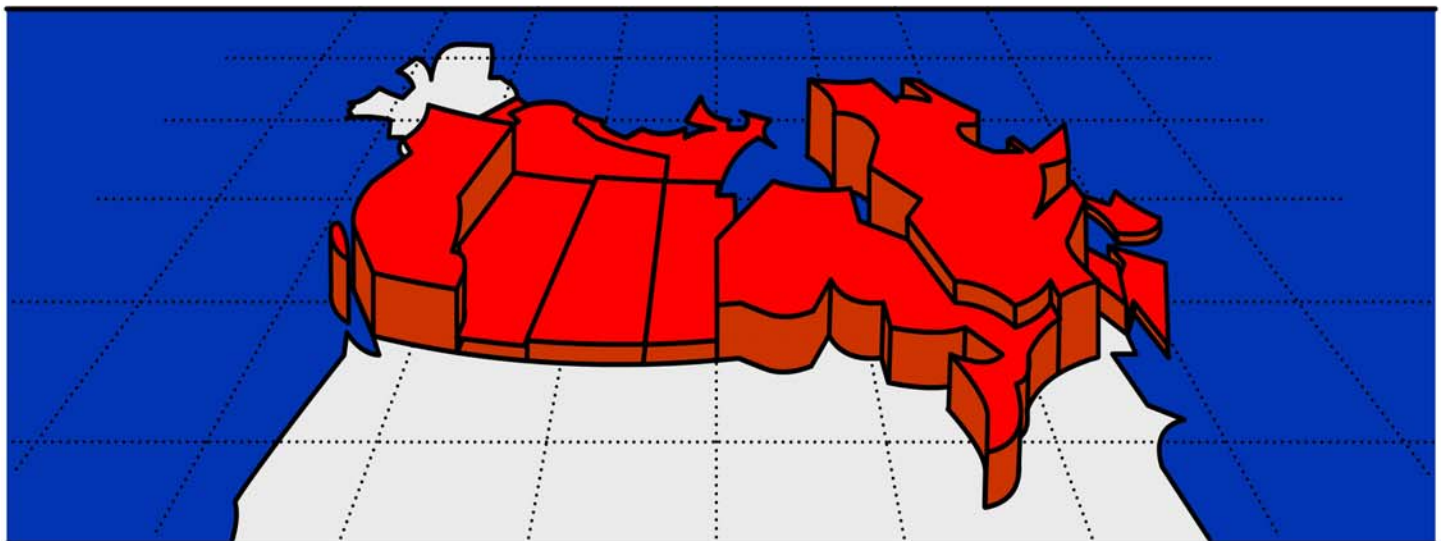


# The Equity Capital Program in British Columbia

An assessment of capital availability,  
program efficiency, and policy alternatives

April 2005



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## Foreword

The context of the report is the rapidly growing knowledge-based sector and the associated rapidly evolving market for early stage equity investment in British Columbia. There are two background themes that deserve particular attention.

First, much of B.C.'s private equity marketplace is relatively young, with an evolving mix of venture capital firms, fund managers, angel investors, and other participants in the market. Total investment in venture capital in B.C. approximately followed the boom and bust pattern associated with the "high-tech" and venture capital investment bubble that burst in 2000. However, B.C.'s early stage equity market has been expanding relative to other jurisdictions as it continues to develop and mature.

The second background trend relates to the large increase in funding of university-based and other applied research in Canada, funded by both federal and provincial governments. This creates an increasing potential supply of emergent firms, particularly in the knowledge-based sector. This supply pressure in British Columbia is particularly strong in view of the commitment of the Government of British Columbia to make the province a prominent jurisdiction for the knowledge-based sector. In light of this objective, Government officials (and others) have emphasized the importance of building an equity "eco-system" that provides appropriate funding for emergent businesses from earliest or "seed" stages right through to full commercialization.

An important component in the development of an equity eco-system in B.C. is the British Columbia Equity Capital Program (ECP), which provides support for equity investment in small B.C. businesses through a 30% refundable tax credit for eligible investments. This report provides an overview of the ECP and its current effects, focusing on the availability of early stage equity capital in B.C. given the current structure of the ECP, on the efficiency of the ECP in meeting its objectives, and on possible changes in ECP policy or design.

**The Equity Capital Program in British Columbia:  
An assessment of capital availability, program efficiency, and policy alternatives**

**EXECUTIVE SUMMARY**

1. Objectives: The Equity Capital Program (ECP) is one of several related programs through which the Province of British Columbia uses tax credits to promote equity investment in small emerging businesses in B.C., particularly but not exclusively in the "knowledge-based" sector. The objective of this report is to assess the availability of early stage equity capital in B.C., the efficiency of the ECP in meeting its objectives, and possible policy or program changes.

**A. Availability<sup>1</sup>**

2. Importance of Angel Investment: The most important source of early stage equity finance is angel investors rather than formal venture capital. We estimate that about 60% to 80% of arm's length, early stage, private equity is angel investment. Therefore any analysis of availability that does not deal effectively with angel finance misses most of the story. However, there is very little systematic information about angel finance in most jurisdictions.

3. Comparison with Tier 1 Venture Capital Jurisdictions: It is possible to make cross-jurisdictional comparisons of formal venture capital. There are two Tier 1 jurisdictions in North America: California and Massachusetts. They have much higher venture capital availability and much higher levels of venture capital transactions than other jurisdictions. They have venture capital investment rates (per unit of GDP) on the order of 5 times the B.C. level or more, depending on the year. However, the difference in the 2002-2004 period is less dramatic than in the 1999-2001 period, indicating that B.C. has made progress in relative terms.

4. Comparison with Tier 2 Venture Capital Jurisdictions: British Columbia might reasonably be compared with Tier 2 venture capital jurisdictions such as Ontario, Quebec, Washington and Oregon. B.C. investment rates lag Ontario, Quebec, and Washington by modest but significant amounts. B.C. also lags the U.S. average. However, these lags are less in the post-bubble period of 2002-2004 than in earlier years. B.C. has been close to the American average, and to Quebec and Ontario, in the 2002-04 period.

5. Early Stage Venture Capital: Point 4 refers to all formal venture capital stages. For early stage venture capital only, British Columbia has moved ahead of Ontario, Quebec, Washington, Oregon, and the U.S. average in the 2002-04 period. We believe that this improvement in relative performance is partly due to the Equity Capital Program (ECP).

6. Deal Size: One indicator of availability is "deal size". A lack of venture capital availability might lead to smaller deals as entrepreneurs are "rationed" by venture capitalists. Deal size in Canada tends to be much less than in the United States. Canadian deal sizes average well below half the U.S. level, even adjusting for stage of finance. Within Canada, B.C. is about 20% behind Ontario but is well ahead of other Canadian jurisdictions, including Quebec. Furthermore, the lag with respect to Ontario is largely eliminated by adjusting for industry composition.

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<sup>1</sup> Venture capital data reported in this section is based on data collected by Macdonald & Associates Ltd. and by PWC Moneytree, and makes use of GDP data from Statistics Canada and the U.S. Bureau of Economic Analysis.

7. Going Public Early: An additional indicator of private equity availability is the stage at which firms “go public” with an initial public offering. In Canada, firms tend to go public earlier than in the United States, due in part to the presence of the TSX Venture exchange, which explicitly describes itself as an “early stage” public equity market. Companies from B.C. and Alberta are particularly heavy users of the TSX Venture exchange. TSX Venture activity is both a cause and a consequence of the relative shortfall of private equity in Canada.

8. Pension Funds: Pension funds (which are the main institutional investors in venture capital) have a smaller presence in venture capital funds in Canada than in the United States. We would expect this to result in lower levels of venture capital availability in Canada.

9. Effect of Angel Finance: Comparisons of early stage finance are of limited value without information on angel finance. Very little such information exists. We believe that consideration of angel finance would, if anything, improve the apparent relative performance of B.C. The ECP contributes to angel finance in BC, particularly through the “direct investment” component of the program, which allocated tax credits directly to eligible business corporations (EBCs)..

#### **B. Program Efficiency – Is the ECP meeting its objectives efficiently?**

10. Administrative Costs: The costs of the Ministry of Small Business and Economic Development (SBED) in administering the ECP are, at present, well below 1% of the annual “portfolio” of new investments. We have not looked closely at specific administrative expenses but the aggregate level is sufficiently low that we do not see administrative cost as a significant issue.

11. Additionality: The efficiency of the ECP in meeting its objectives is closely related to “additionality”. This addresses the extent to which the program is inducing new investment as opposed to simply providing tax credits for investments that would have occurred in any case. We estimate the additionality at about 60%, which is in the normal range for programs of this type. We emphasize that this is a rough estimate and that it is better to think of a range of about 50% to 70%.

12. Utilization: Another reflection of program efficiency relates to "utilization". This addresses the issue of whether sufficient capital is raised to make use of the allocated tax credits. The Ministry tries to allocate enough credits so that final utilization comes close to the maximum allowable level of tax credits without exceeding it. There have been some problems in the past but the system in place in 2004 seems to be working well and should allow for almost full utilization of the available credits without having to withdraw allocations.

13. Effect of the ECP on Early Stage Capital: Overall, we estimate that the ECP and its closely related or “sister” programs (the Community Venture Capital Program and the New Media Venture Capital Program) are increasing early stage equity finance in British Columbia by about \$36 million per year as of 2004, accounting for about 15% of total angel and formal venture capital early stage investment. The ECP by itself accounts for about 9% of the total. While the role of the ECP is far from dominant, we view it as highly significant. We also emphasize that there is considerable estimation uncertainty underlying this estimate. We believe that the figures of 9% and 15% are conservative estimates.

14. Program Acceptance: The ECP has achieved a high level of acceptance and approval in the investment community and in the knowledge-based entrepreneurial community. Support for the

direct investment or EBC component is particularly strong.

15. Taxes and Firm Performance: It would be useful to assess the performance of the program with respect to its effects in increasing tax revenues and its effects on the performance of supported firms. However, an analysis of these questions is beyond the mandate and scope of this study. We do provide some case studies of successful firms supported by the ECP, as well as some basic data about firms in the ECP, and we do consider tax revenue effects. Our analysis suggests that the tax revenue effects of the program are modest and should not be viewed as a primary justification for the program. What is more important than tax effects is the contribution to overall economic growth, generation of employment opportunities, effects on individual income (including returns to investors associated with the program), and effects of the new innovative products on general welfare. It is still rather early to say much about these program outcomes, especially for the most recent aspects of the program.

### **C. Policy and Program Design Recommendations:**

16. National Program and Integration with Labour-Sponsored Fund Programs: It would be very valuable to have a national program<sup>2</sup> based on the ECP model, particularly the EBC component. We would prefer to see an ECP system treated comparably to the labour-sponsored venture capital funds. In essence, we would like to see the labour-sponsored program replaced by a general ECP-style program at the national level. This program would include labour sponsored funds but would not be limited to labour sponsored funds. Under a national ECP program, the federal and provincial governments should share the cost. We also suggest that tax credits under the program be capped (as with the ECP) and that tax credits be allocated based on performance.

17. Demand Management: One important feature of the ECP is that there was "excess demand" for tax credits in fiscal 2003-04 and (we believe) in 2004-05. As a result some parties who wanted to receive tax credits were unable to do so because of the overall budgetary constraints on the program. One concern about excess demand is that high value investments might be lost as a result of the "rationing" of tax credits. There are several ways in which excess demand could be reduced, including increasing the available tax credit budget, allowing tax credited investment to be "blended" with other investments by VCCs or other parties, or reducing the value of the tax credit to something less than 30%. Standard economic analysis suggests that reducing the tax credit would have the advantage of screening out marginal investments and would allow a higher level of tax-credited investment for a given tax credit budget. We recommend a reduction under conditions of excess demand. SBED Ministry officials point out that competing jurisdictions offer tax credits at the 30% level or higher and that the labour-sponsored venture capital funds offer a 30% tax credit. Reducing the ECP tax credit would put retail VCCs at a competitive disadvantage relative to these and other investment vehicles in obtaining investments from retail investors.

