levels of risk capital;
- believe that there is a shortage of risk capital available to small high-technology firms in the Ottawa-Carleton area;
- are experiencing operational problems (i.e. cash flow problems and a necessity to divert short-term financing to long-term needs) which they attribute to the difficulty in raising risk capital; and,
- perceive that investors lack the technical expertise to evaluate technology-based firms and their potential as profitable investment opportunities.

These findings imply that financing problems underlie a variety of other operational problems. As a result, it is not surprising that the entrepreneurs in this study reported committing a substantial amount of their time to the search for sources of risk capital. As the sample of entrepreneurs in this study represented firms which were successful in surviving to the point of being interviewed, these results may understate the extent of financing difficulties experienced by the small-business sector. The Ontario Ministry of Industry, Trade and Technology (1986) estimates that one-third of small firms close within five years of opening. Further, Ministry statistics show that the most frequent cause of failure is bad management and a lack of working capital (Ontario Ministry of Industry, Trade and Technology, 1986).

4.3 OBSERVATIONS ON THE INFORMAL RISK CAPITAL MARKETPLACE

On the surface, perceptions of the entrepreneurs in this study support the notion of capital market 'gaps' or shortages in supply relative to demand for risk capital financing at a cost commensurate with risk. Entrepreneurs believe that there is a shortage of risk capital available to small, technology-based firms, at least in the Ottawa-Carleton region. Their belief is confirmed by a sensed obligation to commit significant amounts of managerial time in pursuit of financial resources. The time-consuming search for capital can represent a serious handicap for small, growing firms. Typically, these firms suffer a shortage of both managerial time and skill because the entrepreneur usually assumes all management functions in the early stages of corporate growth (Poapst, 1986). According to one entrepreneur in this survey, "... we [entrepreneurs] are often caught in a catch-22 situation. . . I can't get financing without demonstrating sales potential yet I can't chase down prospective sales opportunities if I spend all of my time trying to locate and negotiate with potential investors. . . ."

Relative dissatisfaction among entrepreneurs with the existing marketplace fuels their perceptions that risk capital allocation is an haphazard process with a certain element of luck. To the entrepreneurs in this survey, one of the most serious impediments in securing risk capital is a lack of understanding on the part of investors of the technology employed by the firm or of its products and services.

A closer examination of the risk capital market, and in particular the investment record of informal investors, suggests that capital gaps may be more apparent than real. Although this study did not uncover a large number of active informal investors in Ottawa, these individuals represent a sizable pool of capital relative to the pool of capital supplied by the institutional venture capital community. The twenty-five investors who participated in this survey had been involved in risk capital investments totalling almost \$17 million during the last five years. In comparison, professional venture capitalists are reported to have placed approximately \$40 million

in start-up companies across Canada over the same time period (ACVCC, 1986). Thus, the size of the pool of informal risk capital in Ottawa-Carleton alone has been equivalent to almost 42% of size of the pool of institutional risk capital in Canada! This compares with Wetzel's estimates that the pool of informal venture capital exceeds, in the U.S., the total placements of institutional venture capital companies (Wetzel, 1983).

Most of the investors in this survey preferred to invest in the high-technology sector; almost all of the firms were technology-based. Despite entrepreneurs' perceptions that a capital gap exists, these individuals represented firms with relatively low debt/equity ratios. Moreover, the entrepreneurs in this study received, on average, one firm offer of risk capital financing per year. Almost one-half rejected those offers for reasons other than financing terms. Given that there is a pool of active informal investors in Ottawa, it seems incongruous that financing continues to present such difficulty to the small firms located in Ottawa. This research provides two alternative explanations.

First, the various methods for estimating the size of the investor population did not reveal a large number of active investors in the Ottawa area. Although these investors have invested a considerable amount of capital in the high-technology sector, there simply may not be enough of them to support the capital needs of rapidly growing technology-based firms located in the region. The twenty-five investors in this study anticipated investing an additional \$1.5 million in young or start-up firms over the next two years. This represents an increase of only 10% over and above what they have already invested during the previous five year period. Their intention to make fewer investments in the future may be a signal that the 'well' of capital available from these individuals is drying up. However, the empirical results do suggest that there may be as many as 850 individuals in Ottawa who are similar (demographically) to active informal investors. If there is in fact a shortage of informal investors in the area, it may be necessary to encourage potential investors to become more active in the risk capital marketplace.

The nature of measures designed to provide incentive for risk capital investment is discussed at length in the first chapter. Historically, the implementation of these measures has been facilitated by public sector agencies in the form of tax shelters and/or loan guarantees. In addition to the shortcomings of past efforts to increase risk capital supply as articulated in the first chapter, the implications of this study suggest that the recent initiative to free-up *RRSP* funds to increase the pool of risk capital may not be effective. In order to 'activate' inactive investors and to foster individual participation in the risk capital market, it may be necessary to supplement tax-based incentives with informational programs. Translating investment intentions into actual purchases may rest on increasing the awareness of the role of portfolio diversification, and on how informal risk capital investments can be a part of an investment portfolio without the assumption of unnecessarily high risks. In this way, any losing investment would not dominate the total portfolio return. Another possible means for activating potential investors could involve the encouragement of investment clubs or consortia, a preferred investment option for active investors, at least in the Ottawa-Carleton area. Encouragement of investment consortia may take the form of tax relief to protect against downside risk. However, if investment consortia were encouraged to hold diversified portfolios, such measures might not be necessary.

In addition to a shortage of active investors in Ottawa, this research also suggests that communication between investors and entrepreneurs is ineffective, for example, investors and entrepreneurs appear to hold different perceptions about what constitutes 'quality' investment opportunities. Investors typically reject proposals when they are not confident that the management of the firm have the skills necessary to ensure the firm's survival and success. The entrepreneurs in this survey believed that they had been turned down by potential investors because the investors were unfamiliar with the technology employed by the firm. Further evidence of a gap in the expectations of investors and entrepreneurs is provided in the finding that almost 50% of financing deals rejected by entrepreneurs were refused for reasons other than financing terms. Unless most of the entrepreneurs who participated in this survey represented

firms of low quality, this result implies that there is a real communication breakdown between risk capital market participants.

Further evidence of poor communication is provided by the entrepreneurs themselves. When asked directly about their satisfaction with existing information networks, most entrepreneurs expressed some dissatisfaction, while none were completely satisfied. Given that the majority of entrepreneurs spend much of their time searching for appropriate sources of financing, they appear to lack an awareness of potential capital sources. It was not surprising, therefore, to find that most entrepreneurs were interested in a more efficient means of accessing informal investors.

Informal investors in this study were divided on their opinions of the effectiveness of communication channels which currently link themselves with prospective investment opportunities. As many investors were satisfied as they were dissatisfied, although most investors were interested in a more systematic method for uncovering potential investments.

A prominent reason for dissatisfaction with the current marketplace among both investors and entrepreneurs relates to the limited scope of existing information networks. Ineffective communication is manifested in the following remarks provided by the respondents in this study:

- "... without a central pooling of information about investment opportunities, only a subset get brought to my attention. . . how do I know whether I'm missing out on some really worthwhile proposals?"
- "... the communication channels currently in place are such that any matching of investors and entrepreneurs [which may actually occur] . . . is a 'hit-and-miss' process with a certain element of luck. This doesn't automatically imply that the most deserving of ideas actually get financed. . . "

Currently, business associates represent the single most important catalyst for bringing opportunities to the attention of both investors and entrepreneurs. While accountants, lawyers, and bankers attempt to play a matchmaking role, they are not perceived as critical investment information sources. Informal investors in Ottawa were found to be closely linked with each other

through informal networks of friends and business associates, as were their U.S. counterparts. Often the entrepreneurs actively searched for leads on potential sources of risk capital themselves. As more entrepreneurs were dissatisfied with the current situation than were informal investors, it seems likely that the entrepreneurs have not been successful at tapping into clusters of investors, a finding suggested by the preliminary work of Navarre and Janoff (1986). Solving the problems of ineffective communication may involve formalizing the information networks in order to facilitate investor and entrepreneur introductions, an idea proposed and implemented by Wetzel (1983) in New Hampshire.

In conclusion, the research findings suggest that the informal risk capital marketplace is characterized both by a shortage of active investors and by ineffective communication networks. Evidence of both problems in the market precludes the acceptance of the hypothesis that financing difficulties are predominantly the result of ineffective communication channels. In Ottawa-Carleton, these difficulties appear to be the culmination of too few investors and poor communication. The implications of this environment on the feasibility of establishing a systematic referral service in the Ottawa region are discussed in the following section.

4.4 IMPLICATIONS FOR FEASIBILITY

The previous conclusions and observations on the current informal marketplace, as well as its participants, provide considerations which are important for assessing the feasibility of establishing a systematic regionally-based matchmaking network in Ottawa-Carleton. In addition, the survey findings have direct implications for the success of the *COIN*, the matchmaking network currently operating across Ontario.

The finding that entrepreneurs rely on an active personal search as the most important means of raising risk capital is in itself a statement about the operation of existing communication channels. The entrepreneurs surveyed for this research perceive the search for capital as an onerous, haphazard task. The majority were frustrated following the traditional paths to investors through accountants, lawyers, and friends. It was not surprising that in this environment, almost three-quarters of the sample of entrepreneurs were interested in participating in a formal matchmaking network. Extrapolation of the results of the survey to the population of technology-based firms in Ottawa provided an estimate for the demand for such a network as high as 265 firms. The hypothesis that entrepreneurs would be willing to participate in the network appears to hold in the Ottawa region.

On the investor side, this research has revealed the significance of the informal network of business associates in the referral process. Although investors in the survey were neither satisfied nor dissatisfied with existing information channels, most were interested in participating in a systematic referral service which would direct investment opportunities to their attention. On the basis of this finding, it was possible to accept the hypothesis that local investors would be willing to participate in the referral service. Extrapolating the results to the estimated population of active informal investors provided a point estimate of investor demand for the service of 66 individuals.

Extending the survey results to the Ottawa-Carleton region revealed that there may be approximately 330 potential participants for the matchmaking network. Given annual costs of

about \$60,000 for operating such a network, it was predicted that financial self-sufficiency, or economic feasibility, would be attainable if registration fees were to be set at \$200 per annum. Overall, it appeared that the level of community demand for formalizing the process of matching investors and entrepreneurs was sufficient for economic feasibility.

Despite demand estimates of 330 potential participants, the empirical findings suggest that it may not be practical to establish the network in Ottawa at this time. According to Wetzel (1984), the accumulation of a large investor database was critical to the success of the VCN in New Hampshire. At a minimum, the establishment of the VCN required an initial database of 200 investors, and a ratio of three investors to every entrepreneur registrant. This requirement is not surprising given that most successful firms have relied on a number of successive investments to finance corporate growth (Toronto Stock Exchange, 1980). The results of three methods for assessing the size (and hence, the demand for the network) of the informal investor population suggest that there would not be enough local investors to satisfy entrepreneurs' requirements.

The failure to identify a large potential investor database implies that the mere establishment of a matchmaking network in Ottawa-Carleton may not provide a major contribution to the efficiency of the informal market for risk capital. Nonetheless, there are at least two social benefits which may still argue for its implementation. First, Wetzel (1985) purports that the establishment of a systematic referral service may discourage worthy entrepreneurs from prematurely abandoning their search for capital. Second, it has been seen that any encouragement of entrepreneurial activity creates an opportunity for job creation, technological innovation, and economic development (MacDonald, 1985). Given the social benefits to the community and the apparent demand on the part of entrepreneurs in the Ottawa region, it seems appropriate to direct effort toward encouraging investor participation in a network. Developing investor demand will likely involve tracking down the more 'invisible' informal investors in the Ottawa area, if they exist. This is precisely the problem facing small firms in the region! Among other ideas, in order to 'beat the bushes' for identifying a sufficient investor database, it may be

necessary :

- to activate the 'inactive' yet potential investors in the Ottawa area. It is conceivable that the services of a formal matchmaking network may provide some incentive to potential investors for getting involved in the low end of the equity market;
- to involve local professional intermediaries in the search for potential investors. This study, as well as those completed previously in the U.S., have found that local professionals can facilitate initial contact with clusters of informal investors (Wetzel, 1985); and,
- to initiate heavy promotion for the services of the network.

In addition to these suggestions for soliciting investor participation in the network, this research provides some guidelines for its structure and implementation. These guidelines were developed on the basis of the responses to the questionnaires administered to samples of investors and entrepreneurs. Although the level of interest in a network was not a strong function of geographic scope, operating structure, or confidentiality, the individuals who participated in this survey had certain preferences for the attributes of a matchmaking network. Respecting their stated preferences may act to encourage a higher participation rate in a network. Attention to investors' and entrepreneurs' preferences may also be useful in assessing the potential contribution of the *COIN* to the informal market for risk capital in Ottawa-Carleton. In summary, the sample of investors and entrepreneurs indicated the following preferences:

- 1) The informal investors who participated in this study tended to invest 'close to home', a tendency reflected in their favourable attitude toward a regionally-based network. If this attitude is widespread among investors, the *COIN* may find its regional offices operating as autonomous units.
- 2) Confidentiality of participants in the network may be an important attribute. The entrepreneurs questioned in this survey felt that their identity should remain anonymous until serious investors expressed an interest in pursuing negotiations with their firms. It seems that the emphasis on entrepreneur confidentiality was to protect against 'corporate espionage' and to prevent other registrants on the network from stealing their business ideas.
- 3) Few respondents expressed a favourable disposition toward a government-run matchmaking network. This implies that the success of the *COIN* may depend on strong support from local professional intermediaries, Boards of Trade, and economic development agencies.