18. Fund of Funds: We do not have a strong recommendation on a fund-of-funds model as a complement to the existing ECP. If a fund-of-funds model would bring in large pension fund contributions to early stage investment in B.C. then it would probably be worthwhile. However, if it would be simply be a matter of reshuffling existing capital we would not see it as a high priority.

19. Allocation between Program Segments: We have not done a comparative analysis of program performance in the different program areas. We note that community support is very strong for

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<sup>2</sup> A very similar recommendation has been made by the Canadian Task Force on Early Stage Funding.

the EBC component. Support for the VCC components, particularly the retail VCCs, is more mixed. We also note that the EBC component provides earlier stage investment (on average) than the VCC components. On the other hand, we acknowledge that retail VCCs have a more stable supply of funding than other private equity investment vehicles as retail investors are less volatile than both angels and institutional investors in venture capital. As described more fully in the body of the report, SBED Ministry officials emphasize the role of retail VCCs in providing competition in the early stage equity market and in therefore providing more choices for retail investors seeking investment vehicles. The Ministry also emphasizes the importance of retail VCCs in relieving a potential bottleneck in early stage financing at the investment stage "following on" from early angel and family and friend investment.

20. Application and Allocation: We believe that the application and allocation methods work well, subject to one major problem that arose with the application of budget control in 2003-04. We would suggest that the program have a rolling 2-year or 3-year budget so that it can over-allocate in one year if necessary. Thus, once credits are granted they should not be withdrawn before they expire. However, we would also suggest that credits expire 6 months from when they are granted if capital has not been raised.

21. Constraints: We do not see a strong rationale for changing program constraints in the absence of a shift to a national program. However, we favour reducing the holding period from 5 years to 3 years. It is also important that program constraints not serve as a barrier to "follow-on" investment.

#### **D. Future Analysis**

22. Firm Performance: This study provides a "snapshot" of the ECP and recommendations regarding future policy directions. We see it is a precursor to two potential future studies. One useful study would involve an assessment of the performance of firms supported by the ECP. As the direct investment model started very recently (in 2003) it would be necessary to wait perhaps 2 or 3 more years before taking a reading on this component. An assessment of investor returns and other economic benefits could be included in such a study.

23. Eco-system Dynamics: A second future study should be targeted at development of a strategy for evolution of the equity eco-system in B.C. (and in Canada as a whole). There has been a large increase in funding of university-based applied research in Canada and this has been amplified by government policies in B.C. Accordingly, it is important to consider strategies needed to allow the equity eco-system to absorb and generate maximum benefits from the anticipated resulting flow of new knowledge-based ventures into the market for equity capital.

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## 1. Background and Objectives of the Study

The Equity Capital Program (ECP) is one of several related programs<sup>3</sup> through which the Province of British Columbia provides support for equity investment in small businesses based in British Columbia. The primary feature of the program is a 30% refundable tax credit<sup>4</sup> for eligible investments. The program focuses largely but not exclusively on the “knowledge-based” sector, especially information technology and biotechnology.

The objective of this report is to address three specific questions that are relevant to the evolution of the Equity Capital Program. These three questions relate to the availability of capital, to the efficiency of the program in meeting its objectives, and to possible policy alternatives or changes in the design of the program.

The study has been commissioned by Leading Edge BC, with cooperation from the B.C. Ministry of Small Business and Economic Development, the Ministry of Finance, the Premier’s Technology Council, and the Sauder School of Business at UBC.

Section 2 of this report outlines the Equity Capital Program and describes its objectives. Section 3 discusses the main sources of early stage financing. Section 4 presents our methodology and outlines the sources of information used in this study. Section 5 focuses on the analysis of availability while Section 6 focuses on our analysis of the program’s efficiency in meeting its objectives. Section 7 contains case studies of three high-profile ECP-backed companies and provides information on (other) randomly selected ECP-backed companies. Section 8 addresses policy alternatives. Much of the data, qualitative information, and detailed analysis underlying the main text is contained in six appendices.

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<sup>3</sup> In addition to the Equity Capital Program, credits for business investment are also provided through the Community Venture Capital Program, the Employee Share Ownership Program, the Labour Sponsored Investment Program, and the New Media Venture Capital Program.

<sup>4</sup> The credit is administered through the tax system. It is refundable in that investors receive the credit even if it exceeds their B.C. tax liability.

## 2. Outline and Objectives of the Equity Capital Program

### 2.1 Program Outline

The ECP was first established in 1985 under the Small Business Venture Capital Act and is administered by the Ministry of Small Business and Economic Development<sup>5</sup>. The program has evolved significantly since 1985 and at present consists of two components. One component is based on Venture Capital Corporations (VCCs), which are registered holding companies that raise investment capital from B.C. residents and then invest these funds in qualifying businesses. A qualifying business is referred to as an “eligible small business” (ESB). Tax-credit eligible investments flow from investors, through VCCs, to ESBs. The other component is the direct investment option under which a small business can register as an Eligible Business Corporation (EBC) and accept tax-credit eligible investments directly from investors without the need for a VCC. The direct investment component of the program is relatively new as it began in 2003.

Within the VCC component of the program it is important to distinguish among three types of VCCs. First, there are VCCs that invest in only one small business. They are referred to as “single purpose” VCCs. Normally a single purpose VCC has only one investor (who can be viewed as an “angel” investor). The vast majority of VCCs are single business VCCs, but they account for a small share of total VCC capital. The second VCC category consists of portfolio VCCs that receive investments from accredited investors only and invest in a portfolio of companies. The investors in portfolio VCCs often have other angel investments. Typically several investors contribute to one portfolio VCC. One such VCC, the Western Universities Technology Innovation Fund (WUTIF), maintains a relatively large portfolio of investors and investments. We prefer to think of investments in portfolio VCCs as not being angel investments as the portfolio VCC is an intermediary and this investment is therefore intermediated.

The third group of VCCs are the “retail” VCCs. They may raise money from accredited investors. However they get most of their resources from retail investors – members of the general public who do not qualify as accredited investors. Because of their reliance on retail investors, these VCCs are required to issue prospectuses to potential investors. Retail VCCs maintain significant portfolios of investments and are, in this respect, like traditional venture capitalists. These VCCs are often referred to as “prospectus” VCCs. The lion’s share of VCC tax credits flow to retail VCCs. They normally receive multi-year tax credit allocations from the ECP. The other VCCs normally receive single-year tax credit allocations, as do the EBCs.

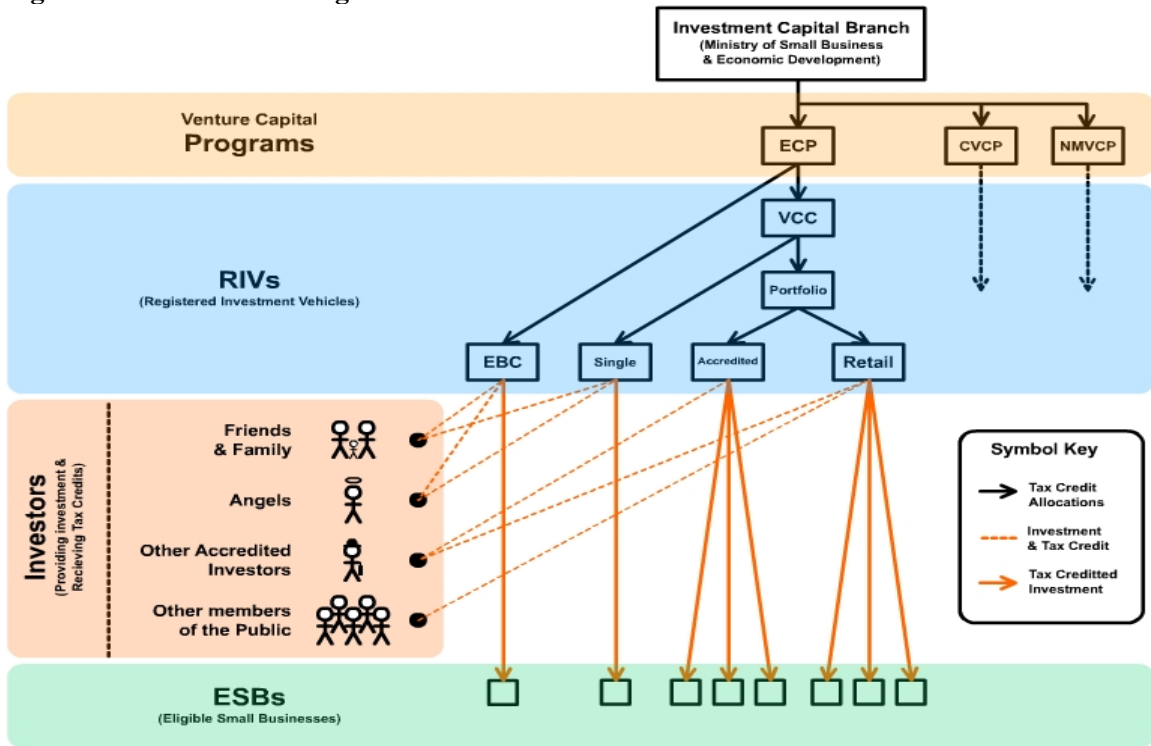
In 2003 and 2004 there were three active retail VCCs making investments in British Columbia: the BC Advantage Fund (“BC Advantage”), British Columbia Discovery Funds (“BC Discovery”), and the Pender Growth Fund (“Pender”). One additional retail VCC, NDI Life Sciences, raised money but made no investments that we can identify in 2003 or 2004. NDI Life Sciences was taken over by Pender in August 2004.

Figure 1 provides a diagrammatic overview of the ECP, identifying the various participants in the program. Table 1 provides a corresponding list of acronyms used in the diagram and throughout this report.

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<sup>5</sup> Within the Ministry, the branch responsible for administration of the ECP and the other related programs is the Investment Capital Branch.

**Figure 1: A Schematic Diagram of the ECP**



SBED	Ministry of Small Business and Economic Development
ICB	The Investment Capital Branch, responsible for administration of programs
ECP	Equity Capital Program (the primary program of the ICB)
CVCP	Community Venture Capital Program
NMVCP	New Media Venture Capital Program
RIV	Registered Investment Vehicle – a company that gets a tax credit allocation
VCC	Venture Capital Corporation – a holding company for tax credited investment
EBC	An Eligible Business Corporation, the new RIV introduced in 2003
ESB	Eligible Small Business. EBCs are ESBs and RIVs
F&F	Friends and Family of company founders

The Equity Capital Program is limited in size by the value of tax credits that can be issued. For 2004/05 the ceiling on the annual tax credit is \$20 million per year for the ECP in combination with two other closely related programs: the New Media Venture Capital Program (NMVCP) and the Community Venture Capital Program (CVCP). The ECP share is \$12 million. At a 30% tax credit rate, this would allow for investments of up to  $12 / .3 = \$40$  million. This ceiling is implemented by giving each VCC and EBC a particular allocation indicating the maximum amount of tax credit that can be provided. According to the website maintained by the

Ministry<sup>6</sup>, this allocation is divided approximately evenly between the retail VCCs on one hand, and the non-retail VCCs together with the EBCs on the other.

A more detailed description of the program is contained in Appendix 6. In addition, Appendix 6 provides an overview of comparable programs in other Canadian provinces.

## 2.2 Program Objectives

At the broadest level, the ECP is supposed to contribute to the economic performance of the Province of British Columbia. The primary function of the program is to increase access to capital for small businesses. Increased access to capital is expected to help diversify the economy and to create new job opportunities. The ECP and its two sister programs, the CVCP and the NMVCP support five categories of prescribed activities. The most important of these five categories relates to what is normally referred to as the knowledge-based sector, particularly information technology and life sciences (or “biotechnology”). The other categories are manufacturing, processing, and exporting; tourism; community diversification; and interactive digital media. The latter two categories are associated with the CVCP and the NMVCP respectively.