- 4) The results of this survey suggest that entrepreneurs may view the administration of registration fees as a means for ensuring the integrity of investors and entrepreneurs listed on the network's database. This finding supports the hypothesis that entrepreneurs perceive the services of a matchmaking network as valuable. However, according to respondents in this study these fees should not exceed \$200 per annum. It may be desirable to waive registration fees for investors at the initial stages of implementation in order to offer an inducement to investors. Experience with the VCN shows that enrollment dropped when investors were required to pay an annual listing fee to register on the database (Logan, 1986). The investors who took part in this survey did not appear to place as high a value as did entrepreneurs on the services of a formal matchmaking network. Presumably this result can, in part, be explained by higher satisfaction rates for investors with the informal communication networks.

In sum, this research provides a preliminary investigation of the informal market for risk capital in Ottawa-Carleton. It presents an initial discussion of:

- the characteristics of informal investors, their investment evaluation criteria and objectives;
- the role of informal investors in the financing of small, technology-based firms ; and,
- the communication channels which link investors and entrepreneurs.

To the extent that this study represents one step toward furthering the current understanding of the informal risk capital marketplace, it raises a number of issues which remain to be resolved. To conclude this chapter, the final section provides a discussion of directions for future investigative work. Some of the suggestions arise from recognized limitations of this study, while others are a consequence of the research findings.

4.5 DIRECTIONS FOR FUTURE STUDY

Although this study provides some answers about the operation of the informal risk capital marketplace, it also raises a number of issues and questions deserving further exploration and analysis. In his review of informal risk capital research in the U.S., Wetzel (1985) identifies nine broad areas which have yet to be addressed in the literature. The following discussion is intended to complement, rather than to reiterate, his suggestions.

In the U.S., it has been recognized that the low end of the equity market does not function in an uniform fashion across all regions (Wetzel, 1985). Krasner and Tymes (1983) have identified what appear to be some important differences in the perceptions of investors active in the San Francisco Bay area relative to those of investors who are located in other parts of the U.S. Even though no formalized referral service is provided in the San Francisco Bay area, 61% of the investors interviewed were satisfied with existing channels of communication. This compares to 28% of New England investors who pronounced themselves satisfied according to Seymour and Wetzel's survey (1981). It is worth noting that the San Francisco Bay area, like Ottawa-Carleton, is a region in which a significant proportion of small high-growth enterprises are technology-based.

While the small-business financing problems identified exist in one form or another throughout many regions in Canada, this study concentrates on the Ottawa-Carleton area and therefore may be limited in the degree to which results may be generalized to other regions across the country. Given regional differences in the perceptions of investors in the U.S., it seems likely that investors from regions in Canada with less concentration in the high-technology sector may exhibit perceptions which are different from those found here. As a result, one possible direction for future study would be to broaden the geographic scope of this survey and to involve investors and entrepreneurs from other Canadian regions in order:

- to investigate whether there are regional differences in the characteristics of investors, their investment objectives, and their criteria;
- to determine whether there are regional differences in the nature or effectiveness of communication channels linking investors and entrepreneurs;

- to conduct a more comprehensive comparison of Canadian informal investors to their U.S. counterparts; and,
- to examine the Canadian informal risk capital marketplace in terms of operational and allocational efficiency, its size, and its relative importance compared to the institutional segment of the venture capital market.

A second area worthy of future exploration relates to the informal networks linking investors and clusters of investors with each other. While this study provides evidence that the bonds between Ottawa investors appear to be strong, the scope and nature of the data collection instrument and, hence, the information obtained from respondents, precluded an extensive examination of the strength of investor interaction. Throughout the personal interviews it became apparent that this interaction forms an important part of informal risk capital investing decisions. Any attempt at modelling informal investment decision making therefore could hardly ignore the bonding which takes place between investors. The investigation of the social interaction or group dynamics among investors may assist in determining whether certain investors are more prominent in terms of influencing the investment decisions of other investors. Further understanding about the nature of this interaction may also enable a more structured approach to selecting appropriate statistical methods for estimating the extent of the informal investor population.

One of the limitations of this study provides another opportunity for future research. The market for risk capital is made up of three segments: the public equities markets; the professional venture capital market; and, the informal investor market (Wetzel, 1983). Because this study involved a survey of the third of these segments, it provided a very focussed view of such a diverse marketplace. A more comprehensive analysis of raising risk capital in Canada could integrate research relating all three segments of the risk capital marketplace. An assessment of the degree of competition between classes of risk capital investors is one possible extension.

Finally, the actual establishment of a matchmaking network in itself constitutes an experiment in mobilizing informal risk capital, similar to the VCN experiment currently underway in

New England (Wetzel, 1984). Thus, the *COIN* can be viewed as an experimental effort with the potential for providing observations about the informal risk capital marketplace in the province of Ontario. As described by Wetzel,

"... [the creation of a formal network] ... will test the hypothesis that the existing system for generating and disseminating information about risk capital opportunities can be improved in a cost-effective manner. ..." (Wetzel, 1984, p. 27)

In effect, the *COIN* provides the opportunity to test this hypothesis in Ontario!

APPENDIX 1
THE SECURITIES ACT

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When a corporation raises money - whether by the issue of shares to investors or by the borrowing of money - it is necessary to ensure that the transaction complies with the Securities Act of Ontario (the "Act"). This Act does not just apply to large publicly-held corporations whose shares are traded on a stock exchange, but also affects many transactions carried out by small and medium-sized businesses.

The word "security" is very broadly defined in the Act. It is not restricted to shares, but also includes options, bonds, debentures, other evidence of indebtedness, certain annuity and investment contracts, and oil or natural gas royalties or leases, among others. Once it has been determined that a "security" is being dealt with, then the Act must be complied with. The Act requires that a person who trades, underwrites or advises on securities must be registered under the Act, unless specifically exempted. Furthermore, any distribution of securities requires that a prospectus be filed with the Ontario Securities Commission, unless an exemption exists.

It is an offence to trade in any securities without complying with both the registration and prospectus requirements of the Act, unless an exemption exists in the Act, or the Commission grants an exemption order. This memorandum is intended to provide a general overview of the impact of the Act on small and medium-sized businesses. Securities legislation is extremely complex and for specific problems or questions, you are advised to obtain professional advice.

The Private Company Exemption

The Securities Act specifically exempts "private companies" from its requirements. A "private company" is defined in the Act as a company whose articles of incorporation contain

the following restrictions:

1. The right to transfer shares is restricted;
2. The number of shareholders, exclusive of employees, is limited to not more than 50; and
3. Any invitation to the public to subscribe for shares is prohibited.

These provisions are generally included in the incorporating documents of most smaller companies. The most difficult criterion to meet is the third. The question of who is to be considered a member of the "public" is a question of fact, and it is often difficult to give a definitive answer as to whether a particular prospective purchaser is considered to be a member of the "public". The intent of the Act is to protect people who are not knowledgeable about the investment they are making. Generally, persons who are closely associated with the corporation or its current shareholders or directors, or who are sophisticated investors, are not considered to be members of the public. Where there is any doubt as to whether or not a person is a member of the public or for purposes of securities legislation, the matter should be fully canvassed and the relationship of the investor to the corporation should be fully documented.

Exemptions Under the Act

There are a number of other exemptions in the Securities Act which a corporation can take advantage of in issuing securities, if it does not come within the definition of a private company. Unless an exemption is found, or an exemption order obtained from the Ontario Securities Commission, then a prospectus must be filed and approved by the Ontario Securities Commission before

any shares can be traded or sold. A prospectus is a lengthy document that is both time-consuming and expensive to prepare. Even where an exemption is used for the issuing of shares, certain restrictions and minimum holding periods for the shares are imposed by the Act. The Act is designed to ensure that before shares can be freely traded the corporation should become a "reporting issuer" whereby information is publicly available so that investors can assess their investment.

Among the more common or useful exemptions for small business are the following:

Private Placement

This exemption enables an issuer of securities to raise funds quickly without the necessity of preparing and qualifying a prospectus. In order to take advantage of this exemption, it is necessary that the purchaser of the securities invest at least \$97,000.00. A report of the trade must be made to the Ontario Securities Commission within 10 days of the trade. When a corporation provides an offering memorandum describing the offering (which may, in some instances, be required), the purchaser is given a contractual right of action for damages or rescission in the event there is any misrepresentation in the offering memorandum.

Seed Capital Exemption

The seed capital exemption allows a company to make a broader distribution of its securities. However, there are a number of specific requirements, all of which must be met in order to qualify for the exemption. Basically, an invitation to invest can be made to no more than 50 prospective purchasers, of whom no more than 25 may actually invest. The person investing

must be reasonably informed, or have received competent investment advice. Currently, the seed capital exemption can only be used once during the lifetime of the corporation.

Isolated Trade

There is a prospectus and registration exemption in the Securities Act for an issuer who makes "an isolated trade ... in a specific security", provided that such a trade "is not made in the course of continued and successive transactions of a like nature". The exemption appears useful, but because of its very specific requirements, it is one of the most difficult to apply in any given factual situation.

Other Exemptions

Certain other exemptions may also be used by an issuer of securities. For instance, certain purchasers are granted exempt status by the Ontario Securities Commission. In addition, certain financial institutions can be issued shares or other securities without the necessity of filing a prospectus. Shares can also be issued as partial consideration for the acquisition of assets that have a fair market value of at least \$100,000.00. Furthermore, securities can be issued as a stock dividend, or in connection with the reorganization or winding up of a corporation. Another possibility is to issue shares to employees, provided that there is no inducement to the employees that they buy the shares if they wish to retain their jobs.

Going Public

At some point in a corporation's development, consideration needs to be given to the advisability of "going public". This is usually done when the corporation has reached a certain stage of growth where it needs substantial investment, and wishes to make

its shares available to the general public, whether they are traded over the counter or listed on a recognized stock exchange. In this event, the private company restrictions in the incorporating documents of the corporation will need to be removed, and the corporation will have to become a reporting issuer within the meaning of the Act. This gives rise to disclosure and prospectus requirements, insider trading reports, and the release of timely disclosure of material facts and material changes. The procedure of becoming a public company is lengthy, expensive, and complex, and should be carefully discussed with lawyers, accountants, investment dealers, and other advisors.

Conclusion

The main point to remember is that whenever shares or other securities are issued by any corporate entity, it is necessary to consider the Securities Act, and to ensure that either an exemption is applicable or an exemption order is obtained from the Securities Commission. In the event that this is not done, problems may ensue, including the possibility of fines and penalties. The implications of the Securities Act should be carefully considered whenever shares are being issued, or other securities being dealt with.

This brief overview of the Securities Act is, of necessity, very general in nature. There is no substitute for direct and specific advice from qualified counsel, and this is particularly true in the securities area. Raising money is always difficult, but finding an investor or lender is only part of the task; the transaction must also be structured in such a way as to comply with the applicable securities legislation.

APPENDIX 2

SAMPLING PROCEDURES

A. POPULATION DEFINITION

The investor population is defined as individuals in households or companies that have invested in young firms on their own account within the last five years. According to previous U.S.-based research they are typically wealthy, well-educated individuals often found in clusters linked by friendship and business networks and they often have had previous experience in the start up of new ventures.

Young and start-up companies are accessed through entrepreneurs. The entrepreneur population is defined as the principals or founders of young firms in Ottawa-Carleton that do not qualify for access to professional venture capital or public equities markets.

B. SAMPLING FRAME

Currently, there are no available sampling frames that represent all elements of the two populations as described above. To commence, a directory of possible investors and entrepreneurs was drawn up with the cooperation of the Ottawa-Carleton Board of Trade, the Research Centre for High Technology Management, and other local professionals. Using a referral system for the generation of candidate respondents, the directory was built as the data collection process proceeded. This directory contained the name, business address, and telephone number of each potential respondent.

C. SAMPLING UNIT

The sampling units comprised the names, addresses and telephone numbers of informal investors and entrepreneurs in the Ottawa-Carleton area.

D. SAMPLING METHOD AND PLAN

The recruitment procedure to generate subjects for this study followed a 'referral system'. There are four basic steps for using a referral system (Greeno, Sommers, and Haines, 1976). As a first-step, subject specifications were discussed with members of the Ottawa-Carleton

Board of Trade, local professional groups (lawyers, accountants, and bankers), and the Research Centre for High Technology Management. These groups were then asked to provide a listing of potential subjects to complete the second step of the sampling method. In the third step, potential subjects were screened according to the criteria outlined in Section A to determine their suitability for the study. Suitable subjects were asked to participate in the survey. Finally, the subjects surveyed were asked to nominate other potential candidates for future study. This final step effectively increased the subject inventory. This procedure was also used to estimate the size of the underlying investor population.

Given that "typical" investors and entrepreneurs were thought to be similar demographically, as well as in terms of attitudes, interests, and personality, the referral system for sample selection offered many advantages. It was used to generate a relatively random sample given the underlying population exhibits homogeneous lifestyles and attitudes. It was an economical and convenient method for sampling since the size of the underlying population was unknown. In addition, the referral system tends to generate a lower level of non-response (Greeno et al. 1976).

E. SAMPLE SIZE

The traditional methods for determining sample size usually require the prespecification of some population parameters. Given the uncertainty of the investor and entrepreneur populations, it was not possible to estimate population parameters a priori.