The ECP contributes to the objective of seeking to greatly increase activity in the technology-based and research-based part of the economy by removing or reducing barriers in this sector arising from insufficient availability of investment capital. In addition to directly increasing equity capital availability, the ECP is also expected to help build the “ecology” of equity finance in British Columbia. This ecology consists of healthy early stage finance supported primarily by individual “angel” investors, early stage formal venture capital, later stage venture capital, and public capital markets.

Accordingly, the 2004/05 business plan of the Investment Capital Branch states (p. 3) that the objective of the Small Business Venture Capital Act is “to provide early stage or ‘seed’ capital for small businesses engaged in value-added sectors of the British Columbia economy.” This statement reflects three important aspects of the program. First, it is focused on small business. Second, the reference to “value-added” sectors reflects an emphasis on technologically sophisticated or research intensive products or processes, especially in the areas of information technology and biotechnology. Other sectors, often referred to as “traditional” sectors, are not completely ruled out, but they constitute a small part of the program, and some traditional sectors are ruled out, including real estate, finance, mining, energy, and retailing.

The third important aspect of the program identified in the Investment Capital Branch Program is the emphasis on “early stage” capital, which is normally taken to include “seed” investment, “start-up” investment and other early stage investment, covering activities up to early or “prototype” commercialization. Macdonald & Associates offer the following definition of these stages of investment.

Seed stage: A developing business entity that has not yet established commercial operations and needs financing for research and product development.

Start-up: A business in the earliest phase of established operations and needs capital for product development, initial marketing and other goals.

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<sup>6</sup> A status report showing allocations and utilization is provided by the following website: [www.cse.gov.bc.ca/ProgramsAndServices/BusinessServices/Investment\\_Capital/Venture\\_Capital\\_Program\\_s/vc\\_budget\\_update.htm](http://www.cse.gov.bc.ca/ProgramsAndServices/BusinessServices/Investment_Capital/Venture_Capital_Program_s/vc_budget_update.htm)

Other early stage: A firm that has begun initial marketing and related development and needs financing to achieve full commercial production and sales.

In keeping with the objective of building the equity capital ecology of B.C., EBC funding and VCC investment are expected to complement traditional venture capitalists. Thus, one expectation is that VCCs would provide early-stage funding for companies that would later receive funding from traditional venture capitalists. However, the legislation underlying the ECP does not rule out later stage equity investments and the program explicitly allows for some later stage investments to occur, especially by retail VCCs. The retail VCCs are expected to provide some overlap with (or competition for) traditional venture capitalists in this area. Thus a company seeking venture capital would have a wider range of potential sources than if it had to rely entirely on traditional venture capitalists and other market participants not supported by the ECP.

### 3. Sources of Early Stage Finance in British Columbia

A starting point for our analysis consists of the identification and classification of the major sources of early stage finance. The major sources are as follows.

- a) Founder, Friends and Family (FFF)
- b) Angel Finance
- c) Formal Venture Capital
- d) Public Equity Markets
- d) Debt

Typically, the first source of finance for a new company is the savings of the founder (or founders), often augmented by contributions from friends and family. This contribution is normally in the form of equity, although it is not uncommon for friends and even for family members to provide debt finance in the form of loans. The amounts involved vary widely but typical investments of this type might run from a few hundred dollars up to the \$50,000 range. There might be several such investments, adding up to perhaps \$250,000 in the FFF “round” of investment.<sup>7</sup>

An important source of finance beyond the FFF stage is angel finance. Angels are high net worth individuals who make significant investments of their own money in private equity. Because of their high net worth they qualify as accredited investors in B.C. An angel might sometimes have a pre-existing relationship with the founder or with the firm and might therefore be hard to distinguish from the FFF category. However, most angel finance comes from “arm's length” individuals. The amount of money involved in angel investments varies very widely, but a typical angel investment would be in the range of about \$30,000 to about \$250,000, although a significant number of investments in the \$500,000 region have occurred in B.C. and a few have been as high as the million dollar range. In addition to individual angels, some corporations, sometimes referred to as “corporate venture capitalists” or CVCs, invest their own money in private equity. There seems to be relatively little CVC activity in British Columbia.<sup>8</sup>

Formal venture capital<sup>9</sup> refers to investments made by recognized venture capital funds. This money is obtained by venture capitalists from other investors, particularly institutional investors such as pension funds. Formal venture capitalists therefore carry out an intermediation function. Typical formal venture capital investments are larger than angel investments and may run from a few hundred thousand dollars into the millions. Venture capitalists are often closely involved with the management of the company and normally have representatives on the company’s board of directors. Venture capitalists often go through several rounds of investment with the same company. In British Columbia there is one large formal venture capitalist: Ventures West. Additional B.C.-based traditional venture capitalists include Greenstone Venture Partners, Banyan Capital Partners, Chrysalix Energy Limited Partners and Yaletown Venture Partners.

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<sup>7</sup> Any investment size numbers defining the type of round are somewhat arbitrary. However, the June 2003 Final Report of the British Columbia Technology Industry Association Capital and Investment Committee suggests that up to \$250,000 in total characterizes the FFF round.

<sup>8</sup> One significant corporate supplier of private equity in British Columbia is TELUS Ventures. TELUS Ventures undertakes a mentoring and development role typical of formal venture capitalists and favours stages of development typical of formal venture capitalists.

<sup>9</sup> Terminology in this area is not uniform. Sometimes the term “venture capital” is taken to include angels, while the terms “formal venture capital”, “institutional venture capital” or “venture capital fund” designate venture capitalists that undertake intermediation (i.e. that invest “opm” or “other people’s money”).

There may be others as well.

In Canada as a whole, and in British Columbia in particular, the venture capital niche is filled in large part by labour-sponsored venture capital funds and by a federal crown corporation, the Business Development Bank of Canada (BDC). Labour-sponsored funds receive a 30% tax credit shared equally between federal and provincial governments. In British Columbia, the most important presence in labour-sponsored venture capital is GrowthWorks, a company that manages the Working Opportunity Fund and the GrowthWorks GW Funds.

In Canada companies sometimes “go public” on the TSX Venture Exchange and seek to obtain funding from public arm’s length investors at a relatively early stage of development. In the United States, going public normally occurs later in the life cycle of a business and many analysts treat early stage finance and public equity as mutually exclusive categories — adopting the convention that “going public” necessarily implies that the firm has passed beyond early stage finance. However, the ECP allows retail VCCs to invest in publicly held companies on the grounds that many of these companies are still relatively small and relatively early in their life cycles. The TSX Venture Exchange explicitly states that an important part of its role is to assist in early stage equity finance. A significant share of the investments made by the retail VCCs are in publicly held companies, almost entirely on the TSX Venture Exchange.

Finally, it should be recognized that debt is an important source of finance. This is particularly true of the traditional sector where, for example, new retail outlets or restaurants often start with little more than the founder's investment and a line of credit from a commercial bank. Debt is much less important than equity in the knowledge-based sector, but it can be significant. Commercial banks are the most important source of debt, but loans may also come from the FFF source, from angels, or from other sources. Debt commonly comes in the form of trade credit from suppliers and/or customers. However, as debt is not the focus of the ECP, is relatively unimportant in the knowledge-based sector, and is difficult to get information about, we provide relatively little discussion of debt finance in this study.



#### **4. Methodology and Sources of Information**

The intellectual framework for this study relies on the basic principles of financial economics as they apply to investments in private equity. Much of the analysis depends on systematic empirical information. In the area of formal venture capital the best source of Canadian data is Macdonald & Associates, accessible on-line at [www.canadavc.com](http://www.canadavc.com). We make significant use of this data. For comparative purposes we have also obtained and made use of corresponding data for the United States from PWC MoneyTree and VentureSource.

We have also conducted a survey (based on a random sample) of small business corporations that received ECP funding, along with a control group that did not receive funding. We refer to this as the company survey. In addition, we did a survey of angel investors contacted through the Vancouver Enterprise Forum, the Angel Forum, and the Angel Network. We refer to this as the investor survey. We also conducted telephone interviews with 11 very prominent members of the B.C. private equity community, including traditional venture capitalists, prominent angels, people from retail VCCs, and one person able to reflect the views of American venture capitalists with respect to BC. We refer to these interviews as the private equity “leader” interviews. We also have access to a variety of other relevant studies, including earlier studies of the British Columbia Equity Capital Program and to data about the ECP from the Ministry of Small Business and Economic Development. In addition we have made extensive use of on-line sources related to investment, including the System for Electronic Document Analysis and Retrieval<sup>10</sup> (SEDAR).

The surveys and the methodology are described at greater length in the appendices, particularly Appendices 1-4.

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<sup>10</sup> The System for Electronic Document Analysis and Retrieval was developed in Canada for the Canadian Securities Administrators (CSA) to facilitate the electronic filing of securities information as required by the securities regulatory agencies in Canada and to allow for the public dissemination of Canadian securities information collected in the securities filing process.

## **5. Analysis of Availability**

### **5.1 Introduction**

The primary motivation for the Equity Capital Program is a belief that, in the absence of such a program, there would be insufficient availability of private equity capital for appropriate development of business innovation in British Columbia's small business sector. The 2004/05 business plan of the Investment Capital Branch states (p. 3) that "British Columbia faces an acute shortage of seed capital that is critical to excel [in] small business innovation".

Accordingly, an assessment of capital availability is central to the evolution of the program. If availability of capital remains a critical bottleneck in business development, that would strengthen the case for expanding the program. Conversely, if availability of capital is not a serious problem, the case for program funding is weakened. At a more detailed level, understanding which parts of the private equity market are most subject to serious availability constraints is important in adjusting the design of the program.

### **5.2 Conceptual Framework**

The central question of this study and the central question underlying the ECP concerns whether the availability of capital for small firms in the "knowledge-based" sector in British Columbia is sufficient. Determining what is sufficient is difficult.

From an economist's point of view, the default or initial response to the question of whether availability of financing is adequate would be that financial resources should flow in the direction where the (risk-adjusted) returns are highest. Under this view, as long as markets are operating freely and competitively, whatever allocation is provided to a particular sector (like the knowledge-based sector in B.C.) is sufficient. If the sector received little funding, that would simply be an indicator that investment dollars were better utilized somewhere else.

However, economists recognize that there might be "market failure" in private equity markets, especially at seed, start-up and other early stages. This "market failure" arises when free markets fail to achieve efficiency for one of several well-accepted structural reasons. One type of market failure arises from monopoly power. For example, if there were insufficient competition in the supply of venture capital or other equity capital, the outcome would be inefficient and might justify some form of intervention. In the case of small, private, entrepreneurial firms, the more likely cause of market failure arises from informational asymmetries<sup>11</sup>. In essence, a problem arises because it is too difficult for most investors to assess entrepreneurial projects and to monitor the entrepreneur once investments are made.<sup>12</sup> These two problems are referred to as the adverse selection and agency problems respectively. In such a circumstance it might be difficult even for very worthwhile projects to be funded. It is also possible that other government policies (including tax and regulatory policies) create distortions that lead to underinvestment in private equity in the small business sector.

One other possible market failure relates to "positive externalities" in the knowledge-based sector. It is sometimes argued that the knowledge-based sector provides substantial benefits

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<sup>11</sup> A textbook treatment of market failure and its relationship to financial regulation can be found in Brander (2005, Ch.2 and Ch. 15)

<sup>12</sup> As described in Amit, Brander and Zott (1998), venture capitalists (and angels) exist as specialized investors precisely because they are better at handling these informational asymmetries.

to society at large over and above returns to investors in that sector. If so, then investors might under-invest in that sector relative to the fully efficient investment level. Finally, it is possible that market failure might arise from insufficient diversification. It is sometimes argued that a given economy (like the B.C. economy) might be too dependent on one or two sectors (like the natural resource sectors) and tax/subsidy system should be used to diversify the economy. This argument is consistent with basic economy theory if markets allowing economic agents to fully diversify using financial transactions are unavailable.

Ministry officials have indicated that one important rationale for providing tax credits in private equity is to encourage investment in areas that traditional venture capitalists and other investors would find too risky. This rationale does not have a strong foundation in economic analysis. Just as with any investment that is too costly for the private sector to undertake, excessive risk is normally taken as an indication that funds are better used elsewhere. However, an economic argument has been made that the public sector should be less concerned about risk than private investors because the public sector is very large and can therefore diversify risk more effectively than private investors. See Arrow and Lind (1970).