**APPENDIX 3 A
INVESTOR QUESTIONNAIRE**

**A SURVEY OF THE

INFORMAL RISK CAPITAL MARKET
IN THE OTTAWA-CARLETON AREA**

Conducted by:

**Dominique Short, Graduate Student
Master's of Management Studies Programme
School of Business
Carleton University
Ottawa, Ontario
K1S 5B6**

In Cooperation with:

The Ottawa-Carleton Board of Trade

Fall 1986

For Editor's Use Only
Sequence # C1-3 _____

Part A- The following questions are designed to measure the extent and nature of past risk capital investments in young or start-up firms. For purposes of this questionnaire, risk capital is defined as equity or equity-type capital for young or start-up companies.

1. Within the past five years, how many risk capital investments have you made ?

_____ C4-5 _____

2. Of the investments reported in question #1, how many fell in each of the following size categories?

	# of investments
1) under \$10,000	C6-7 _____
2) \$10,001 - \$24,999	C8-9 _____
3) \$25,000 - \$49,999	C10-11 _____
4) \$50,000 - \$99,999	C12-13 _____
5) \$100,000 - \$249,999	C14-15 _____
6) over \$250,000	C16-17 _____

If over \$250,000 please specify approximate amount for each investment:

1)\$ _____
2)\$ _____
3)\$ _____

C18-21 _____
C22-25 _____
C26-29 _____

3. Of the investments reported in question #1, how many fell in each of the following categories?

	# of investments
1) Retail trade	C30-31 _____
2) Wholesale trade	C32-33 _____
3) Manufacturing-High Technology products	C34-35 _____
4) Manufacturing-Industrial products	C36-37 _____
5) Manufacturing-Consumer products	C38-39 _____
6) Service	C40-41 _____
7) Construction/Real Estate	C42-43 _____
8) Finance/Banking/Insurance	C44-45 _____
9) Transportation	C46-47 _____
10) Natural Resources	C48-49 _____
11) Other (please specify)	C50-51 _____
_____	C50-51 _____

4. Of the investments reported in question #1, how many fell in each of the following geographic categories?

	# of investments
1) within 10 miles of your home or office	C52-53 _____
2) beyond 10 miles but within 50 miles	C54-55 _____
3) beyond 50 miles but within 300 miles	C56-57 _____
4) beyond 300 miles	C58-59 _____

If beyond 300 miles, please specify how far (in miles)

C60-63 _____

5. Of the investments reported in question #1, in how many cases did the total risk capital financing involve other types of investors besides yourself who also put up risk capital?

	# of investments
1) other individuals	C64-65 _____
2) venture capital firms	C66-67 _____
3) public economic development agencies (e.g. FBDB)	C68-69 _____
4) Small Business Development Corporations (SBDCs)	C70-71 _____
5) other (please specify)	C72 _____
_____	C72 _____

6. Of the investments reported in question #1, in how many cases did your personal involvement with the firm fall in the following categories?

	# of investments
1) none, other than reviewing periodic reports and attending stockholder meetings	C1-2 _____
2) representation on the Board of Directors	C3-4 _____
3) provide consulting help as needed	C5-6 _____
4) work part-time with the firm	C7-8 _____
5) work full-time with the firm	C9-10 _____
6) other (please specify) _____	C11-12 _____

7. Of the investments reported in question #1, in how many cases did your immediate or potential voting control fall in the following categories?

	# of investments
1) under 10%	C13-14 _____
2) 10% - 25%	C15-16 _____
3) 26% - 49%	C17-18 _____
4) 50%	C19-20 _____
5) over 50%	C21-22 _____

8. How would you describe the performance of your investments in young or start-up firms? For instance, how many of those investments reported in question #1 fell in each of the following performance categories?

	# of investments
1) performed substantially above expectations	C23-24 _____
2) performed moderately above expectations	C25-26 _____
3) performance approximately met expectations	C27-28 _____
4) performed moderately below expectations	C29-30 _____
5) performed substantially below expectations	C31-32 _____
6) too soon to tell	C33-34 _____

9. Would you invest in a young or start-up company again?

- 1) yes _____ 2) no _____

C35 _____

Why? _____

C36 _____

C37 _____

10. Considering your total personal assets, what percentage of these assets is represented by your risk capital investments in young or start-up firms?

(check one)

- 1) under 5% _____
- 2) 5% - 10% _____
- 3) 11% - 25% _____
- 4) 26% - 50% _____
- 5) more than 50% _____

C38 _____

11. In your opinion, what percentage of your personal assets invested in young or start-up companies is reasonable?

C39-41 _____

12. Considering your personal net worth (total assets less liabilities), what percentage of your net worth is represented by your risk capital investments in young or start-up firms?

(check one)

- 1) under 5% _____
- 2) 5% - 10% _____
- 3) 11% - 25% _____
- 4) 26% - 50% _____
- 5) more than 50% _____

C42 _____

13. In your opinion, what percentage of your net worth invested in young or start-up companies is reasonable? _____

C43-45 _____

14. How many risk capital investment opportunities did you seriously consider but reject during the past five years? _____

C46-47 _____

If none, skip to Part B of the questionnaire

15. Of the rejected investment opportunities you reported, what was/were the principal reason(s) you declined to invest?

(check one or more as appropriate)

1) unfamiliar with the technology or the nature of the investment

C48 _____

2) market potential insufficient

C49 _____

3) not convinced of managerial ability to succeed/ lack of
confidence in management

C50 _____

4) unsatisfactory risk/return ratio

C51 _____

5) inadequate or unsatisfactory business plan

C52 _____

6) other (please specify) _____

C53 _____

Part B- The following questions are designed to measure the extent and nature of investors' objectives for future risk capital investments in young or start-up companies. Remember that a risk capital investment is defined as an equity or equity-type investment in a young or start-up company.

1. During the next two years, how many risk capital investments in young or start-up companies would you like to add to your portfolio?

(check one)

- 1) one _____
 2) two or three _____
 3) four to six _____
 4) seven to ten _____
 5) more than ten _____

C54 _____

2. Of the investments reported in question #1, how many will fall in the following size categories?

	# of investments
1) under \$10,000	C55-56 _____
2) \$10,001 - \$24,999	C57-58 _____
3) \$25,000 - \$49,999	C59-60 _____
4) \$50,000 - \$99,999	C61-62 _____
5) \$100,000 - \$249,999	C63-64 _____
6) over \$250,000	C65-66 _____

If over \$250,000 please specify approximate amount for each investment:

1) \$ _____	C67-70 _____
2) \$ _____	C1-4 _____
3) \$ _____	C5-8 _____

3. Of the investments reported in question # 1, in how many cases will you demand voting control in the following categories?

	# of investments
1) under 10%	C9-10 _____
2) 10% - 25%	C11-12 _____
3) 26% - 49%	C13-14 _____
4) 50%	C15-16 _____
5) over 50%	C17-18 _____

4. Of the investments reported in question # 1, in how many cases will your personal involvement with the firm fall in the following categories?

	# of investments
1) no involvement, other than reviewing periodic reports and attending stockholder meetings	C19-20 _____
2) representation on the Board of Directors	C21-22 _____
3) provide consulting help as needed	C23-24 _____
4) work part-time with the firm	C25-26 _____
5) work full-time with the firm	C27-28 _____
6) other (please specify) _____	C29-30 _____

5. What geographical constraints, if any, do you place on your future risk capital investment decisions? What are they?

(check one)

- 1) within 10 miles of home or office _____
- 2) beyond 10 miles but within 50 miles of home or office _____
- 3) beyond 50 miles but within 300 miles of home or office _____
- 4) other geographic limitation (please specify) _____
- 5) no geographic limitation _____

C31 _____

6. What types of businesses or industries would you prefer to invest in?

(check all or any as appropriate)

- 1) Retail trade C32-33 _____
- 2) Wholesale trade C34-35 _____
- 3) Manufacturing-High Technology products C36-37 _____
- 4) Manufacturing-Industrial products C38-39 _____
- 5) Manufacturing-Consumer products C40-41 _____
- 6) Service C42-43 _____
- 7) Construction/Real Estate C44-45 _____
- 8) Finance/Banking/Insurance C46-47 _____
- 9) Transportation C48-49 _____
- 10) Natural Resources C50-51 _____
- 11) Other (please specify) _____ C52-53 _____

7. The Federal government recently introduced two measures to stimulate equity investment in small businesses.

a) One measure was designed to provide tax incentives to encourage the investment of RRSP funds into small businesses. Do you anticipate investing a portion your RRSP funds in young or start-up firms?

1) yes _____ 2) no _____

C54 _____

If yes, what proportion of your RRSP funds are you planning to invest in young or start-up companies? _____

C55-57 _____

b) A second government initiative is the lifetime personal capital gains tax exemption of \$500,000. Has this new capital gains treatment influenced your decision to invest in young or start-up companies?

(check one)

- 1) significantly influenced my investment decision _____
- 2) moderately influenced my investment decision _____
- 3) does not influence my investment decision _____

C58 _____

8. What, if any, is your preference for the form of return earned on your risk capital investments in young or start-up companies?

(check one)

- 1) all capital gains _____
- 2) mostly capital gains _____
- 3) both capital gains and an annual return
(i.e. dividends) _____
- 4) mostly annual returns (i.e. dividends) _____
- 5) all annual returns (i.e. dividends) _____
- 6) other (specify) _____

C59 _____

9. If you were to participate with other investors in providing risk capital to a young or start-up firm, are the following acceptable partners?

	YES	NO	
1) individuals	_____	_____	C60 _____
2) venture capital firms	_____	_____	C61 _____
3) government economic development agencies (e.g. FBDB)	_____	_____	C62 _____
4) Small Business Development Corporations (SBDCs)	_____	_____	C63 _____
5) other (please specify)	_____	_____	C64 _____

10. Within what length of time would you normally expect to liquidate your risk capital investment in any particular young or start-up company?

(check one)

- 1) within one year _____
- 2) after one year but less than three years _____
- 3) after three years but less than five years _____
- 4) after five years but less than seven years _____
- 5) after seven years but less than ten years _____
- 6) after ten years but less than fifteen years _____
- 7) after fifteen years _____
- 8) not important _____

C65 _____

11. Will provisions for liquidating your equity participation in a young or start-up firm typically be included in your initial investment agreement?

(check one)

- 1) definitely yes _____
- 2) generally yes _____
- 3) generally no _____
- 4) definitely no _____

C66 _____

12. How would you prefer to liquidate your investments in young or start-up firms?

(check one)

- 1) by selling my equity interest back to the company _____
- 2) by selling my equity interest once the company goes public _____
- 3) through a takeover or merger with another company _____
- 4) other (please specify) _____

C67 _____

13. When you make a risk capital investment in a young or start-up company, what form will your investment typically take?

(check one)

- 1) common stock _____
- 2) convertible preferred stock _____
- 3) notes with warrants _____
- 4) convertible debentures _____
- 5) other (please specify) _____

C68 _____

14. Suppose you had a portfolio of ten investments in young or start-up firms and that, at the time of your investment, each opportunity met your criteria regarding investment size, industry, location, management qualifications etc....

a) How many of the ten would probably turn out to be "losers", where losers are defined as investments in which your eventual losses exceed 50% of your initial investment? How many of the ten would probably turn out to be very successful "winners"? How many of the ten would probably turn out to be "middle of the road" investments, neither winners nor losers?

- 1) Estimated number of "losers" _____
- 2) Estimated number of "winners" _____
- 3) Estimated number of "middle of the roads" _____

C1 _____

C2 _____

C3 _____

(Total 10)

- b) What is your best estimate of the return on your investment in a "loser"? a "winner"? a "middle of the road" investment? (We ask that you estimate the potential return in terms of a compound annual rate)

Compound
Annual Rate

1) Potential return on a "loser"

C4-8 _____

2) Potential return on a "winner"

C9-13 _____

3) Potential return on a "middle of the road"

C14-18 _____

- c) Recognizing that there will be both "winners" and "losers" in any portfolio of investments in young or start-up firms, what do you consider to be a minimum acceptable return on the total portfolio? (This question measures your estimate of the average cost of risk capital for young or start-up companies. Please estimate the minimum acceptable portfolio return in terms of a compound annual rate)

Compound
Annual Rate

Minimum acceptable portfolio return

C19-21 _____

Part C- The following questions are designed to assess the effectiveness of existing channels of communication between investors like yourself, and investment opportunities.

1. How have you learned of the risk capital investment opportunities that you have seriously considered during the last five years?

	Frequent Source	Occasional Source	Not a Source	
1) Active personal search	_____	_____	_____	C22 _____
2) Accountants	_____	_____	_____	C23 _____
3) Attorneys/Lawyers	_____	_____	_____	C24 _____
4) Brokerage Houses	_____	_____	_____	C25 _____
5) Business Associates	_____	_____	_____	C26 _____
6) Friends	_____	_____	_____	C27 _____
7) Bank Manager	_____	_____	_____	C28 _____
8) Other (specify)	_____	_____	_____	C29 _____

2. Which single source has been the most useful for generating leads or possible risk capital investment opportunities that you have seriously considered?

_____ C30 _____

3. Are you satisfied with the effectiveness of existing channels of communication between bona fide entrepreneurs seeking risk capital and private investors like yourself ?

(check one)

- 1) definitely satisfied
- 2) basically but not totally satisfied
- 3) neither satisfied nor dissatisfied
- 4) dissatisfied- moderate improvement needed
- 5) totally dissatisfied- room for major improvement

C31 _____

Why?

C32 _____

C33 _____

Part D- The following questions are designed to assess investor interest in an experimental effort to broaden the range of bona fide investment opportunities available for their consideration.

Background Information

Ottawa-Carleton may establish a computerized matchmaking network to facilitate the flow of information between entrepreneurs and investors. The ultimate purpose of this network is to match private individuals with risk capital with entrepreneurs seeking funds.

In this matchmaking network, investors and entrepreneurs would provide investment profiles describing their interests and opportunities in order to be listed on the network's database. The network would then submit to investors those investment opportunities that meet their screening criteria. If requested by the investor, a summary of the entrepreneur's business plan would be sent by the network. Both parties would remain anonymous throughout this process.

If the investor wishes to pursue the opportunity further, the two parties can then follow-up through direct contact. The network would essentially be an information service; it would neither evaluate nor endorse the merits of the investment opportunities presented through its services.

1. Would you be interested in participating in such a matchmaking network that referred you to all the investment opportunities registered on its database if they appeared to meet your criteria? Please circle a number from 1 to 5 that best indicates your level of interest where a 1 signifies strong interest and a 5 signifies no interest:

strong interest			moderate interest		no interest
1	2	3	4	5	

If no interest, please skip to Part E on Page 18.

2. This question is designed to assess how various characteristics of the referral service affect your level of interest in participating in that service. Please indicate how each characteristic would affect your level of interest by circling a number from 1 to 5 where 1 signifies a strong influence on your interest level, and 5 signifies no influence on your interest level:

	Significantly increases my level of interest		Does not influence my level of interest		Significantly reduces my level of interest	
1) The referral service would operate on a nation-wide level serving investors and entrepreneurs across Canada.	1	2	3	4	5	C35 _____
2) The referral service would operate on a regional basis serving investors and entrepreneurs within 300 miles of Ottawa-Carleton.	1	2	3	4	5	C36 _____
3) The referral service would operate such that the identity of investors would remain anonymous until they expressed a desire to meet with the entrepreneur.	1	2	3	4	5	C37 _____
4) The referral service would operate such that the identity of entrepreneurs would remain anonymous until their business plan had been reviewed by interested investors.	1	2	3	4	5	C38 _____
5) The referral service would be run by a government organization.	1	2	3	4	5	C39 _____
6) The referral service would operate as a non-profit, non-government corporation.	1	2	3	4	5	C40 _____
7) The referral service would operate as a commercial corporation.	1	2	3	4	5	C41 _____

	Significantly increases my level of interest		Does not influence my level of interest		Significantly reduces my level of interest	
8) The referral service would charge only the entrepreneurs an annual listing fee that was set to cover the costs of operation.	1	2	3	4	5	C42 _____
9) The referral service would charge only the investors an annual listing fee that was set to cover the costs of operation.	1	2	3	4	5	C43 _____
10) The referral service would charge both investors and entrepreneurs an annual listing fee that was set to cover the costs of operation.	1	2	3	4	5	C44 _____
11) To be listed on the database, it would cost \$100 per year.	1	2	3	4	5	C45 _____
12) To be listed on the database, it would cost \$200 per year.	1	2	3	4	5	C46 _____
13) To be listed on the database, it would cost \$300 per year.	1	2	3	4	5	C47 _____
14) To be listed on the database, it would cost \$500 per year.	1	2	3	4	5	C48 _____
15) To be listed on the database, it would cost \$1000 per year.	1	2	3	4	5	C49 _____

Part E - the following questions are designed to provide a brief bibliographical profile of respondents. Remember that all information is strictly confidential and that only aggregate data will be published.

1. Sex: 1) Male _____ 2) Female _____ C50 _____

2. Age: 1) 24 years and under _____
 2) 25-34 years _____
 3) 35-44 years _____
 4) 45-54 years _____
 5) 55-64 years _____
 6) 65-69 years _____
 7) 70 + years _____

C51 _____

3. Present Occupation: _____

If retired, previous occupation _____

C52 _____

C53 _____

4. Family Income: 1) less than \$34,999 _____
 2) \$35,000 - \$49,999 _____
 3) \$50,000 - \$64,999 _____
 4) \$60,000 - \$74,999 _____
 5) \$75,000 - \$99,999 _____
 6) \$100,000 - \$149,999 _____
 7) \$150,000 and over _____

C54 _____

5. Total Personal Assets:

- 1) less than \$49,999 _____
- 2) \$50,000 - \$74,999 _____
- 3) \$75,000 - \$99,999 _____
- 4) \$100,000 - \$149,999 _____
- 5) \$150,000 - \$299,999 _____
- 6) \$300,000 - \$499,999 _____
- 7) \$500,000 - \$999,999 _____
- 8) \$1,000,000 and over _____

C55 _____

6. Personal Net Worth (Personal assets less liabilities):

- 1) negative or zero _____
- 2) less than \$49,999 _____
- 3) \$50,000 - \$74,999 _____
- 4) \$75,000 - \$99,999 _____
- 5) \$100,000 - \$149,999 _____
- 6) \$150,000 - \$299,999 _____
- 7) \$300,000 - \$499,999 _____
- 8) \$500,000 - \$999,999 _____
- 9) \$1,000,000 and over _____

C56 _____

7. Highest level of education attained:

- 1) Elementary school _____
- 2) some High school _____
- 3) High school graduate _____
- 4) some College or University _____
- 5) College or University graduate _____
- 6) Post-Graduate _____

Major _____

Major _____

C57 _____

8. Have you ever been involved at the top management level in the start-up of a new venture?

- 1) yes _____
- 2) no _____

C58 _____

If yes, were you employed in a similar business prior to the start-up?

- 1) yes _____
- 2) no _____

C59 _____

In order to help us expand the scope of our research, we would appreciate it if you could provide us with the names and addresses of other individuals who you know to have invested in young or start-up firms. You can be assured that all information you provide will remain strictly confidential.

Names and Addresses of Other Investors:

Name	Address	Phone

Thank you for your cooperation

Should you wish to obtain a copy of the final research report please call or write to:

Dominique Short
School of Business
Carleton University
Colonel By Drive
Ottawa, Ontario
K1S 5B6
(613) 564-4373

Please use the space below if you have any additional comments that you would like to make:

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APPENDIX 3 B
ENTREPRENEUR QUESTIONNAIRE

A SURVEY OF THE
INFORMAL RISK CAPITAL MARKET
IN THE OTTAWA-CARLETON AREA

Conducted by:

Dominique Short, Graduate Student
Master's of Management Studies Programme
School of Business
Carleton University
Colonel By Drive
Ottawa, Ontario
K1S 5B6
(613) 564-4373

In Cooperation with:

The Ottawa-Carleton Board of Trade

Fall 1986

For Editor's Use Only
Sequence# C1-3 _____

Part A- The following questions are designed to document the recent financing history of your firm. For purposes of this questionnaire, risk capital is defined as equity or equity-type capital invested in young or start-up firms.

1. How is your firm financed?

1) % Debt Capital

Percentage

C4-6 _____

2) % Risk Capital (equity or equity-type)

C7-9 _____

3) % Other (please specify)

C10-12 _____

2: From what sources has your firm's risk capital (equity or equity-type capital) come?

(check all or any as appropriate)

1) own resources

C13 _____

2) friends, relatives

C14 _____

3) venture capitalist

C15 _____

4) private individuals/

informal investors

C16 _____

5) government assistance/programs

(FBDB, SBDC)

C17 _____

6) others (please specify)

C18 _____

C19 _____

3. Which source has been the most important in terms of supplying the largest infusion of risk capital?

Please indicate your answer by rating each source listed below according to importance where:

1 is the single most important supplying the largest amount of risk capital

2 is the second most important supplying the second largest amount...

3 is the third most important etc...

0 means that no funds were supplied by this source

Rank of Importance

1) own resources	C20	_____
2) friends, relatives	C21	_____
3) venture capital firm	C22	_____
4) private individuals/ informal investors	C23	_____
5) government assistance/programs (FBDB, SBDC)	C24	_____
6) others (please specify)	C25	_____
_____	C26	_____

4. Considering the following sources of risk capital, how well do you feel your financing needs have been served over the past three years? Please indicate how well each source was able to serve your needs by circling the appropriate number below:

	Not Applicable	Very Poorly	Adequately			Very Well	
1) friends, relatives	0	1	2	3	4	5	C27 _____
2) venture capital firm	0	1	2	3	4	5	C28 _____
3) private individuals/ informal investors	0	1	2	3	4	5	C29 _____
4) government assistance/programs (FBDB, SBDC)	0	1	2	3	4	5	C30 _____
5) others (please specify)	0	1	2	3	4	5	C31 _____
_____	0	1	2	3	4	5	C32 _____

5. Considering each of the following sources of risk capital, were you able to secure funds for your firm when you needed them?

	Funds were available						
	Not Applicable needed it	exactly when I	within reasonable timeframe	within unreasonable timeframe			
1) friends, relatives	0	1	2	3	4	5	C33 _____
2) venture capital firm	0	1	2	3	4	5	C34 _____
3) private individuals/ informal investors	0	1	2	3	4	5	C35 _____
4) government assistance/programs (FBDB, SBDC)	0	1	2	3	4	5	C36 _____
5) others (please specify)	0	1	2	3	4	5	C37 _____
_____	0	1	2	3	4	5	C38 _____

6. Considering each of the following sources of risk capital, were you able to get financing on reasonable terms?

	Not Applicable	Very reasonable terms	Terms fairly reasonable	Very unreasonable terms			
1) friends, relatives	0	1	2	3	4	5	C39 _____
2) venture capital firm	0	1	2	3	4	5	C40 _____
3) private individuals/ informal investors	0	1	2	3	4	5	C41 _____
4) government assistance/programs (FBDB, SBDC)	0	1	2	3	4	5	C42 _____
5) others (please specify)	0	1	2	3	4	5	C43 _____
_____	0	1	2	3	4	5	C44 _____

7. If your firm needed financing today, what potential source(s) of supply would you approach?

(check all or any as appropriate)

1) Own shareholders	C45	_____
2) Friends, Relatives	C46	_____
3) Bank, Caisse Populaire, Credit Union	C47	_____
4) Financial Corporation, Trust Company	C48	_____
5) Venture Capitalist	C49	_____
6) Investment Dealer	C50	_____
7) Government	C51	_____
8) Informal Investors, Private Individuals	C52	_____
9) Others (please specify)		
_____	C53	_____
_____	C54	_____
_____	C55	_____

The following questions deal with sources of information through which you have learned of potential investors for your company. The purpose of these questions is to identify and assess the effectiveness of communication channels between entrepreneurs like yourself and investors who are seriously interested in investing funds in companies like yours.

8. How have you learned of potential sources of equity or equity-type capital that you have seriously considered or pursued?

- | | Frequent
Source | Occasional
Source | Not a
Source | |
|---------------------------|--------------------|----------------------|-----------------|-----------|
| 1) Active personal search | _____ | _____ | _____ | C56 _____ |
| 2) Accountants | _____ | _____ | _____ | C57 _____ |
| 3) Attorneys/Lawyers | _____ | _____ | _____ | C58 _____ |
| 4) Brokerage Houses | _____ | _____ | _____ | C59 _____ |
| 5) Business Associates | _____ | _____ | _____ | C60 _____ |
| 6) Friends | _____ | _____ | _____ | C61 _____ |
| 7) Bank Manager | _____ | _____ | _____ | C62 _____ |
| 8) Other (please specify) | _____ | _____ | _____ | |
| _____ | _____ | _____ | _____ | C63 _____ |

9. Which single source has been most useful for generating leads or potential sources of risk capital that you have seriously considered? _____

C64 _____

10. Are you satisfied with the effectiveness of existing channels of communication between entrepreneurs like yourself and private investors who you think are seriously interested in investing in companies like yours?

(check one)

- 1) definitely satisfied _____
- 2) basically but not totally satisfied _____
- 3) neither satisfied nor dissatisfied _____
- 4) dissatisfied- moderate improvement
needed _____
- 5) totally dissatisfied- room for major
improvement _____

C65 _____

Why?

C66 _____

C67 _____

C68 _____

Part B- The following questions are designed to assess entrepreneurial interest in an experimental effort to broaden the range of serious, private investors as potential sources of capital.

Background Information

Ottawa-Carleton may establish a computerized matchmaking network to facilitate the flow of information between entrepreneurs and investors. The ultimate purpose of this network is to match private individuals with risk capital with entrepreneurs seeking funds.

In this matchmaking network, investors and entrepreneurs would provide investment profiles describing their interests and opportunities in order to be listed on the network's database. The network would then submit to investors those investment opportunities that meet their screening criteria. If requested by the investor, a summary of the entrepreneur's business plan would be sent by the network. Both parties would remain anonymous throughout this process.

If the investor wishes to pursue the opportunity further, the two parties can then follow-up through direct contact. The network would essentially be an information service; it would neither evaluate nor endorse the merits of the investment opportunities presented through its services.

-
1. Would you be interested in participating in such a matchmaking network that referred you to all the investment opportunities registered on its database if they appeared to meet your criteria? Please circle a number from 1 to 5 that best indicates your level of interest where a 1 signifies strong interest and a 5 signifies no interest:

strong interest

1

2

moderate interest

3

4

no interest

5

If no interest, please skip to Part C on Page 10.