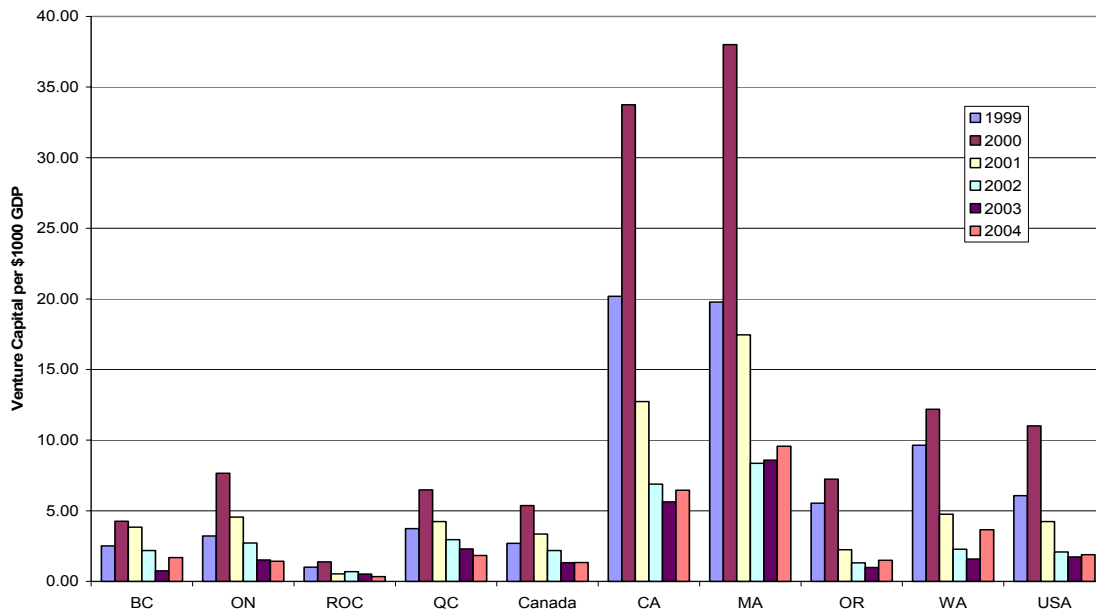
Any of these market failures might provide a rationale for government programs to support private equity investment, especially early stage investment in the knowledge-based sector. Understanding the economic rationale for such intervention provides some guidance regarding which specific policies are likely to be successful.

### **5.3 Venture Capital Availability: Cross Jurisdictional Comparisons of Investment Rates**

Traditionally, studies of capital availability for knowledge-based firms in the small business sector focus on formal venture capital. Figure 2 shows the ratio of venture capital funding to GDP for British Columbia and several other jurisdictions, based on data from Macdonald & Associates for Canada and from PWC Moneytree for the U.S. The associated data is provided in Table 2.

**Figure 2:**

**Venture Capital Investment Rates**



	1999	2000	2001	2002	2003	2004 <sup>+</sup>
<b>BC</b>	2.51	4.26	3.84	2.18	0.74	1.69
<b>ON</b>	3.22	7.66	4.55	2.72	1.52	1.43
<b>ROC*</b>	1.01	1.38	0.54	0.68	0.52	0.34
<b>QC</b>	3.74	6.48	4.24	2.96	2.31	1.84
<b>Canada</b>	2.70	5.37	3.35	2.18	1.32	1.34
<b>CA</b>	20.19	33.74	12.74	6.88	5.63	6.45
<b>MA</b>	19.78	38.01	17.46	8.36	8.59	9.57
<b>OR</b>	5.55	7.24	2.23	1.32	0.99	1.50
<b>WA</b>	9.64	12.18	4.76	2.28	1.59	3.65
<b>USA</b>	6.08	11.00	4.24	2.08	1.73	1.89

\*Rest of Canada. <sup>+</sup>2004 data is based on the first 3 quarters for Canada and the first 2 quarters for the U.S. Sources<sup>13</sup>: Macdonald & Associates, PWC Moneytree, Statistics Canada and the US Bureau of Economic Analysis.

Figure 2 and Table 2 show comparative venture capital investment rates per \$1000 of GDP by year for a variety of jurisdictions, including British Columbia, for the 1999-2004 period. The most obvious feature of Figure 2 is the pattern of venture capital investment over time. In all jurisdictions venture capital investments peaked in 2000, fell precipitously in 2001 and continued

<sup>13</sup> Canadian data were obtained from the Macdonald & Associates VCAlyst data tool on February 1, 2005. VCAlyst data is updated quarterly. US venture capital data was obtained from PWC Moneytree. The data was extracted (in August 2004) from the PWC Moneytree online repository and re-assembled to create a comprehensive database containing all investments from q1 1994 through q2 2004. Nominal GDP was collected from Statistics Canada and the US Bureau of Economic Analysis. GDP for 2004 was estimated by updating 2003 data with 2004 aggregate growth rates.

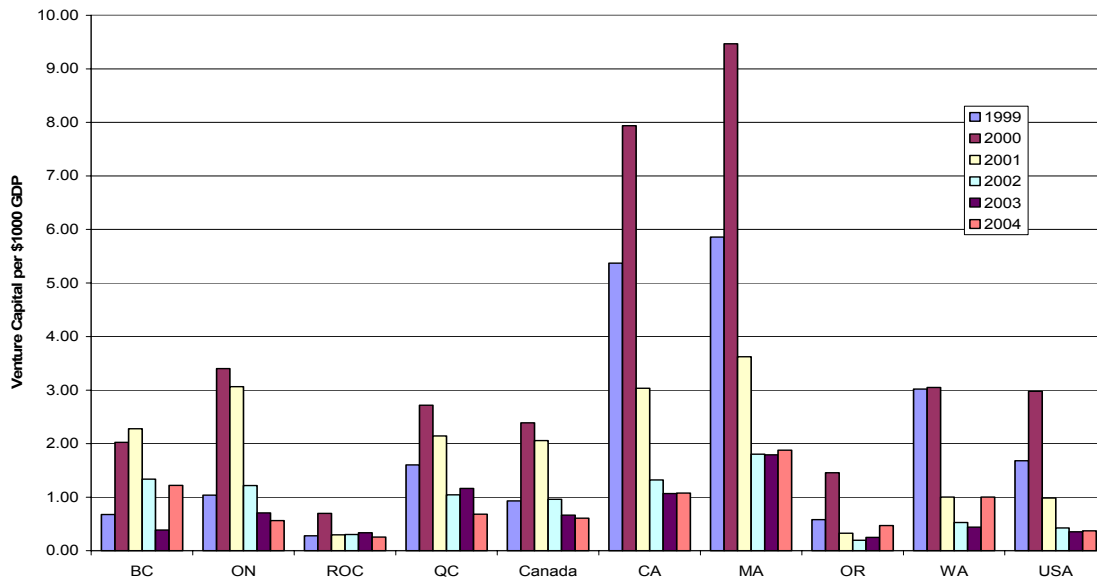
to fall significantly in 2002 and 2003. The year 2004 was a year of stabilization and modest recovery for venture capital. However, the primary focus here is on comparative availability of venture capital. In making cross-jurisdictional comparisons, it is probably best to focus on the “post-bubble” period of 2001-2004 as the 1999 and 2000 years are not reflective of current economic fundamentals.

California and Massachusetts are very well developed jurisdictions for venture capital where market imperfections in venture capital are at a minimum. Accordingly, the values for these regions are probably close to the maximum level of venture capital penetration that can be achieved under the most favourable circumstances. From the diagram, it is clear that California and Massachusetts have venture capital investment rates that are much higher than in B.C. – a full order of magnitude larger. British Columbia might more realistically be compared with other Canadian regions, particularly Quebec and Ontario, and with comparable American jurisdictions such as Washington and Oregon. For the 2001-04 period British Columbia had distinctly lower rates of venture capital funding than Washington, moderately lower levels than Quebec, and slightly lower levels than Ontario. It is slightly ahead of Oregon. Overall, British Columbia has levels of venture capital investment comparable to the Canadian average and slightly lower than the United States average.

Figure 2 and Table 2 show venture capital funding for both early stage and later stage venture capital investments. As the ECP focuses on early stage investment, we present information on just early stage<sup>14</sup> investments in Figure 3 and Table 3.

**Figure 3:**

**Early Stage Venture Capital Investment Rates**



<sup>14</sup> In comparing early stage investment it is important to use comparable classification systems across jurisdictions. For Canada, the classification is from Macdonald & Associates, counting seed, start-up, and other early stage investments as early stage. This is closely comparable to the classification used by PWC MoneyTree. PWC Moneytree does not distinguish between seed and start-up stages.

	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>
<b>BC</b>	0.68	2.02	2.27	1.34	0.39	1.22
<b>ON</b>	1.04	3.40	3.06	1.22	0.71	0.56
<b>ROC*</b>	0.28	0.70	0.30	0.30	0.34	0.25
<b>QC</b>	1.60	2.72	2.14	1.04	1.17	0.68
<b>Canada</b>	0.93	2.39	2.05	0.96	0.66	0.61
<b>CA</b>	5.37	7.94	3.03	1.32	1.07	1.08
<b>MA</b>	5.86	9.47	3.62	1.80	1.79	1.88
<b>OR</b>	0.58	1.46	0.33	0.19	0.25	0.47
<b>WA</b>	3.02	3.05	1.00	0.53	0.44	1.00
<b>USA</b>	1.68	2.98	0.98	0.43	0.35	0.37

\*Rest of Canada. Sources: Macdonald & Associates, PWC MoneyTree, Statistics Canada and the US Bureau of Economic Analysis, as for Figure (1) and Table (1) – see footnote 1.

From Figure 3 and Table 3 we can see that for early stage financing British Columbia lagged Ontario, Quebec and Canada overall in 1999 and 2000 but weathered the "crash" of the high tech sector better, moving ahead of both Quebec and the overall Canadian investment rate for the 2001-04 period. In recent years, British Columbia has been ahead of Washington, Oregon, and the overall U.S. average.<sup>15</sup>

The data for British Columbia include a recent effort by Macdonald & Associates to count the retail VCCs as part of the formal venture capital supply. Macdonald & Associates believe that they identify the vast majority of venture capital investments. The data does not include the single-purpose VCCs. This is consistent with the view that the single-purpose VCCs (along with the EBC investments) should be viewed as angel investments rather than formal venture capital investments.

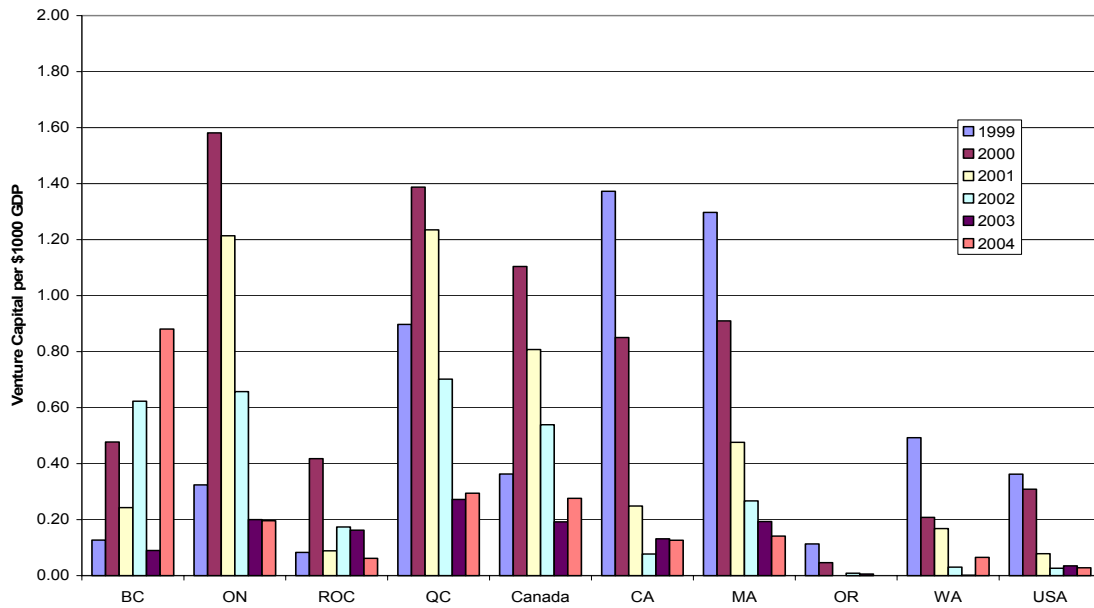
Early stage investment consists of the sub-stages: seed investment, start-up investment, and other early stage investment (i.e. subsequent to start-up). Most of this is in the "other early stage" category. In Figure 4 and Table 4 we consider just the earliest stages – seed and start-up.