C1 _____

2. This question is designed to assess how various characteristics of the referral service affect your level of interest in participating in that service. Please indicate how each characteristic would affect your level of interest by circling a number from 1 to 5 where 1 signifies a significant increase in your interest level and 5 signifies a significant reduction in your interest level:

	Significantly increases my level of interest		Does not influence my level of interest		Significantly reduces my level of interest	
1) The referral service would operate on a nation-wide level serving investors and entrepreneurs across Canada.	1	2	3	4	5	C2 _____
2) The referral service would operate on a regional basis serving investors and entrepreneurs within 300 miles of Ottawa-Carleton.	1	2	3	4	5	C3 _____
3) The referral service would operate such that the identity of investors would remain anonymous until they expressed a desire to meet with the entrepreneur.	1	2	3	4	5	C4 _____
4) The referral service would operate such that the identity of entrepreneurs would remain anonymous until their business plan had been reviewed by interested investors.	1	2	3	4	5	C5 _____
5) The referral service would be run by a government organization.	1	2	3	4	5	C6 _____
6) The referral service would operate as a non-profit, non-government corporation.	1	2	3	4	5	C7 _____
7) The referral service would operate as a commercial corporation.	1	2	3	4	5	C8 _____

	Significantly increases my level of interest		Does not influence my level of interest		Significantly reduces my level of interest	
8) The referral service would charge only the entrepreneurs an annual listing fee that was set to cover the costs of operation.	1	2	3	4	5	C9 _____
9) The referral service would charge only the investors an annual listing fee that was set to cover the costs of operation.	1	2	3	4	5	C10 _____
10) The referral service would charge both investors and entrepreneurs an annual listing fee that was set to cover the costs of operation.	1	2	3	4	5	C11 _____
11) To be listed on the database, it would cost \$100 per year.	1	2	3	4	5	C12 _____
12) To be listed on the database, it would cost \$200 per year.	1	2	3	4	5	C13 _____
13) To be listed on the database, it would cost \$300 per year.	1	2	3	4	5	C14 _____
14) To be listed on the database, it would cost \$500 per year.	1	2	3	4	5	C15 _____
15) To be listed on the database, it would cost \$1000 per year.	1	2	3	4	5	C16 _____

Part C- The following questions are designed to measure your recent experiences in which funds had to be raised for your firm. We are specifically interested in your experiences over the last three years only.

1. Overall, would you say that you have experienced problems in raising risk capital (equity or equity-type capital) for your business?

1) yes _____ 2) no _____ C17 _____

If no, skip to question # 4 at the bottom of this page.

2. Do you feel that problems in raising risk capital have seriously inhibited your firm's ability to grow?

1) yes _____ 2) no _____ C18 _____

3. Have you experienced any other problems that you attribute to a difficulty in raising risk capital?

(check all or any as appropriate)

1) inability to sustain employment growth	C19 _____
2) inability to expand	C20 _____
3) cashflow problems	C21 _____
4) inability to find competent employees	C22 _____
5) other (specify) _____	C23 _____

4. Do you think there is a shortage of risk capital (equity and equity-type capital) available to companies like yours? 1) yes _____ 2) no _____

C24 _____

If you answered yes, why do you think there is such a shortage?

C25 _____

C26 _____

C27 _____

5. Over the past three years, how many firm offers of risk capital financing have you seriously considered? _____

C28-29 _____

6. Have you ever rejected a firm offer of risk capital financing?

1) yes _____ 2) no _____

C30 _____

If no, skip to question # 8.

7. Generally, what were the reasons for turning down firm offers of risk capital financing? (check all or any as appropriate)

1) negotiated a better offer with investor

C31 _____

2) obtained better offer with another investor

C32 _____

3) best offer not tolerable

C33 _____

4) rejected for reason other than financing terms

C34 _____

5) other (please specify) _____

C35 _____

8. In the past three years, have investors or other suppliers of risk capital ever turned down your request for financing so that you had to go to another source or abandon your plans?

1) yes _____ 2) no _____

C36 _____

If yes, why do you think you were turned down?

C37 _____

C38 _____

C39 _____

9. Do you ever use short-term financing (i.e. bank line of credit) to meet long-term needs (i.e. new equipment or permanent increases in working capital) ?

1) yes _____ 2) no _____

C40 _____

Why?

1) temporary measure (waiting for a better time to obtain long-term financing)

C41 _____

2) because of covenant restrictions imposed by suppliers

C42 _____

3) only type of financing I could get

C43 _____

4) other (specify) _____

C44 _____

Is this policy desirable?

1) yes _____ 2) no _____

C45 _____

Does it occur more often than you would like it to?

C46 _____

10. How much of your time, over the last year, do you estimate that you have spent trying to locate adequate sources of capital ?

(check one)

- 1) less than 10% _____
2) 10% - 30% _____
3) 31% - 50% _____
4) more than 50% _____

C47 _____

Part D- the following questions are designed to provide a brief bibliographical profile of respondent firms. Remember that all information is strictly confidential and that only aggregate data will be published.

1. When was the business started (i.e. when did you incorporate)? 19 _____

C48 _____

2. How many full-time employees are there (approximately)? _____ C49-51 _____

As of what date? _____

3. Please describe your major product service: _____

C52 _____

4. What were the firm's approximate sales (\$) in 1985?

Were they:

(check one)

1) less than \$99,999

2) \$100,000 - \$ 199,999

3) \$ 200,000 - \$ 499,999

4) \$ 500,000 - \$ 1 million

5) \$ 1 million - \$5 million

6) \$ 5 million - \$10 million

7) \$ 10 million - \$ 20 million

8) more than \$20 million

C53 _____

5. How fast, on average, do you estimate that your annual sales have been growing over the past 2-3 years?

(check one)

- 1) no growth _____
- 2) between 0% and 9% _____
- 3) 10% and 19% _____
- 4) 20% and 29% _____
- 5) 30% and 49% _____
- 6) over 50% _____
- 7) shrinkage _____

C54 _____

Comment (i.e. Is that growth rate "typical" for your firm?)

6. What was the approximate book value of your firm's asset base (\$) in 1985?

Was it:

(check one)

- 1) less than \$ 99,999 _____
- 2) between \$ 100,000 - \$ 199,999 _____
- 3) \$ 200,000 - \$ 499,999 _____
- 4) \$ 500,000 - \$ 1 million _____
- 5) \$ 1 million - \$ 5 million _____
- 6) \$ 5 million - \$ 10 million _____
- 7) \$ 10 million - \$ 20 million _____
- 8) more than \$ 20 million _____

C55 _____

As part of this study, we are investigating the role of private individuals or informal investors in providing investment in young, high growth companies such as yours. In order to help us expand the scope of our research, we would appreciate it if you could provide us with the names and addresses of individuals who have invested in your company or in other similar firms. You can be assured that all information you provide will remain strictly confidential.

Names and Addresses of Investors:

Name	Address	Phone

Thank you for your cooperation

Should you wish to obtain a copy of the final research report please call or write to:

Dominique Short
School of Business
Carleton University
Colonel By Drive
Ottawa, Ontario
K1S 5B6
(613) 564-4373

Please use the space below if you have any additional comments that you would like to make:

APPENDIX 4
LINKAGE OF RESEARCH OBJECTIVES TO SECTIONS OF THE
QUESTIONNAIRES

OBJECTIVE/ HYPOTHESIS	INVESTOR QUESTIONNAIRE	ENTREPRENEUR QUESTIONNAIRE
1. To determine the extent and nature of criteria used by informal investors for evaluating investment opportunities.	Part A deals with the extent and nature of past risk capital investments; Part B deals with investors' objectives for future risk capital investments.	
2. To identify the communication channels currently link entrepreneurs and informal investors.	Part C deals with the sources of information about sources investment opportunities and the perceived effectiveness of communication channels.	Part A deals with the that of information about potential investors and the perceived effectiveness of communication
3. To assess investors' and entrepreneurs' perceptions of the effectiveness of channels; existing information networks.		
H1. The difficulties small firms face in finding capital are predominantly of ineffective information networks.		Part C deals with recent experiences of the result entrepreneurs in raising funds for their firms.
4. To assess investor and entrepreneur willingness to participate in a systematic referral service.	Part D deals with investor interest in an experimental effort to broaden the range of opportunities available for their consideration;	Part B deals with entrepreneurial interest in an experimental effort to broaden the range of serious investors as potential sources of capital;
5. To identify investors' and entrepreneurs' preferences for the structure of the service.		
H2. Local investors and entrepreneurs would be willing to participate in the referral service.		
H3. The services of the referral service are of sufficient value that investors and entrepreneurs would be willing to pay a fee to acquire the information it can provide.		
To compile a demographic profile of respondents.	Part E deals with demographic attributes of investor respondents.	Part D deals with demographic attributes of respondent firms.

The
Ottawa-
Carleton
Board of
Trade

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INCORPORATED/INCORPORÉ 1857

APPENDIX 5 SURVEY PACKAGE

Mr. J. Investor
Company ABC
123 Bank Street
Ottawa, Ontario
K2E 7J4

September 5, 1986

Dear Mr. Investor,

The Ottawa-Carleton Board of Trade is involved in a regional research effort to determine the cost and availability of informal risk capital for local firms which do not have access to traditional venture capital sources or the public equities markets. Your participation would contribute significantly to the success of our research. Approximately one hour of your time would be required to complete an interview either on the telephone, or by filling out the attached questionnaire.

The success of this research effort depends upon the collection of comprehensive data describing the investment objectives of informal risk capital investors. Attached, for your information, is a brief synopsis of this research.

This research is being carried out by Dominique Short, a graduate student at Carleton University as part of her Master's thesis, under the direction of Professor A. L. Riding. Dominique Short will be contacting you shortly to determine whether you wish to complete the questionnaire yourself or with her by telephone. Should you decide to fill out the questionnaire yourself, I have enclosed a self-addressed, stamped return envelope for convenience. You can obtain additional information by contacting Dominique at 993-2709 or Professor Riding at 564-7434.

Thank you for your help,

John P. Manley,
Past-Chairman

Attachments

The
Ottawa-
Carleton
Board of
Trade

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INCORPORATED/INCORPORÉE 1857

Mr. J. Entrepreneur
Company ABC
123 Bank Street
Ottawa, Ontario
K2H 9C1

September 5, 1986

Dear Mr. Entrepreneur,

The Ottawa-Carleton Board of Trade is involved in a regional research effort to determine the cost and availability of informal risk capital for local firms which do not have access to traditional venture capital sources or the public equities markets. Your participation would contribute significantly to the success of our research. Approximately one hour of your time would be required to complete an interview either over the telephone, or by filling out the attached questionnaire.

The success of this research effort depends upon the collection of comprehensive data describing the financing history of entrepreneurial ventures. Attached, for your information, is a brief synopsis of this research.

This research is being carried out by Dominique Short, a graduate student at Carleton University as part of her Master's thesis, under the direction of Professor A.L. Riding. Dominique Short will be contacting you shortly to determine whether you wish to complete the questionnaire yourself or with her by telephone. Should you decide to fill out the questionnaire yourself, I have enclosed a self-addressed, stamped return envelope for convenience. You can obtain additional information by contacting Dominique at 993-2709 or Professor Riding at 564-7434.

Thank you for your help,

John P. Manley,
Past-Chairman

Attachments

INFORMAL RISK CAPITAL IN OTTAWA-CARLETON SOME DEFINITIONS AND BACKGROUND

BACKGROUND

The Ottawa-Carleton Board of Trade is engaged in a regional research effort to determine the cost and availability of informal risk capital for firms without access to traditional venture capital sources or the public equities markets. The research is being carried out by Dominique Short, a graduate student in Management Studies at Carleton University as part of her Master's thesis, under the direction of Professor A.L. Riding.

Young and start-up firms create most of the nation's new employment opportunities and are a major source of technological innovation. Problems raising risk capital represent a serious obstacle to the formation and growth of these firms. It is well known that informal investors represent a principal source of external risk capital for foundation firms; however, little is known about the volume of risk capital available, about the investment criteria employed by informal investors, or about how to locate these investors. This research project is designed to help answer these questions by surveying local investors and entrepreneurs.

DEFINITIONS

1. RISK CAPITAL

Equity and equity-type capital for young or start-up firms. Risk capital investments typically involve higher potential returns, higher risks, and more limited marketability than equity investments in larger established firms which are listed on stock exchanges.

2. INFORMAL INVESTORS

Represent sources of risk capital other than professionally managed venture capital funds, other institutional investors, and the public equity markets. Informal risk capital investors tend to be financially sophisticated individuals of means. They often have previous investment or management experience with entrepreneurial ventures.

3. YOUNG AND START-UP FIRMS

Represent small firms requiring external equity financing but without access to traditional venture capital sources or the public equities markets. Young and start-up firms typically require capital in amounts ranging from \$50,000 to \$300,000, are expanding at rates between 10% and 30% per year, are unlikely to qualify for a public stock offering or merger with a larger firm within five to ten years, employ anywhere from 10 people, and generate annual sales under \$20 million.

All inquiries regarding the survey should be directed to Miss Short or Professor Riding at the following address:

Dominique Short
or
Alan Riding, Associate Professor
School of Business
Carleton University
Colonel By Drive
Ottawa, Ontario
K1S 5B6
(613) 564-7434

Dominique Short can be reached during business hours at (613) 993-2709

Your cooperation in this research project is greatly appreciated:

Mr. Respondent
Company ABC
123 Bank Street
Ottawa, Ontario
K2E 6T7

December 4, 1986

Dear Mr. Respondent,

On behalf of the Ottawa-Carleton Board of Trade, I would like to thank you for your participation in the Survey of the Informal Risk Capital Market in Ottawa-Carleton.