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<sup>15</sup> The numbers reported in Figures 1, 2 and 3, and the corresponding tables are all rates or ratios so there is no need for exchange rate adjustments to reflect differences between Canadian and U.S. dollars. The rates are strictly comparable across jurisdictions.

**Figure 4:**

**Seed and Startup Venture Capital Investment Rates**



**Table 4: Venture Capital Per \$1000 GDP, Seed & Start-up**

	1999	2000	2001	2002	2003	2004
<b>BC</b>	0.13	0.48	0.24	0.62	0.09	0.88
<b>ON</b>	0.32	1.58	1.21	0.66	0.20	0.20
<b>ROC*</b>	0.08	0.42	0.09	0.17	0.16	0.06
<b>QC</b>	0.90	1.39	1.23	0.70	0.27	0.29
<b>Canada</b>	0.36	1.10	0.81	0.54	0.19	0.28
<b>CA</b>	1.37	0.85	0.25	0.08	0.13	0.13
<b>MA</b>	1.30	0.91	0.48	0.27	0.19	0.14
<b>OR</b>	0.11	0.05	0.00	0.01	0.01	0.00
<b>WA</b>	0.49	0.21	0.17	0.03	0.00	0.07
<b>USA</b>	0.36	0.31	0.08	0.03	0.03	0.03

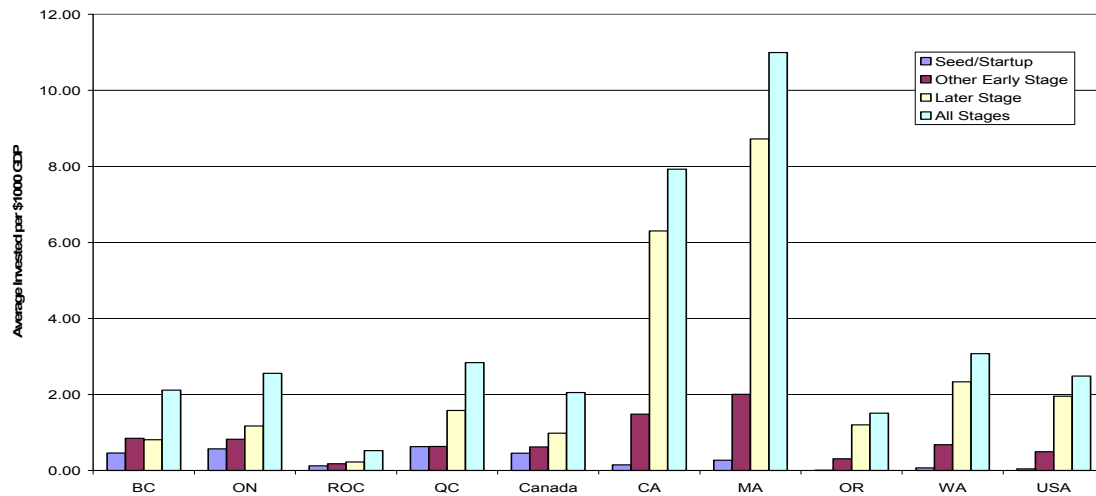
\*Rest of Canada. Sources: Macdonald & Associates, PWC MoneyTree, Statistics Canada and the US Bureau of Economic Analysis, as for Figure (1) and Table (1) – see footnote 1.

From 2000 onwards, on a per GDP basis, Canadian jurisdictions exceeded their US counterparts in seed and start-up formal venture capital investments. This is a reflection of the fact that seed and start-up investments get relatively little emphasis in formal venture capital portfolios, especially in the United States. Other sources of finance dominate at these stages. The numbers are small and relative rankings are highly volatile and easily influenced by one or two large investments. For example, the increase in seed and start-up stage venture capital investment into B.C. in 2004 is almost entirely attributable to one round of investment into one company, Aspreva Pharmaceuticals, which is the topic of a case study in Section 7.1. On a per GDP basis, B.C. was very similar to Ontario in 2002, and was ahead in 2004, but was otherwise behind.

Figure 5 provides a four year average venture capital investment (from 2001 to 2004) by stage for each jurisdiction.

**Figure 5:**

**Four Year Venture Capital Average Investment (2001-2004)**



	<b>Seed/Startup</b>	<b>Other Early Stage</b>	<b>Later Stage</b>	<b>All Stages</b>
<b>BC</b>	0.46	0.85	0.81	2.11
<b>ON</b>	0.57	0.82	1.17	2.55
<b>ROC*</b>	0.12	0.18	0.22	0.52
<b>QC</b>	0.63	0.63	1.58	2.83
<b>Canada</b>	0.45	0.62	0.98	2.05
<b>CA</b>	0.15	1.48	6.30	7.93
<b>MA</b>	0.27	2.00	8.72	11.00
<b>OR</b>	0.00	0.31	1.20	1.51
<b>WA</b>	0.07	0.68	2.33	3.07
<b>USA</b>	0.04	0.49	1.95	2.49

\*Rest of Canada. Sources: Macdonald & Associates, PWC MoneyTree, Statistics Canada and the US Bureau of Economic Analysis<sup>16</sup>

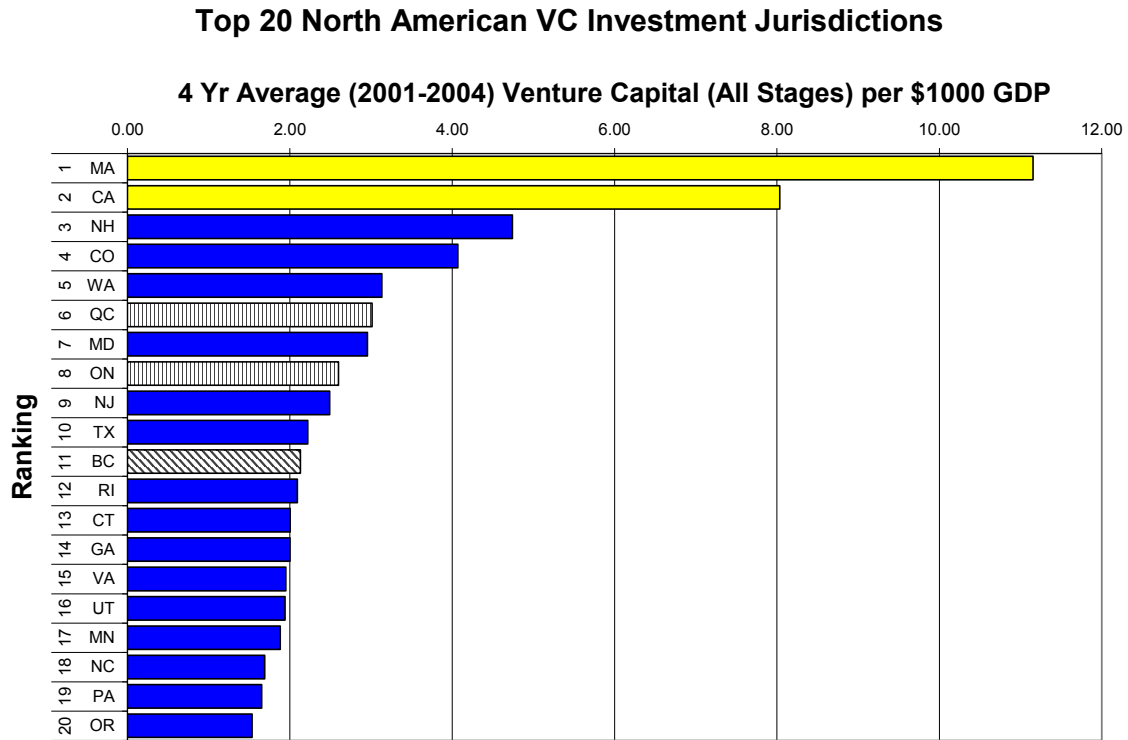
Over the 4-year period, B.C. has a similar average investment rate to Ontario and Quebec for seed/start-up investment and other early stage investment, but was noticeably behind for later stage investment. Overall, B.C. has a very similar pattern to the Canadian average. For the U.S., California and Massachusetts stand alone as tier 1 jurisdictions. B.C. is stronger than Washington, Oregon and the U.S. average for seed, start-up and other early stage investments but is behind in later stage investment rates.

To provide a sense of how B.C. fits into the overall North American venture capital environment the following diagram and table provide venture capital investment rates for the top 20 jurisdictions in North America.

<sup>16</sup> Data for Figure 5 and Table 5 is taken from Macdonald & Associates and PWC Moneytree. The four year averages were calculated by first determining each year's venture capital investment per nominal GDP and then taking the mean over the 4 years. This was performed for each stage separately.



Figure 6



State	Rank	Abbrev.	Rate
Massachusetts	1	MA	11.15
California	2	CA	8.03
New Hampshire	3	NH	4.74
Colorado	4	CO	4.07
Washington	5	WA	3.13
<b>Quebec</b>	<b>6</b>	<b>QC</b>	<b>3.01</b>
Maryland	7	MD	2.95
<b>Ontario</b>	<b>8</b>	<b>ON</b>	<b>2.60</b>
New Jersey	9	NJ	2.49
Texas	10	TX	2.22
<b>British Columbia</b>	<b>11</b>	<b>BC</b>	<b>2.13</b>
Rhode Island	12	RI	2.09
Connecticut	13	CT	2.00
Georgia	14	GA	2.00
Virginia	15	VA	1.95
Utah	16	UT	1.94
Minnesota	17	MN	1.88
North Carolina	18	NC	1.69
Pennsylvania	19	PA	1.65
Oregon	20	OR	1.53

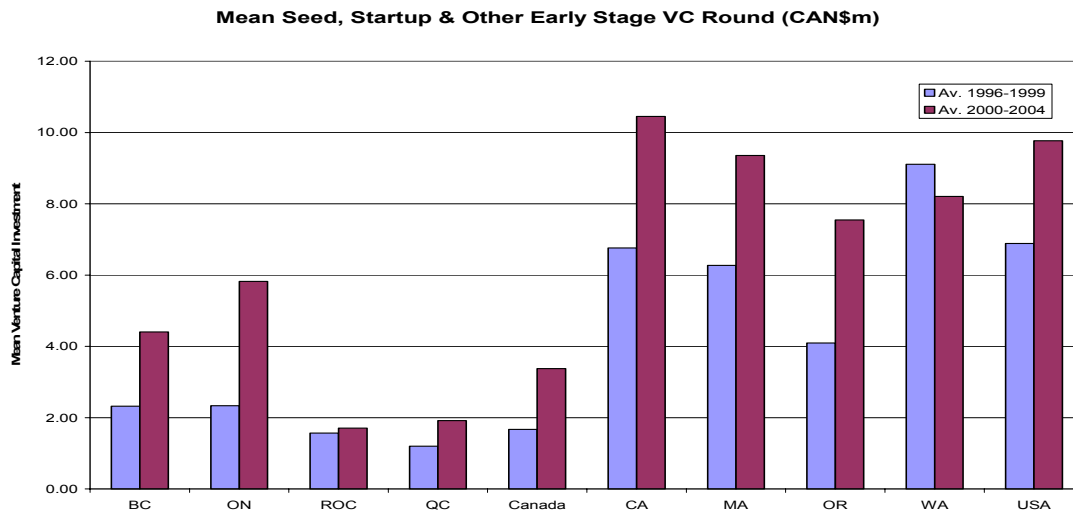
Sources: Macdonald & Associates, PWC MoneyTree, Statistics Canada & the US Bureau of Economic Analysis

As can be seen from Figure 6 and Table 6, Massachusetts and California are in a class by themselves as far as venture capital is concerned. Even the third-place jurisdiction, New Hampshire, is primarily an extension of the Massachusetts venture capital market. It is noteworthy, however, that Quebec and Ontario are both in the top 10, and B.C. is in 11<sup>th</sup> place, only marginally behind Texas for the final spot in the "top 10".

#### 5.4 Venture Capital Availability: Cross Jurisdictional Comparisons of Deal Size

One possible indicator of capital availability is the size of a typical investment round or “deal”. If, for example, a particular jurisdiction has high demand for venture capital but limited availability, then the available venture capital might be rationed over potential projects. Figure 7 shows the average size for early stage investments (including seed, start-up and other early stage investment) in each jurisdiction for two periods: 1996 through 1999, and 2000 through 2004.

**Figure 7:**



<b>Table 7: Mean Early Stage Deal Size</b>		
	<b>Av. 1996-1999</b>	<b>Av. 2000-2004</b>
<b>BC</b>	2.32	4.41
<b>ON</b>	2.34	5.82
<b>ROC*</b>	1.57	1.70
<b>QC</b>	1.20	1.92
<b>Canada</b>	1.67	3.38
<b>CA</b>	6.76	10.45
<b>MA</b>	6.27	9.36
<b>OR</b>	4.09	7.55
<b>WA</b>	9.11	8.21
<b>USA</b>	6.89	9.77

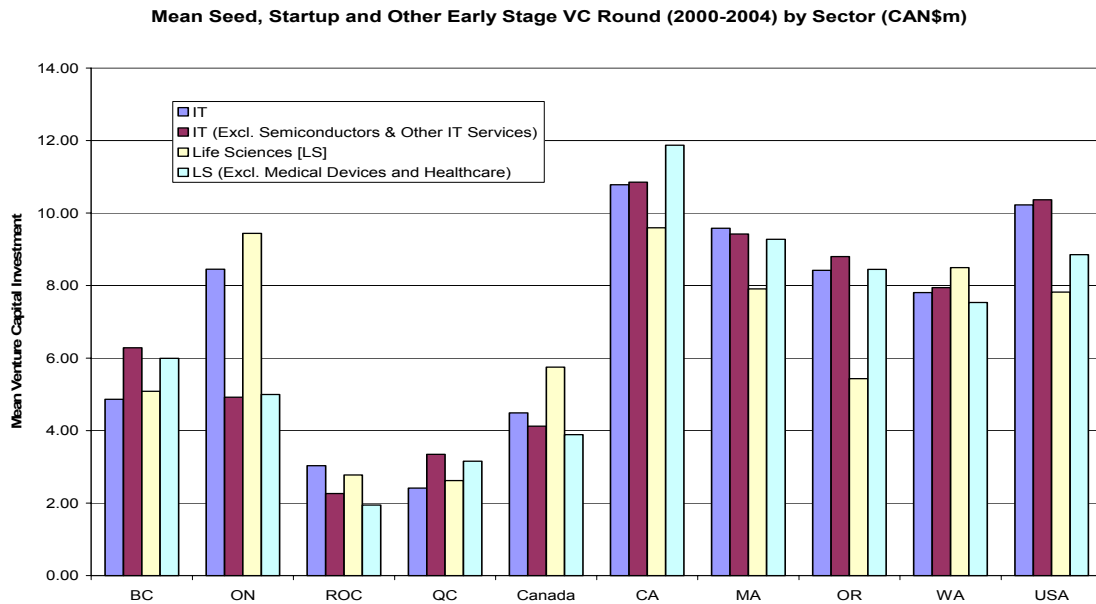
\*Rest of Canada. Sources: Macdonald & Associates, PWC MoneyTree <sup>17</sup>

<sup>17</sup> Canadian and US data are taken from Macdonald & Associates VCAlyst and PWC Moneytree. See Footnote 13. US currency was converted to Canadian dollars using annual average exchange rates.

There is a clear trend of increasing deal sizes in both Canada and the US, with Canada's increases being more pronounced. B.C. significantly exceeds the Canadian average and has mean early stage deal sizes approximately half of those found in California. B.C. appears to be the second strongest jurisdiction in Canada, after Ontario, for early stage deal size. Quebec, which led Canadian provinces in the total seed and start-up investment for all years except 2000, and which has had a strong early stage total investment through-out the past five years, shows the lowest average early stage deal sizes in Canada for both periods. Overall it is noticeable that Canadian provinces have considerably smaller average early stage deal size than American states. In part this reflects relatively more emphasis in Canada on seed and start-up investments.

One factor that might partially explain different deal sizes is industry composition. Different industries have different investment requirements. Within the life sciences area, medical devices and healthcare are sub-industries that have given rise to large deal sizes in Ontario. Similarly, within the information technology area, semi-conductors and a category called "other IT services" have higher deal sizes in Ontario. Figure 8 separates out IT and Life Sciences, with and without the sub-industries that have large investment requirements.

**Figure 8:**



	IT	IT (Excl. Semiconductors & Other IT Services)	Life Sciences	Life Sciences (Excl. Medical Devices & Healthcare)
<b>BC</b>	4.86	6.28	5.08	5.99
<b>ON</b>	8.45	4.92	9.44	5.00
<b>ROC*</b>	3.03	2.27	2.78	1.95
<b>QC</b>	2.42	3.35	2.62	3.15
<b>Canada</b>	4.49	4.12	5.75	3.89
<b>CA</b>	10.78	10.85	9.60	11.87
<b>MA</b>	9.58	9.42	7.91	9.28
<b>OR</b>	8.42	8.80	5.43	8.44
<b>WA</b>	7.81	7.94	8.50	7.54
<b>USA</b>	10.22	10.37	7.82	8.85

\*Rest of Canada. Sources: Macdonald & Associates, VenturesCanada Ltd., PWC MoneyTree and the Bank of Canada.<sup>18</sup>

Figure 8 shows that B.C. has smaller deal sizes than Ontario in IT and life sciences. However, if we separate out semiconductors (where B.C. has almost no investments), other IT services, medical devices and health services, then B.C. has slightly higher deal sizes than Ontario. It might be the case that jurisdictions with more capital availability attract investments with high capital requirements so it is not clear that one should “correct for” industry composition in comparing availability. However, the key point is that different industry composition does explain some of the variation in average deal size across jurisdictions.

To summarize the cross jurisdictional comparisons, B.C. (and every other jurisdiction) is dramatically behind California and Massachusetts in both venture capital investment rates and in deal size. B.C. lags Ontario, Washington and Quebec in investment rates by a moderate but significant amount. As far as deal size is concerned, B.C. is very similar to Ontario and ahead of the rest of Canada, including Quebec, but all Canadian jurisdictions lag the U.S. significantly. The financing gap is greater at later stages than at early stages.

### **5.5 Venture Capital Availability: Interview and Survey Information**

Cross-jurisdictional comparisons are of considerable value. However, they are only part of the story. The actual amount of venture capital transacted is what economists refer to as an equilibrium outcome. It depends on the interaction of supply and demand. If a particular jurisdiction has low venture capital investment this could be the result of low supply or availability. However, it could also be an indicator of low demand for venture capital funds (or, as venture capitalists might put it, of low supply of high quality projects). In other words, a low value for venture capital transactions does not necessarily reflect lack of availability as it might, alternatively, reflect lack of demand for venture capital instead. The high investment rates in Massachusetts and California reflect high demand for private equity, partially stimulated by university-based research and development in those states.

<sup>18</sup> The Macdonald & Associates data used for this calculation was obtained from the VCReporter service, (not through VCAlyst) and was processed by VenturesCanada Ltd. in order to overcome differences in industry classifications used by Macdonald & Associates, PWC Moneytree, VentureSource and Thomson Venture Economics. The data was compiled in December 2004 for this study and contained investments from q1 1994 to q4 2004.

In order to understand availability, interview or survey responses data can be helpful. One useful source of relatively recent survey information is provided by the June 2003 Final Report of the British Columbia Technology Industry Association (BCTIA) Capital and Investment Committee. This report draws from a survey of BCTIA members in the summer of 2002 and a follow-up survey in 2003. As stated in the report (p.6):

“The biggest concern cited by respondents was the inability to secure investment capital. Surprisingly, the concern was not limited to smaller companies but was shared equally by the larger and more well-established companies as well.”

Of the various types of finance, venture capital finance was viewed as having the most serious availability problem. More than half (53%) of the respondents identified insufficient financial resources in the VC sector as a problem and a similar number (55%) identified insufficient competition among VCs as a problem. However, elsewhere in the report (p. 14), the following statements appear:

“The data suggests and interviews with VCs confirmed that the venture capital market in B.C. is far more healthy than is publicly acknowledged.... There is anecdotal evidence that companies now find it easier to raise capital, under better terms, than in other technology markets in North America.”

These two quotes are rather different in tone. This difference is explained in part by the fact that the latter quote was provided by a subcommittee composed primarily of representatives of the venture capital community, while the survey was targeted primarily at companies that received or wanted to receive private equity investments.

Our interviews are consistent with the point made in the previous paragraph. As one of the private equity leader interviewees noted: “[the] entrepreneurs will say there is not enough early stage capital. The VCs say there are not enough early stage deals.” Expanding on these points, people we interviewed from the Venture Capital industry pointed out that they need to provide investors with returns that are comparable to the returns that can be obtained in other investments of comparable risk. This requires being selective in making investment decisions and it requires terms that are favourable from the venture capitalist’s point of view. This means that most new young firms, even in the knowledge-based sector, will not be able to obtain venture capital financing from traditional private sector venture capitalists. Even those firms that do find interested venture capitalists will find it difficult to negotiate terms that are acceptable to both sides.

This appears to be the normal state of the venture capital business in most jurisdictions. Accordingly, our assessment of interview data is that the venture capital market in British Columbia is consistent with the information obtained from cross-jurisdictional comparisons. Specifically, relative to North America’s two major venture capital and business innovation centres (California and Massachusetts), British Columbia is lacking in both the supply of venture capital and the supply of attractive investment opportunities for venture capitalists. However, British Columbia is competitive with but slightly behind the major “second-tier” centres for venture capital and business innovation such as Ontario, Quebec, and Washington.

In information obtained from our company survey, our investor survey and the interviews with private equity leaders the most frequently mentioned concern was with early stage finance. In the company survey, many companies report difficulties in obtaining suitable early stage finance. More details are provided in the Appendix 2 dealing with the company survey.

The Government of British Columbia has indicated an intention to make British Columbia a leader in technology and business innovation. It is not completely clear what this implies for objectives regarding cross-jurisdictional comparisons. Realistically, in the judgement of the authors of this study, reaching the levels of venture capital activity of California or Massachusetts is not feasible for British Columbia in the foreseeable future. A more feasible objective would be to lead the “second tier”, ahead of Ontario and Washington in particular. Availability of formal venture capital in British Columbia is not yet at that level. However, it is not far off, especially for early stage venture capital finance.

One important aspect of venture capital availability in British Columbia is that it depends heavily on direct financial support from government, as is also true of other Canadian jurisdictions. On the order of 40% of venture capital in British Columbia is managed by GrowthWorks in its labour-sponsored funds, which benefit from federal and provincial tax credits. The second largest management company for venture capital in B.C. (after GrowthWorks) is a federal crown corporation, the BDC. The largest private sector formal venture capital firm, Ventures West, is also large but much its investment portfolio is outside B.C. The retail VCCs, while small compared to the overall pool of formal venture capital in British Columbia, clearly add to the level of government support in the private equity sector.