With your cooperation, I am hopeful that the survey results will provide valuable information leading to a better understanding of, and perhaps an improvement in the cost and availability of informal risk capital for local small businesses. A copy of the executive summary of the research report will be available to all participants when it is completed. Should you wish to obtain a copy please call me at 993-2709 or write to me at:

School of Business, Carleton University
Room 925, Arts Tower
Colonel By Drive
Ottawa, Ontario
K1S 5B6

Thank you again for your participation,

Dominique Short

APPENDIX 6 A
INVESTOR SURVEY
TABULATION OF RESULTS BASED ON 25 COMPLETED
QUESTIONNAIRES

PART A PAST INVESTMENTS

1. Within the past five years, how many risk capital investments have you made ?

Total number of investments	156
Average number of investment per investor	6
Average number per investor per year	1

2. Of the investments reported in question #1, how many fell in each of the following size categories?

	# of investments
1) under \$10,000	42
2) \$10,001 - \$24,999	23
3) \$25,000 - \$49,999	27
4) \$50,000 - \$99,999	29
5) \$100,000 - \$249,999	23
6) over \$250,000	8
No Answer	4

Total 156

If over \$250,000 please specify approximate amount for each investment:

	# of Investments
\$500,000	1
\$525,000	1
\$750,000	1
\$1,000,000	3
\$2,000,000	1
\$4,000,000	1

Total Value of Investments \$16,600,000

Average Size of Investment \$109,211

3. Of the investments reported in question #1, how many fell in each of the following categories?

	# of investments
1) Retail trade	3
2) Wholesale trade	2 *
3) Manufacturing-High Technology products	109
4) Manufacturing-Industrial products	1
5) Manufacturing-Consumer products	2
6) Service	9
7) Construction/Real Estate	21
8) Finance/Banking/Insurance	2
9) Transportation	0
10) Natural Resources	6
11) Other (please specify)	
Exporting Business	1
Total	156

4. Of the investments reported in question #1, how many fell in each of the following geographic categories?

	# of investments
1) within 10 miles of your home or office	73
2) beyond 10 miles but within 50 miles	58
3) beyond 50 miles but within 300 miles	6
4) beyond 300 miles	17
No Answer	2
Total	156

Average distance beyond 300 miles 1,876 miles

5. Of the investments reported in question #1, in how many cases did the total risk capital financing involve other types of investors besides yourself who also put up risk capital?

	number of cases
1) other individuals	119
2) venture capital firms	43
3) public economic development agencies (e.g. FBDB)	12
4) Small Business Development Corporations (SBDCs)	10
5) other - Private SRTC	10

6. Of the investments reported in question #1, in how many cases did your personal involvement with the firm fall in the following categories?

	# of investments
1) none, other than reviewing periodic reports and attending stockholder meetings	49
2) representation on the Board of Directors	72
3) provide consulting help as needed	52
4) work part-time with the firm	16
5) work full-time with the firm	6
6) other (please specify) _____	0

7. Of the investments reported in question #1, in how many cases did your immediate or potential voting control fall in the following categories?

	# of investments
1) under 10%	83
2) 10% - 25%	51
3) 26% - 49%	11
4) 50%	3
5) over 50%	8

8. How would you describe the performance of your investments in young or start-up firms? For instance, how many of those investments reported in question #1 fell in each of the following performance categories?

	# of investments
1) performed substantially above expectations	27
2) performed moderately above expectations	14
3) performance approximately met expectations	36
4) performed moderately below expectations	19
5) performed substantially below expectations	32
6) too soon to tell	28
Total	156

9. Would you invest in a young or start-up company again?

96% yes 4% no

Why?

	# of Responses
- Attractive Risk/Reward Potential i.e. high capital growth potential, substantial capital gains	10
- Fun, Exciting, Challenging	9
- Depends on the Management of the Firm or its Business Plan	3

10. Considering your total personal assets, what percentage of these assets is represented by your risk capital investments in young or start-up firms?

	Frequency of response
1) under 5%	6
2) 5% - 10%	8
3) 11% - 25%	4
4) 26% - 50%	4
5) more than 50%	1
No Answer	1
Total	25

11. In your opinion, what percentage of your personal assets invested in young or start-up companies is reasonable?

Mean response 18.33%

12. Considering your personal net worth (total assets less liabilities), what percentage of your net worth is represented by your risk capital investments in young or start-up firms?

	Frequency of Response
1) under 5%	7
2) 5% - 10%	7
3) 11% - 25%	5
4) 26% - 50%	4
5) more than 50%	1
No Answer	1
Total	25

13. In your opinion, what percentage of your net worth invested in young or start-up companies is reasonable?

Mean response 16.86%

14. How many risk capital investment opportunities did you seriously consider but reject during the past five years?

Total number Rejected	795
Average number Rejected per Investor per year	6

15. Of the rejected investment opportunities you reported, what was/were the principal reason(s) you declined to invest?

	# times cited
1) unfamiliar with the technology or the nature of the investment	10
2) market potential insufficient	12
3) not convinced of managerial ability to succeed/ lack of confidence in management	22
4) unsatisfactory risk/return ratio	10
5) inadequate or unsatisfactory business plan	9
6) other (please specify)	
Not Offered Enough Control	1
Minimum Investment Required was Too Large	3

PART B FUTURE INVESTMENTS

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1. During the next two years, how many risk capital investments in young or start-up companies would you like to add to your portfolio?

	Frequency of Response
1) one	6
2) two or three	14
3) four to six	5
4) seven to ten	0
5) more than ten	0

Average number of investments per investor per year 1

2. Of the investments reported in question #1, how many will fall in the following size categories?

	# of investments
1) under \$10,000	4
2) \$10,001 - \$24,999	10
3) \$25,000 - \$49,999	9
4) \$50,000 - \$99,999	10
5) \$100,000 - \$249,999	9
6) over \$250,000	0

Average Size of Future Investments \$ 68,036

Total Value of Future Investments \$ 2,857,500

3. Of the investments reported in question # 1, in how many cases will you demand voting control in the following categories?

	# of investments
1) under 10%	26
2) 10% - 25%	10
3) 26% - 49%	0
4) 50%	0
5) over 50%	1

4. Of the investments reported in question # 1, in how many cases will your personal involvement with the firm fall in the following categories?

	# of investments
1) no involvement, other than reviewing periodic reports and attending stockholder meetings	7
2) representation on the Board of Directors	23
3) provide consulting help as needed	23
4) work part-time with the firm	0
5) work full-time with the firm	1
6) other (please specify) _____	0

5. What geographical constraints, if any, do you place on your future risk capital investment decisions? What are they?

	Frequency of Responses
1) within 10 miles of home or office	3
2) beyond 10 miles but within 50 miles of home or office	8
3) beyond 50 miles but within 300 miles of home or office	2
4) other geographic limitation (please specify)	
Within North America	3
5) no geographic limitation	9
Total	25

6. What types of businesses or industries would you prefer to invest in?

	# times cited
1) Retail trade	2
2) Wholesale trade	3
3) Manufacturing-High Technology products	21
4) Manufacturing-Industrial products	7
5) Manufacturing-Consumer products	2
6) Service	6
7) Construction/Real Estate	10
8) Finance/Banking/Insurance	0
9) Transportation	0
10) Natural Resources	1
11) Other (please specify)	
Communications	1
No Preference	3

7. The Federal government recently introduced two measures to stimulate equity investment in small businesses.

a) One measure was designed to provide tax incentives to encourage investment of RRSP funds into small businesses. Do you anticipate investing a portion your RRSP funds in young or start-up firms?

8% yes 92% no

If yes, what proportion of your RRSP funds are you planning to invest in young or start-up companies?

Mean Proportion 20%

b) A second government initiative is the lifetime personal capital gains tax exemption of \$500,000. Has this new capital gains treatment influenced your decision to invest in young or start-up companies?

	frequency of Responses
1) significantly influenced my investment decision	6
2) moderately influenced my investment decision	4
3) does not influence my investment decision	15
Total	25

8. What, if any, is your preference for the form of return earned on your risk capital investments in young or start-up companies?

	Frequency of Responses
1) all capital gains	14
2) mostly capital gains	6
3) both capital gains and an annual return (i.e. dividends)	3
4) mostly annual returns (i.e. dividends)	1
5) all annual returns (i.e. dividends)	1
6) other (specify) _____	0
Total	25

9. If you were to participate with other investors in providing risk capital to a young or start-up firm, are the following acceptable partners?

	Number of times Cited		
	YES	NO	NO ANSWER
1) individuals	24	0	1
2) venture capital firms	14	10	1
3) government economic development agencies (e.g. FBDB)	12	12	1
4) Small Business Development Corporations (SBDCs)	19	5	1
5) other (please specify)	0	23	1

10. Within what length of time would you normally expect to liquidate your risk capital investment in any particular young or start-up company?

	Frequency of Response
1) within one year	0
2) after one year but less than three years	3
3) after three years but less than five years	7
4) after five years but less than seven years	7
5) after seven years but less than ten years	2
6) after ten years but less than fifteen years	1
7) after fifteen years	0
8) not important	4
No Answer	1
Total	25

11. Will provisions for liquidating your equity participation in a young or start-up firm typically be included in your initial investment agreement?

	Frequency of response
1) definitely yes	5
2) generally yes	3
3) generally no	12
4) definitely no	4
No Answer	1
Total	25

12. How would you prefer to liquidate your investments in young or start-up firms?

	Frequency of responses
1) by selling my equity interest back to the company	2
2) by selling my equity interest once the company goes public	19
3) through a takeover or merger with another company	2
4) other (please specify) _____	0
No Answer	2
Total	25

13. When you make a risk capital investment in a young or start-up company, what form will your investment typically take?

	Frequency of Responses
1) common stock	21
2) convertible preferred stock	1
3) notes with warrants	1
4) convertible debentures	0
5) other (please specify)	0
No Answer	1
Total	25

14. Suppose you had a portfolio of ten investments in young or start-up firms and that, at the time of your investment, each opportunity met your criteria regarding investment size, industry, location, management qualifications etc....

a) How many of the ten would probably turn out to be "losers", where losers are defined as investments in which your eventual losses exceed 50% of your initial investment? How many of the ten would probably turn out to be very successful "winners"? How many of the ten would probably turn out to be "middle of the road" investments, neither winners nor losers?

	Mean %
1) Estimated number of "losers"	27%
2) Estimated number of "winners"	29%
3) Estimated number of "middle of the roads"	48%

- b) What is your best estimate of the return on your investment in a "loser"? a "winner"? a "middle of the road" investment? (We ask that you estimate the potential return in terms of a compound annual rate)

Mean Compound
Annual Rate

1) Potential return on a "loser"	-20.5%
2) Potential return on a "winner"	350.2%
3) Potential return on a "middle of the road"	20.9%

- c) Recognizing that there will be both "winners" and "losers" in any portfolio of investments in young or start-up firms, what do you consider to be a minimum acceptable return on the total portfolio? (This question measures your estimate of the average cost of risk capital for young or start-up companies. Please estimate the minimum acceptable portfolio return in terms of a compound annual rate)

Mean Minimum acceptable portfolio return 31.6%

Part C COMMUNICATION CHANNELS

1. How have you learned of the risk capital investment opportunities that you have seriously considered during the last five years?

	Frequent Source	# of Times Cited as Occasional Source	Not a Source	Most Useful
1) Active personal search	5	7	12	3
2) Accountants	6	11	7	2
3) Attorneys/Lawyers	8	8	8	1
4) Brokerage Houses	4	11	9	0
5) Business Associates	17	3	4	8
6) Friends	11	7	6	5
7) Bank Manager	0	5	19	0
8) Other (specify)				
Direct Contact from Firms	6	1	17	4

2. Which single source has been the most useful for generating leads or possible risk capital investment opportunities that you have seriously considered?

1. Business Associates
2. Friends
3. Direct Contact by Firms

3. Are you satisfied with the effectiveness of existing channels of communication between bona fide entrepreneurs seeking risk capital and private investors like yourself ?

Frequency of Responses

1) definitely satisfied	4
2) basically but not totally satisfied	4
3) neither satisfied nor dissatisfied	8
4) dissatisfied- moderate improvement needed	4
5) totally dissatisfied- room for major improvement	4
No Answer	1
Total	25

Why?

Frequency of Responses

DISSATISFIED

1. Poor Scope

1.1 No central pooling of Information	4
Only a subset of opportunities gets brought to my attention	
1.2 Not Enough Interested Investors	
Shortage of capital	0
1.3 Hit-and-Miss Process/ Chance Happening	
Requires too much legwork	4

2. Inefficiency

2.1 Information Disseminated Too Slowly	
Quality of information is poor	1
2.2 Lack of Understanding	
Poor Communication	2
2.3 Need Assistance preparing Business Plan	1

SATISFIED

1. Network Exist	2
2. There is an Abundance of Capital for Successful Companies	0
3. I am Well Connected, Lots of Opportunities	2

Part D INTEREST ON THE MATCHMAKING NETWORK

Background Information

Ottawa-Carleton may establish a computerized matchmaking network to facilitate the flow of information between entrepreneurs and investors. The ultimate purpose of this network is to match private individuals with risk capital with entrepreneurs seeking funds.