## 5.6 Angel Investments

In our interviews with leaders of the private equity community in British Columbia, we learned that it is widely believed that angel finance is far more important than formal venture capital in seed and other early stage equity investment, although there are no reliable quantitative measures of such comparative investments<sup>19</sup>. If this belief is true, it means that most of the previous research on venture capital comparisons is only a small part of the picture for early stage funding. To put the point more bluntly, any study that ignores angel finance leaves out the most important part of early stage funding. It is therefore questionable whether such analysis (i.e. based purely on formal venture capital) can provide much guidance regarding assessments of capital availability and regarding associated government policy.

The question of the relative importance of angel investment is therefore crucially important in assessing capital availability for early stage financing – the focus of the ECP. In this report we undertake an estimate of the relative importance of angel finance in British Columbia, assessing both its absolute magnitude and its share of total early stage finance. We are aware of no comparable studies for any jurisdiction and regard this as a major contribution of this study.

The basis for our estimate of early stage angel financing magnitudes and relative importance relies on two primary data sources:

- a) Equity Capital Program Data
- b) British Columbia Securities Commission (BCSC) Filings Data

Angel investment consists of private equity investment by high net worth individuals. These investors make investments without a prospectus being required from the company in

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<sup>19</sup> We are aware of two published (but rough) estimates of angel investment in Canada. They are the Global Entrepreneurship Monitor 2004 Financing Report by Bygrave and Hunt (2005) and Industry Canada (2002), Canadian Venture Capital Activity: An Analysis of Trends and Gaps 1996-2002. This second study states that Statistics Canada and Industry Canada are jointly working on improved angel investment data.

which they invest. Companies receiving such investments are supposed to file with the BCSC for exemptions from needing to file a prospectus. These capital-raising exemptions are described by multilateral instrument 45-103, and are complex and detailed. These exemptions capture angel investment. However, many investments that we would not want to include as angel investments are included in BCSC filings, including investments in publicly traded companies, and including some investments that should be viewed as venture capital investments. In addition, the list includes investments in some industries, such as mining, that are not in the set of industries the ECP focuses on. We have identified those investments in the industries that are eligible for financing under the ECP. Other investments are dropped from the list<sup>20</sup>. Details of this procedure are described in Appendix 1. In principle, we should be left with a set of investments provided primarily by angels in privately held companies in the relevant sectors of the economy. This angel investment total can therefore be compared with formal venture capital investment in those industries.

However, BCSC filings include a modest share of total angel investment, primarily because of various legally allowed exemptions from filing. Based on our interviews we believe that a majority of angel investments are not filed<sup>21</sup>. In addition, most investment by friends and family is exempt from filing. Thus the vast majority of investment in the BCSC data is likely to be angel investment, although some friend and family investment is also included.

The under-filing rate for angels can be estimated from ECP data on ESB investments. Specifically, we know from the ECP data how much money was invested through the non-retail VCC and EBC components into the recipient ESBs. If exemption filing were complete, each of these investments would have given rise to a filing with the BCSC, as ESBs rarely if ever file a prospectus or offering memorandum. We can identify the ESB-related filings in BCSC data and can therefore determine what fraction of the investment actually led to a BCSC exemption filing. The ratio of the total non-retail VCC and EBC investment to the BCSC-filed non-retail VCC and EBC investment shows the extent of under-reporting. If we then assume that under-filing in the general population of angel investments is similar to the under-filing for ESB investments, we can apply the under-reporting ratio to the total BCSC angel investment level to get an estimate of overall angel investment.

Using this approach, as detailed in Appendix 1, we estimate that about 30.3% of angel investment is captured in BCSC filings. Therefore, to get an estimate of the total angel investment, we can take the angel investment obtained from the BCSC filing and multiply by  $1/.303 = 3.30$ .

For 2003 and the first eleven months of 2004, the amount of angel investment captured by BCSC filings was approximately \$107.6 million<sup>22</sup>. Accordingly, the estimated total for angel investment is  $\$107.6 * 3.30 = \$355$  million. This can be compared with total early stage venture capital investment, including investment by retail VCCs, which can be estimated using data from Macdonald & Associates. We use the Macdonald and Associates VCAAnalyst data from February

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<sup>20</sup> The industries dropped include energy (including oil and gas), mining, real estate, and finance.

<sup>21</sup> We believe that there are several reasons why many transactions are not filed. Most importantly, some exemptions (under Section 2 – the “Private Issuer Exemption”) do not require filing. In addition, non-reported angel investment might be treated as debt, joint-venture investment, or very informal early stage investment. Also, some companies operating without expert legal advice might simply neglect to report or simply be unaware of reporting requirements.

<sup>22</sup> The BCSC data was provided on the 13<sup>th</sup> Dec 2004. Companies are required to report transactions within 10 days to the BCSC. A more detailed discussion of the covered time period is contained in Appendix 1.

1, 2005, which is the same data used elsewhere in this report. We take the 2003 value and 11/12 of the 2004 value, making this data comparable to the BCSC data we have (which covers the period up to the beginning of December 2004). This estimated total is \$184.6 million.<sup>23</sup> Thus, if angel investment is targeted primarily at early stages, we would conclude that angel investment is about twice as important as formal venture capital in these early stages. However, venture capital investment is highly volatile, and the recording of investment is difficult and subject to revision. 2004 has proven to be an exceptional year. If 2004 had been similar to 2003, the relevant 23 month total would have been only about \$108m. The main reason for the sharp increase in 2004 was an investment of almost \$80m in a single firm, Aspreva. This observation is a large outlier and probably should not be treated as representative for the near future. If we drop Aspreva from the total for formal venture capital the 23 month total would stand at approximately \$105m. Therefore, if we drop out Aspreva, angel finance would account for 78% of arm's length early stage equity finance for 2003-04. If we include Aspreva, angel finance accounts for about 60%. Accordingly, we estimate that the share of angel finance in early stage arm's length equity finance is normally in the range of 60% to 80% in the sectors covered by the ECP.

In constructing this estimate, we have incorporated some unavoidable approximations. In eliminating venture capital investments from the BCSC data, we dropped all venture-backed companies. This had the effect of dropping any angel investments in companies that also had formal venture capital, leading to an understatement of total angel finance. In addition it seems probable that the under-filing rate for ESBs might be less than for other firms. On the other hand, our estimated angel investment includes significant investment from friends and family.<sup>24</sup> Furthermore, some of the estimated angel investment is probably targeted at later stage businesses. These first two effects work in the opposite direction to the latter two. Taking these and other factors into account we recognize that the 60% to 80% estimate, even as a range, is only approximate.

We asked some members of our private equity "leader" group to estimate the relative importance of angel and venture capital finance in early stage investment. We received estimates ranging from 70% to 80% for angel finance and take this as consistent with our estimate.

The Global Entrepreneurship Monitor (GEM) 2004 Financing Report (p. 26, Figure 10) as reported by Bygrave and Hunt (2005) provides a rough estimate of the relative importance of "informal investment", which includes both angel investment and family and friends and other miscellaneous investments. GEM finds a ratio of informal investment to formal venture capital of about 8, implying that almost 90% of private equity is informal investment. As angel investment is the major part of informal investment, but not all of it, we view this as broadly consistent with our estimates for British Columbia. The Industry Canada (2002) study on Venture Capital suggests (Figure 1, p. 19) that narrowly defined angle investment is only about twice as important as formal venture capital, but there is a large "other" category, some of which is almost certainly angel investment by our definition. This would make the Industry Canada estimate broadly consistent with ours. However, we should keep in mind that GEM data and the Industry Canada data refer to all of Canada, to all industries, and to all stages of investment. Our primary

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<sup>23</sup> The venture capital investment totals for all early stage investment are taken from a VCAnalyst dataset downloaded 1st Feb 2004 (used throughout this paper). This dataset includes the Aspreva Pharmaceuticals investment in 2004 of \$79.8m. We note that both the BCSC data and the Macdonald and Associates data are likely to record additional investments for the 2004 year as time goes on and reporting becomes more complete.

<sup>24</sup> Arguably, we should just include FFF investment with angels. The main point is simply that sources other than formal venture capital are very important in early stage finance.



focus is early stage investment in the knowledge-based sector in British Columbia, which might well exhibit a different relative importance of angel investment than the overall aggregates.

Unfortunately, there is almost no comparative data on angel finance across jurisdictions. In the United States, much of the very limited work on angel finance that exists is due to Jeffrey Sohl in his role as Director of the Center for Venture Research at the University of New Hampshire. In a 2003 paper<sup>25</sup> Sohl estimates that in the late 1990s the total amount of angel finance exceeded the total amount of venture capital finance, although venture capital investment exceeded angel investment in 2000, the peak year of the venture capital boom. In addition, Sohl confirms the widely held perception that angel investment is targeted at seed, start-up and other early stage investment, whereas only a small part of venture capital investment is targeted at early stages. Putting the various pieces of data in Sohl (2003) together implies that angel investment would have accounted for something on the order of the 70% of early stage private equity in the knowledge-based commercial sector in the United States in the period 1995-2000. If anything, his numbers imply a slightly higher share than 70%. Therefore our estimates of the British Columbia situation are broadly consistent with the American experience with angel investment.

Some of our private equity leaders reported a belief that British Columbia has relatively more angel finance than Ontario, Quebec or the rest of Canada. On the other hand, our equity capital leaders reported that there is relatively little corporate venture capital activity in B.C.

Our investor survey (of angels) contains considerable information about angel finance, although it is related more to program evaluation and policy suggestions than to availability. However, one key point arising from the survey is that the ECP program seems to be an important but not dominant factor in encouraging angel finance in British Columbia. See Appendix 3 for a fuller discussion of the investor survey.

Our summary assessment of angel finance availability in British Columbia consists of the following main points.

- a) Angel finance is very important — much more important than formal venture capital — for early stage equity finance.
- b) Relatively little is known about availability of angel finance in any jurisdiction, including British Columbia. It is very hard to make a reasonable assessment of early stage equity capital availability without more systematic information about angel investment.
- c) In British Columbia on the order of 60% to 80% of early stage arm's length equity finance is provided by angels.
- d) It is believed that the availability of angel finance in British Columbia is relatively good by Canadian standards.
- e) Angel finance in British Columbia seems comparable in relative importance to angel finance in the United States.
- f) The ECP is an important factor in encouraging angel investment in British Columbia.

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<sup>25</sup> Jeffrey E. Sohl (2003), "The US Angel and Venture Capital Market: Recent Trends and Developments", *Journal of Private Equity*, Vol. 6, pp. 7-17.

## **6. Analysis of Program Efficiency**

### **6.1 Introduction**

As stated in the terms of reference for this study, we are to approach the "efficiency" analysis as follows.

This [analysis] consists of two parts. One part focuses on whether the program is meeting its objectives. These objectives include filling perceived financing gaps, supplying capital at early stages in a company's development, and building competition in the retail venture capital fund sector of the financial market. The second part considers the cost of program, taking into account both administrative costs and forgone tax revenues.

As noted in Section 2.2 a primary objective of the Equity Capital Program is to "provide early stage or "seed" capital for small businesses engaged in the value-added sectors of the British Columbia economy". Therefore, as stated in the above quote from the terms of reference, we focus first on the extent to which the Equity Capital Program leads to increased availability of early stage equity investment for small businesses in British Columbia.

One key issue underlying this question is whether the tax credits arising from the equity capital program actually increase investment. It is, for example, possible (albeit unlikely) that investors might accept a 30% refundable credit and make the same investments they would have made anyway. In this (extreme) case, the program would have no effect on availability of early stage capital. Conversely, it is possible (although unlikely) that the entire tax credited investment is new investment that would not have occurred without the program. The truth is likely to lie somewhere between these two extremes. We refer to the question of how much ECP funding is incremental or additional as the "additionality" question.

Some people have suggested an optimistic hypothesis that we call the "jumpstart" hypothesis. The basic idea is that the ECP itself would act like a seed investment that would jumpstart private equity markets in British Columbia and, in effect, cause increases in availability over and above what is provided by the program itself. For example, it is possible that ECP-based funding might lead to syndicated investments that would bring in additional capital from outside B.C. Similarly, it is possible that very early stage ECP-based investments<sup>26</sup> might make early stage firms sufficiently attractive to obtain funding in later rounds that they would not otherwise attract.