In this matchmaking network, investors and entrepreneurs would provide investment profiles describing their interests and opportunities in order to be listed on the network's database. The network would then submit to investors those investment opportunities that meet their screening criteria. If requested by the investor, a summary of the entrepreneur's business plan would be sent by the network. Both parties would remain anonymous throughout this process.

If the investor wishes to pursue the opportunity further, the two parties can then follow-up through direct contact. The network would essentially be an information service; it would neither evaluate nor endorse the merits of the investment opportunities presented through its services.

1. Would you be interested in participating in such a matchmaking network that referred you to all the investment opportunities registered on its database if they appeared to meet your criteria? Please circle a number from 1 to 5 that best indicates your level of interest where a 1 signifies strong interest and a 5 signifies no interest:

	strong interest		moderate interest		no interest
	1	2	3	4	5
Frequency of responses	5	3	11	2	4

If no interest, please skip to Part E on Page 18.

2. This question is designed to assess how various characteristics of the referral service affect your level of interest in participating in that service. Please indicate how each characteristic would affect your level of interest by circling a number from 1 to 5 where 1 signifies a strong influence on your interest level, and 5 signifies no influence on your interest level:

	Frequency of Responses					No Answer
	Significantly increases my level of interest 1	2	Does not influence my level of interest 3	4	Significantly reduces my level of interest 5	
1) The referral service would operate on a nation-wide level serving investors and entrepreneurs across Canada.	2	3	5	5	6	4
2) The referral service would operate on a regional basis serving investors and entrepreneurs within 300 miles of Ottawa-Carleton.	5	7	8	1	0	4
3) The referral service would operate such that the identity of investors would remain anonymous until they expressed a desire to meet with the entrepreneur.	11	2	7	0	1	4
4) The referral service would operate such that the identity of entrepreneurs would remain anonymous until their business plan had been reviewed by interested investors.	2	1	7	5	6	4
5) The referral service would be run by a government organization.	0	1	6	4	10	4
6) The referral service would operate as a non-profit, non-government corporation.	5	9	5	0	2	4
7) The referral service would operate as a commercial corporation.	1	2	11	3	4	4

	Frequency of Responses					No Answer
	Significantly increases my level of interest		Does not influence my level of interest		Significantly reduces my level of interest	
	1	2	3	4	5	
8) The referral service would charge only the entrepreneurs an annual listing fee that was set to cover the costs of operation.	5	2	10	2	1	5
9) The referral service would charge only the investors an annual listing fee that was set to cover the costs of operation.	2	2	4	5	7	5
10) The referral service would charge both investors and entrepreneurs an annual listing fee that was set to cover the costs of operation.	0	3	10	4	3	5
11) To be listed on the database, it would cost \$100 per year.	3	4	9	0	4	5
12) To be listed on the database, it would cost \$200 per year.	1	3	10	2	4	5
13) To be listed on the database, it would cost \$300 per year.	0	0	8	6	6	5
14) To be listed on the database, it would cost \$500 per year.	0	0	5	6	9	5
15) To be listed on the database, it would cost \$1000 per year.	0	0	2	1	17	5

Part E DEMOGRAPHICS

1. Sex: Male 100% Female 0%

2. Age:	Frequency
1) 24 years and under	0
2) 25-34 years	1
3) 35-44 years	7
4) 45-54 years	8
5) 55-64 years	9
6) 65-69 years	0
7) 70 + years	0
Total	25

3. Present Occupation:	Frequency
Consultant	4
Senior Management, Administrative	7
Engineer	1
Lawyer	4
Entrepreneurs, Principals of Firms	5
Real Estate Sales, Securities Broker	2
Teaching	2
Total	25

76 % Not Retired 24% Retired

4. Family Income:	Frequency
1) less than \$34,999	0
2) \$35,000 - \$49,999	0
3) \$50,000 - \$64,999	0
4) \$65,000 - \$74,999	4
5) \$75,000 - \$99,999	4
6) \$100,000 - \$149,999	3
7) \$150,000 and over	11
No Answer	3
Total	25

5. Total Personal Assets:

	Frequency
1) less than \$49,999	0
2) \$50,000 - \$74,999	0
3) \$75,000 - \$99,999	0
4) \$100,000 - \$149,999	0
5) \$150,000 - \$299,999	1
6) \$300,000 - \$499,999	0
7) \$500,000 - \$999,999	5
8) \$1,000,000 and over	16
No Answer	3
Total	25

6. Personal Net Worth (Personal assets less liabilities):

	Frequency
1) negative or zero	0
2) less than \$49,999	0
3) \$50,000 - \$74,999	0
4) \$75,000 - \$99,999	0
5) \$100,000 - \$149,999	0
6) \$150,000 - \$299,999	1
7) \$300,000 - \$499,999	3
8) \$500,000 - \$999,999	5
9) \$1,000,000 and over	13
No Answer	3
Total	25

7. Highest level of education attained:

	Frequency
1) Elementary school	0
2) some High school	3
3) High school graduate	1
4) some College or University	2
5) College or University graduate	8
6) Post-Graduate	11
Total	25

8. Have you ever been involved at the top management level in the start-up of a new venture? 84% yes 16% no

If yes, were you employed in a similar business prior to the start-up?

44% yes 56% no

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APPENDIX 6 B
ENTREPRENEUR SURVEY
TABULATION OF RESULTS BASED ON 23 COMPLETED
QUESTIONNAIRES

PART A RECENT FINANCING HISTORY

1. How is your firm financed?

	Average Percentage
1) % Debt Capital	21.9%
2) % Risk Capital (equity or equity-type)	66.3%
3) % Other (please specify)	
Retained Earnings	11.8%

2. From what sources has your firm's risk capital (equity or equity-type capital) come?

(check all or any as appropriate)

	# of Times Cited	
	YES	NO
1) own resources	20	3
2) friends, relatives	12	11
3) venture capitalist	5	18
4) private individuals/ informal investors	13	10
5) government assistance/programs (FBDB, SBDC)	5	18
6) others (please specify)		
Idea Corporation	1	22
Pension Fund	2	21
Corporate Investor	1	22

3. Which source has been the most important in terms of supplying the largest infusion of risk capital?

Please indicate your answer by rating each source listed below according to importance where:

1 is the single most important supplying the largest amount of risk capital

2 is the second most important supplying the second largest amount...

3 is the third most important etc...

	Frequency of a 1 or 2 Rating
1) own resources	12
2) friends, relatives	5
3) venture capital firm	5
4) private individuals/ informal investors	13
5) government assistance/programs (FBDB, SBDC)	2
6) others (please specify)	
Pension Fund	2
Idea Corporation	1

4. Considering the following sources of risk capital, how well do you feel your financing needs have been served over the past three years?

	Not Applicable	Frequency of rating					Very Well
	0	Very Poorly	1	2	3	4	5
1) friends, relatives	12	4	3	2	0	2	
2) venture capital firm	16	2	1	2	2	0	
3) private individuals/ informal investors	7	2	6	3	2	3	
4) government assistance/programs (FBDB, SBDC)	18	2	2	1	0	0	
5) others (please specify)							
Pension Fund	0	0	1	0	1	0	
Idea Corporation	0	0	1	0	0	0	
Corporate Investor	0	1	0	0	0	0	

5. Considering each of the following sources of risk capital, were you able to secure funds for your firm when you needed them?

	Not Applicable needed it	exactly when I	Frequency of Rating			
			within reasonable timeframe		within unreasonable timeframe	
	0	1	2	3	4	5
1) friends, relatives	0	4	1	4	1	1
2) venture capital firm	0	0	1	3	1	1
3) private individuals/ informal investors	0	2	3	9	2	0
4) government assistance/programs (FBDB, SBDC)	0	0	1	1	0	2
5) others (please specify)						
Pension Fund	0	0	0	1	1	0
Idea Corporation	0	0	0	0	0	1

6. Considering each of the following sources of risk capital, were you able to get financing on reasonable terms?

	Not Applicable	Frequency of Rating				
		Very reasonable terms		Terms fairly reasonable		Very unreasonable terms
	0	1	2	3	4	5
1) friends, relatives	0	5	2	4	0	0
2) venture capital firm	0	1	1	2	1	1
3) private individuals/ informal investors	0	5	4	5	1	1
4) government assistance/programs (FBDB, SBDC)	0	1	0	1	2	0
5) others (please specify)						
Idea Corporation	0	0	0	1	0	0
Pension Fund	0	0	1	0	1	0

7. If your firm needed financing today, what potential source(s) of supply would you approach?

	# of Times Cited	
	YES	NO
1) Own shareholders	13	10
2) Friends, Relatives	3	20
3) Bank, Caisse Populaire, Credit Union	11	12
4) Financial Corporation, Trust Company	4	19
5) Venture Capitalist	11	12
6) Investment Dealer	3	20
7) Government	6	17
8) Informal Investors, Private Individuals	12	11
9) Others (please specify)		
Pension Fund	2	21
Corporate Investor	2	21

8. How have you learned of potential sources of equity or equity-type capital that you have seriously considered or pursued?

	Frequency Cited as			
	Frequent Source	Occasional Source	Not a Source	Most Useful
1) Active personal search	12	3	8	6
2) Accountants	4	13	6	2
3) Attorneys/Lawyers	2	12	9	1
4) Brokerage Houses	1	6	16	0
5) Business Associates	9	7	7	7
6) Friends	5	9	9	4
7) Bank Manager	0	8	15	0
8) Other (please specify)				
Venture Capitalist	1	0	22	0
Government	0	1	22	0
Shareholders	1	1	21	0

9. Which single source has been most useful for generating leads or potential sources of risk capital that you have seriously considered?

1. Business Associates
2. Active Personal Search
3. Friends

10. Are you satisfied with the effectiveness of existing channels of communication between bona fide entrepreneurs seeking risk capital and private investors like yourself?

Frequency of Responses

1) definitely satisfied	0
2) basically but not totally satisfied	6
3) neither satisfied nor dissatisfied	5
4) dissatisfied- moderate improvement needed	5
5) totally dissatisfied- room for major improvement	7
No Answer	
Total	23

Why?

Frequency-of Responses

DISSATISFIED

1. Poor Scope

1.1 No central pooling of Information Only a subset of opportunities gets brought to my attention	4
1.2 Not Enough Interested Investors Shortage of capital	1
1.3 Hit-and-Miss Process/ Chance Happening Requires too much legwork	4

2. Inefficiency

2.1 Information Disseminated Too Slowly Quality of information is poor	2
2.2 Lack of Understanding Poor Communication	4
2.3 Need Assistance preparing Business Plan	0

SATISFIED

1. Network Exist	2
2. There is an Abundance of Capital for Successful Companies	1
3. I am Well Connected, Lots of Opportunities	1

Part B INTEREST ON THE MATCHMAKING NETWORK

Background Information

Ottawa-Carleton may establish a computerized matchmaking network to facilitate the flow of information between entrepreneurs and investors. The ultimate purpose of this network is to match private individuals with risk capital with entrepreneurs seeking funds.

In this matchmaking network, investors and entrepreneurs would provide investment profiles describing their interests and opportunities in order to be listed on the network's database. The network would then submit to investors those investment opportunities that meet their screening criteria. If requested by the investor, a summary of the entrepreneur's business plan would be sent by the network. Both parties would remain anonymous throughout this process.

If the investor wishes to pursue the opportunity further, the two parties can then follow-up through direct contact. The network would essentially be an information service; it would neither evaluate nor endorse the merits of the investment opportunities presented through its services.

1. Would you be interested in participating in such a matchmaking network that referred you to all the investment opportunities registered on its database if they appeared to meet your criteria? Please circle a number from 1 to 5 that best indicates your level of interest where a 1 signifies strong interest and a 5 signifies no interest:

	strong interest		moderate interest		no interest
	1	2	3	4	5
Frequency of responses	8	5	4	2	4

If no interest, please skip to Part E on Page 18.

2. This question is designed to assess how various characteristics of the referral service affect your level of interest in participating in that service. Please indicate how each characteristic would affect your level of interest by circling a number from 1 to 5 where 1 signifies a strong influence on your interest level, and 5 signifies no influence on your interest level:

	Frequency of Responses					No Answer
	Significantly increases my level of interest 1	2	Does not influence my level of interest 3	4	Significantly reduces my level of interest 5	
1) The referral service would operate on a nation-wide level serving investors and entrepreneurs across Canada.	7	4	5	3	0	4
2) The referral service would operate on a regional basis serving investors and entrepreneurs within 300 miles of Ottawa-Carleton.	3	6	7	3	0	4
3) The referral service would operate such that the identity of investors would remain anonymous until they expressed a desire to meet with the entrepreneur.	7	3	3	2	4	4
4) The referral service would operate such that the identity of entrepreneurs would remain anonymous until their business plan had been reviewed by interested investors.	9	3	3	2	2	4
5) The referral service would be run by a government organization.	0	0	7	5	7	4
6) The referral service would operate as a non-profit, non-government corporation.	2	8	9	0	0	4
7) The referral service would operate as a commercial corporation.	5	1	11	2	0	4

	Frequency of Responses					No Answer
	Significantly increases my level of interest 1	2	Does not influence my level of interest 3	4	Significantly reduces my level of interest 5	
8) The referral service would charge only the entrepreneurs an annual listing fee that was set to cover the costs of operation.	2	4	9	3	1	4
9) The referral service would charge only the investors an annual listing fee that was set to cover the costs of operation.	2	4	9	4	0	4
10) The referral service would charge both investors and entrepreneurs an annual listing fee that was set to cover the costs of operation.	4	6	8	1	0	4
11) To be listed on the database, it would cost \$100 per year.	8	6	5	0	0	4
12) To be listed on the database, it would cost \$200 per year.	2	11	6	0	0	4
13) To be listed on the database, it would cost \$300 per year.	1	6	7	4	1	4
14) To be listed on the database, it would cost \$500 per year.	1	3	5	6	4	4
15) To be listed on the database, it would cost \$1000 per year.	1	2	2	5	9	4

Part C EXPERIENCES RAISING FUNDS

1. Overall, would you say that you have experienced problems in raising risk capital (equity or equity-type capital) for your business?

56.5% yes

43.5% no

If no, skip to question # 4 at the bottom of this page.

2. Do you feel that problems in raising risk capital have seriously inhibited your firm's ability to grow?

39.1% yes

68.9% no

3. Have you experienced any other problems that you attribute to a difficulty in raising risk capital?

	# of Times Cited	
	YES	NO
1) inability to sustain employment growth	3	20
2) inability to expand	5	18
3) cash flow problems	10	13
4) inability to find competent employees	2	21
5) other (specify)		
Inability to obtain fixed capital assets	1	22
Missed opportunities	1	22
Decreased R and D activities	1	22

4. Do you think there is a shortage of risk capital (equity and equity-type capital) available to companies like yours? 65.2% yes 34.8% no

If you answered yes, why do you think there is such a shortage?

	Frequency of Response
Canadians are reluctant to take on risk	7
Not enough investors	2
Investors lack technical expertise for evaluation	4
Banks are too 'tight'	1
Communication problems	1

5. Over the past three years, how many firm offers of risk capital financing have you seriously considered?

Total number of offers considered 73

Average number per Entrepreneur per year 1

6. Have you ever rejected a firm offer of risk capital financing?

47.8% yes 52.2% no

If no, skip to question # 8.

7. Generally, what were the reasons for turning down firm offers of risk capital financing?

	# of times cited	
	YES	NO
1) negotiated a better offer with investor	0	23
2) obtained better offer with another investor	3	20
3) best offer not tolerable	2	21
4) rejected for reason other than financing terms	5	18
5) other (please specify)		
Wanted to change Board of Directors	1	22
Investor too small	1	22
Investor's perception of firm's value too low	1	22

8. In the past three years, have investors or other suppliers of risk capital ever turned down your request for financing so that you had to go to another source or abandon your plans?

47.8% yes 52.2% no

If yes, why do you think you were turned down?

	Frequency
Investor unfamiliar with technology, product, business	3
Too risky	4
No track record	2
Not consistent with investor's criteria	2
Lack of equity investment by founders	1
Investors lacked foresight	1

9. Do you ever use short-term financing (i.e. bank line of credit) to meet long-term needs (i.e. new equipment or permanent increases in working capital) ?

65.2% yes 34.8% no

Why?

	# of times Cited	
	YES	NO
1) temporary measure (waiting for a better time to obtain long-term financing)	6	17
2) because of covenant restrictions imposed by suppliers	1	22
3) only type of financing I could get	8	15
4) other (specify) Short-term was adequate to cover small equipment purchases	3	20

Is this policy desirable?

13% yes 87% no

Does it occur more often than you would like it to?

22% yes 78% no

10. How much of your time, over the last year, do you estimate that you have spent trying to locate adequate sources of capital ?

	Frequency
1) less than 10%	11
2) 10% - 30%	8
3) 31% - 50%	4
4) more than 50%	0
total	23

Average amount of time spent over the last year 16%

Part D DEMOGRAPHICS

1. When was the business started (i.e. when did you incorporate)?

Average age 4.8 years

2. How many full-time employees are there (approximately)?

Average number of employees 29

3. Please describe your major product or service:

High Technology Manufacturing	8
Software Developers	9
Manufacturing other	4
Service	2

4. What were the firm's approximate sales (\$) in 1985?

Were they:

	Frequency
1) less than \$99,999	1
2) \$100,000 - \$ 199,999	3
3) \$ 200,000 - \$ 499,999	2
4) \$ 500,000 - \$ 1 million	3
5) \$ 1 million - \$5 million	10
6) \$ 5 million - \$10 million	3
7) \$ 10 million - \$ 20 million	1
8) more than \$20 million	0

Average Sales \$2.9 million

5. How fast, on average, do you estimate that your annual sales have been growing over the past 2-3 years?

	Frequency
1) no growth	2
2) between 0% and 9%	1
3) 10% and 19%	3
4) 20% and 29%	6
5) 30% and 49%	3
6) over 50 %	8
7) shrinkage	0

Average growth rate 39.7%

6. What was the approximate book value of your firm's asset base (\$) in 1985?

Was it:

	Frequency
1) less than \$ 99,999	3
2) between \$ 100,000 - \$ 199,999	4
3) \$ 200,000 - \$ 499,999	6
4) \$ 500,000 - \$ 1 million	3
5) \$ 1 million - \$ 5 million	6
6) \$ 5 million - \$ 10 million	1
7) \$ 10 million - \$ 20 million	0
8) more than \$ 20 million	0

Average Book Value of Respondent Firms' Assets \$1.2 Million

REFERENCES

- Akerlof, G., "The Market for Lemons' Qualitative Uncertainty and the Market Mechanism", *Quarterly Journal of Economics*, No. 4, 1970, p. 488-500.
- Association of Canadian Venture Capital Companies, "Unaudited Information Regarding the Investment Activities of the Association Members during the Calendar Year 1985", prepared by Venture Economics Limited in conjunction with the Association and Ernst and Whinney, May, 1986.
- Bárnea, A., R.A. Haugen, and L.W. Sengbet, *Agency Problems and Financial Contracting*, New Jersey, Prentice-Hall Inc., 1985.
- Bean, A.S., D. Schiffel, and M.E. Moege, "The Venture Capital Market and Technological Innovation", *Research Policy*, Vol. 4, 1975.
- Bishop, Y.M.M., S.E. Fiendberg, and P.W. Holland, *Discrete Multivariate Analysis: Theory and Practice*, Cambridge, Massachusetts, The MIT Press, 1975.
- Chan, Y.S., "On the Positive Role of Financial Intermediation in Allocation of Venture Capital in a Market with Imperfect Information", *Journal of Finance*, Vol. 38, NO. 5, December 1983, p. 1543-1568.
- Charles River Associates Inc., *An Analysis of Capital Market Imperfections*, prepared for the Experimental technology Incentives Program, National Bureau of Standards, Washington, DC, 1976.
- Copeland, T.E., and J.F. Weston, *Financial Theory and Corporate Policy*, Don Mills, Ontario, Addison-Wesley, 1983.
- Ernst and Whinney, "Characteristics of Successful Companies Financed by Canadian Venture Capital Sources", Prepared for the Association of Canadian Venture Capital Companies, May, 1984.
- Facsym Research Limited, *Small Business Financing and Non-Bank Financial Institutions*, a study for the Small Business Financing Review, September 1981.
- Fells, G., "Venture Capital in Canada - A Ten-Year Review", *Business Quarterly*, Spring 1984, p. 70-77.
- Feigen, J., "Finding Seed Capital: Who are these Investors?", *In Business*, March-April 1986, P. 56-58.
- The Financial Post, "Special Report on Small Business", September 14, 1985.
- Government of Alberta, "Position and Policy Statement on Enhancing the Alberta Capital Market", September 1985.
- Greeno, D.W., M.S. Sommers, and G.H. Haines, "What kind of subjects can a referral system generate? A case analysis", *Journal of Market Research Society*, Vol. 18, No. 4, 1976, p. 207-210.

- Grdssman, S.J., and J.E. Stiglitz, "On the Impossibility of Informationally Efficient Markets", *The American Economic Review*, Vol. 70, No. 3, June 1980, p. 393-408.
- Hays, W.L., and R.L. Winkler, *Statistics: Probability, Inference, and Decision*, Montreal, Holt Rinehart and Winston Inc, 1971.
- Kinnear, T.C., and J.R. Taylor, *Marketing Research: An Applied Approach*, 2nd ed., Toronto, MacGraw-Hill Inc., 1983.
- Kostuch, M., "Cashing in on the New Entrepreneurial Climate Part II- Sources of Help and Financing", *The Business Quarterly*, Spring 1976, p. 61-73
- Krasner, O., and E. Tymes, "Informal Risk Capital in California", *Frontiers of Entrepreneurial Research*, Babson College, Wellesly, MA, 1984.
- Kurtz, J., "Real Estate Tax Shelter- A Postscript", *National Tax Journal*, Vol. 26, No. 3, 1973, p. 341-346.
- Larntz, K., "Small Sample Comparisons of Exact Levels for Chi-Square Goodness-of-Fit Statistics", *Journal of the American Statistical Association*, Vol. 73, 1978, p. 253-263.
- Leland, H.E., and P.H. Pyle, "Informational Asymmetries, Financial Structure, and Financial Intermediation", *Journal of Finance*, May 1977, p. 371-386.
- Logan, W.B., "Finding Your Angel", *Venture*, March 1986, p. 38-44.
- MacDonald, M., "Pension Funds and Venture Capital- The Critical Links between Savings, Investment, Technology, and Jobs", report prepared for the Science Council of Canada, March 1985.
- Navarre, A., and D. Janoff, *Role of Matchmaking Networks in the Financing of Small Business*, Departments of Finance and Regional and Industrial Expansion, Ottawa, Canada, 1986.
- Neave, E.H., *Canada's Financial System*, Toronto, Wiley and Sons Canada Ltd., 1981.
- Ontario Ministry of Industry, Trade, and Technology, "Ontario Technology: A Quarterly Review", Vol. 1, Issue 2, January 1986.
- Osgood, W.R., and W.E. Wetzel, "A Systems Approach to Venture Initiation", *Business Horizons*, October 1977, p. 42-53.
- Poapst, J.V., "Impact of Government Regulations and Programs on Institutional Debt Financing of Small High Technology Business", published in *Managing High Technology Volume I: Decisions for Success*, conference proceedings for the Research Centre for High Technology Management, Ottawa, Feb. 27-28, 1986, p. 147-158.
- Public/Private Ventures, Philadelphia, PA, "Critical Issues in Development Finance", a conference report prepared for the Economic Development Administration, U.S. Department of Commerce, January 1980.

Seymour, C.R., and W.E. Wetzel, "Informal Risk Capital in New England" prepared for Office of Advocacy, U.S. Small Business Administration, University of New Hampshire, 1981.

Statistics Canada, Small Area Program, "Statistical Information on the Federal Electoral District: Ottawa-Centre", November 1984.

Statistics Canada, Characteristics of High Income Families, 1980.

Toronto Stock Exchange, Nothing Ventured...Investing in Canada's Winners, 1980.

Toronto Stock Exchange, Canadian Shareowners: Their Profile and Attitudes, April 1984.

Tull, D.S., and D.I. Hawkins, Marketing Research: Measurement and Method, 2nd ed., New York, MacMillan Publishing Company Inc., 1980.

Urban, G.L., and J.R. Hauser, Design and Marketing of New Products, New Jersey, Prentice-Hall Inc., 1980.

Venture Economics Canada Ltd., "Multi Client Project: The Canadian Venture Capital Industry" prepared for the Department of Finance Canada, January 1986.

Wetzel, W.E., "Angels and Informal Risk Capital", *Sloan Management Review*, Summer 1983, p. 23-34.

_____, "Venture Capital Network, Inc.: An Experiment in Capital Formation", prepared for the Entrepreneurship Research Conference, Georgia Institute of Technology, Atlanta, Georgia, April 1984.

_____, "Informal Risk Capital- Knowns and Unknowns", prepared for State-of-the-Art in Entrepreneurial Research, GK Foundation, February 1985.

_____ and I.G. Wilson, "Seed Capital Gaps: Evidence from High Growth Ventures", Entrepreneurship Research Conference, Wharton School, University of Pennsylvania, Philadelphia, Pennsylvania, April 1985.

White, R.W., "Raising Risk Capital in Canada and the U.S. - A Comparison", report completed for the Department of Finance Canada, October 1984.

REFERENCE NOTES

Gadbois, A., "Provincial Venture Capital Corporations: A Comparative Analysis, Universite de Moncton, Moncton N.B., 1986.

Gaston R.J., and S. Bell, Informal Risk Capital in the Sunbelt Region, Applied Economics Group Inc., Knoxville, TN., January 1986.

Kobernick, J.M., and I.C. MacMillan, New York University, New York, NY, 1986.

Loo, S., "The Issuance of Unseasoned Equity- A Comprehensive Study", unpublished baccalaureate paper Carleton University, Ottawa, Ontario, September 1985

MacMillan, I.C., R. Siegel, and P.N. Subba Narasimba, "Criteria Used by Venture Capitalists to Evaluate New Venture Proposals", prepared with support from the Centre for Entrepreneurial Studies, New York University, New York, N.Y.

Ottawa Carleton Economic Development Corporation, Directory of Manufacturing Firms in the Ottawa-Carleton Area, draft of March 1987, Ottawa Ontario.

_____, Directory of Software Developing Firms in the Ottawa-Carleton Area, Ottawa, Ontario, 1986.

Venture Capital Network Inc., newsletter to VCN Entrepreneurs and Investors, dated December 10, 1985.

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