### **6.2 Additionality and the Effect of the ECP on Availability of Early Stage Finance**

It is useful to start by considering the size of the ECP compared to the scale of overall venture capital and angel finance in the relevant parts of the B.C. economy. In Section 5.6 we indicated that data from Macdonald & Associates suggests that total early stage venture capital in British Columbia for 2003 and 2004 combined (two calendar years) is approximately \$196.3 million for the full 24 months. We estimated that angel investment for 23 months, excluding non-relevant sectors, was on the order of \$355 million, equivalent to \$370m ( $\$355\text{m} \times 24/23$ ) for the

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<sup>26</sup> Later in the study we consider brief case studies including the investment in Aspreva, which subsequently received substantial funding from venture capitalists based in Alberta and Texas. The key question is whether this additional funding should be attributed to the ECP tax credit.

entire period. However, the venture capital total included investment into Aspreva, which was funded in part through the ECP. Having acknowledged the “jumpstart” hypothesis in section 6.1<sup>27</sup>, a fair comparison of the ECP to the early stage funding totals should either count or exclude Aspreva on both sides. Given the likely “one-off” nature of the Aspreva investment, we opt for the latter and estimate that the total early stage investment by both angels and venture capitalists was on the order of \$487 million for these two years (apart from Aspreva), or an average per year of about \$243 million. We recognize that this estimate is only an approximation and that the actual amount of investment could differ significantly in either direction.

The allowable maximum tax credit budget is currently \$12 million per year for the ECP, allowing up to \$40 million to be raised and tax-credited. Over 2 years, the maximum creditable investment would be about \$80 million. This is divided approximately equally between the retail VCCs on one hand and the non-retail VCCs and EBCs on the other. Two related tax-credit programs, the Community Venture Capital Program (CVCP) and the New Media Program (NMVCP), operate very much like the ECP and are often incorporated with it for summary reporting of data. These programs are allowed an additional \$8 million per year in tax credits.

Putting these numbers together we can see that if the ECP were operating at full potential and if all the money were going toward early stage investment, it could account for something on the order of 16% of early stage private equity in British Columbia. This would be a very significant contribution to the availability of early stage capital. However, there are several reasons why this full potential is not realized.

a. Utilization of Tax Credits: When tax credits are allocated, some of the allocated tax credit is not utilized. This occurs if the VCC or EBC receiving the credit allocation is unable to raise enough capital. For example, a VCC or EBC that received a tax credit allocation of \$100,000 would need to raise approximately \$333,000 in investment in order to “use up” the 30% tax credit. If it raised only \$222,000, then a third of the credit would be unutilized. Inevitably, some of the allocated credit will not be used. Investment Capital Branch documents<sup>28</sup> indicate that the utilization rate for 2003 was approximately 40%. To compensate for this utilization rate the Branch is allowed to “over-allocate” (much as airlines overbook seats), with a sufficiently conservative approach so that over-utilization of the available tax credit is very unlikely. The Branch would like to get as close as possible to full use of the available tax credit (\$12 million for the ECP corresponding to \$40 million in raised capital) without exceeding it. Ministry officials believe that very close to full utilization of the \$40 million for the ECP will be achieved for 2004 (and something very close to a full \$67 million for the ECP and the two closely related programs).<sup>29</sup>

c. Later Stage Investments: Some of the allocated tax credit might be applied to investments that are not early stage. Companies receiving investments from retail VCCs tend to be at a later stage of development than the EBCs or the companies supported by the non-retail VCCs. We do not intend to imply that later stage investments are unproductive or inappropriate. However the question in this section concerns the contribution to early stage finance, so we need to adjust for later stage investments that occur. Based on our analysis of retail VCC investments, we would

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<sup>27</sup> We examine the jumpstart hypothesis in Aspreva’s case study in more detail in section 7.5

<sup>28</sup> Small Business Venture Capital Act: 2004 Program Budget Controls Presentation to the Ministry of Finance, March 2004, Investment Capital Branch, Ministry of Small Business and Economic Development.

<sup>29</sup> The 2004 year actually extends until the end of February 2005 as investors have a 60 day window at the beginning of the year to claim credits for the previous year.

suggest that a conservative estimate of the share of retail VCC investment that is beyond early stage would be on the order of 20%. As retail VCCs account for something on the order of 50% of total ECP investment, the implied adjustment is  $20\% \times 50\% = 10\%$ . Applying this percentage adjustment yields a net tax-credited early stage investment of about \$36 million for the ECP in 2004.

d. Additionality: This point addresses the extent to which tax-credited investment is incremental or additional over and above investment that would occur even without the program. Investors who were planning to make investments in any case will of course be happy to accept a 30% tax credit as an additional benefit. In our surveys (described in detail in Appendices 2 and 3) we sought to shed light on the extent of additionality. It is potentially difficult to get unbiased assessments of additionality as some participants may interpret questions about additionality as asking, in effect, whether they want to retain their tax credits. We therefore asked a variety of questions to a variety of participants in order to try to get an unbiased estimate. Details of how we arrived at this estimate are provided in Appendix 4. We suggest that somewhere between 50% and 70% of tax-credited investment is incremental or additional investment beyond what would have occurred without the program. We use 60% as a “point estimate”.

We also read a report from the U.K.<sup>30</sup> that addressed this question. Our findings are consistent with the U.K. report and suggest that tax-credited investment is largely incremental but far from completely incremental.

Several people suggested that for most angel investors the tax credit would itself represent a lower bound on the amount of additionality. For example, an angel investor might be considering a \$30,000 investment. With a 30% tax credit, the investor would receive \$9,000 back and would add this on to the \$30,000 to make a total of \$39,000. Thus the investor would still provide \$30,000 out of his or her own resources, and the government would, in effect, provide an additional \$9,000, which would be fully incremental. In this case the additionality percentage would be  $9/39 = 23\%$ . In other cases, no investment at all might be made if it were not for the ECP tax credit, in which case 100% of the investment would be incremental. An overall or average additionality of about 60% seems plausible.

Applying this adjustment to the ECP investments implies a net effect of about \$22 million for 2004. The other two closely related programs (the CVCP and the NMVCP) have a combined maximum allowable tax credit of \$8 million, as compared with the \$12 for the ECP. We would expect additionality for these programs to be similar on a percentage basis as for the ECP. If so, these programs would add about an additional \$14 million in estimated investment, leading to total estimated increment of about \$36 million for the three programs combined, representing about 15% of early stage angel and venture capital finance in the relevant sectors of the British Columbia economy. The ECP by itself would account for about 9%.

An incremental investment of about \$36 million per year for the ECP and its two "sister" programs is a large sum, especially if it is applied to a small set of areas at early stages. However, as a proportion of total private equity investment it is not large. We emphasize that our estimate

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<sup>30</sup> “Research into the Enterprise Investment Scheme and Venture Capital Trusts” (2003), a report prepared for Inland Revenue by N. Boys, M. Cox, and N. Spires of PACEC Consultants and A. Hughes of Cambridge University.

of total private equity depends on an inference regarding angel finance that is certainly subject to some uncertainty. It might therefore be helpful to compare this \$36 million increment with the total amount of early stage venture capital investment in B.C. reported by Macdonald & Associates. This was on the order of \$58 million per year for 2003 and 2004 (excluding Aspreva) so we can see that ECP and related program investments are highly significant compared to the overall amount of early stage formal venture capital, although only a modest share of overall early stage equity finance.

The relative size of the investments supported by the ECP should not be taken as either a negative or positive comment on the program. The relative size is a consequence of the amount of program funding, which is only moderate in comparison with the overall size of the knowledge-based commercial sector and other relevant sectors in British Columbia. The key issue is not aggregate size, but “bang for the buck” or performance relative to cost, as taken up in the next section.

### **6.3 Cost and Performance**

Program efficiency concerns the impact of the program relative to its cost. Program costs consist of the forgone tax revenue and the direct administrative cost of running the program. However, before considering costs we provide a note about program acceptance.

#### a. Program Acceptance:

We have been very impressed by the positive sentiment created by the ECP and, more specifically, by the staff who administer the program for the Ministry. Participants at all levels, including those who are critical of various aspects of the program, speak very highly of the program staff. The staff is perceived as being helpful, open, responsive to suggestions, fair, eager to make the program as effective as possible and hard-working. The legislative revisions to the program in 2003 were particularly well received. One benefit of the program is that it has created a lot of positive energy in the private equity community.

#### b. Administrative Costs:

We received the Fiscal 2004/05 Budget Forecast for the Investment Capital Branch. That statement indicates that the annual administrative cost directly attributable to the ECP is approximately \$550,000. We assume that this includes the CVCP and the NMVCP in addition to the ECP, as the CVCP and NMVCP are not separately listed in the budget forecast. We do not have any information about the internal operations of the Branch that would allow us to assess whether these internal operations are run efficiently or whether there is room for improvement. However, we believe that it is useful to compare the ratio of administrative expenses to program activity, much as mutual funds or venture capital funds report a “management expense ratio” (MER).

In this case, we might call the ratio a public administrative cost ratio (PACR). The investment level that will derive from the ECP and its two closely-related sister programs will be very close to the maximum allowable amount of \$67 million. To obtain the PACR, we divide the public administrative cost of \$550,000 by this \$67 million to obtain a PACR of less than 1%.

If this were the only significant administrative cost, as is the case with EBC component of the ECP, this would represent an attractive ratio, lower than the MER of most mutual funds, and comparable to some large index funds. However, the VCCs, particularly the retail VCCs, also

incur substantial management costs that make the overall cost of management of these funds relatively high<sup>31</sup>. In any case, the budget of the Investment Capital Branch itself contains nothing that we would see as a cause of concern based on the size of the administrative cost relative to the size of the program.

c. Tax Cost:

The most obvious cost of a tax credit program is forgone taxes. Economists often refer to such costs as “tax expenditures”. In this case, the maximum tax credit budget is \$12 million for fiscal 2004-05 for the ECP. We have estimated the incremental investment for the ECP as something on the order of \$22 million, so the direct tax cost would be over half of the incremental investment.

In doing an overall tax cost assessment, it should be recognized that that ECP investments create activities that generate tax revenues. These revenues might reasonably be deducted from gross tax expenditures to obtain a full assessment of the net tax cost. The 2004-05 Investment Capital Branch Business Plan contains (in Appendix D) the statement that tax revenues generated over a 5 year period (prior to 2001) for a sample of 35 businesses funded by the ECP exceeded the tax cost by approximately 30%. The estimate is based on calculations described in a 2001 study<sup>32</sup> of the ECP by Grant Thornton LLP, an accounting and consulting firm. Sandler (2004)<sup>33</sup> raises some concerns about this net tax evaluation. We will not take the space here to explain these points of disagreement, but our conclusion is that the evidence does not support a claim that the ECP has generated net tax revenues over and above the cost of the program so far.

Undertaking a full assessment of the effects of the ECP on government revenues or, more broadly, on overall economic activity in B.C. would be a major undertaking that is beyond the scope of this study. However, we note that, of every extra dollar in taxable income received by a resident of British Columbia, on the order of 10% returns to the provincial treasury in income tax,<sup>34</sup> and a smaller but significant amount in other taxes (including capital gains taxes and provincial sales tax) is also generated. This tax revenue can be attributed to the ECP only if the ECP creates additional income over and above what would have been earned without the program. If, for example, the ECP simply moved people from one job to another without changing income there would be no net revenue effect.

Even if the ECP is, as we suspect, a net cost to the provincial treasury, it is possible for the program to have a significant positive net impact. The most important indicator of program success would be whether the program generates sufficient gains to residents of British Columbia to more than offset the costs they paid as taxpayers. However, these benefits do not have to flow to the provincial treasury in order for the program to be a success. Suppose, for example, that the properly discounted cost of the program to Treasury is \$20 million. Suppose that the net benefit to B.C. residents is an increase in income of \$100 million. If only 15% of this extra \$100 million

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<sup>31</sup> For the retail VCCs, these costs arise from the commissions, investor management costs, and reporting costs associated with dealing with small scale retail investors.

<sup>32</sup> Grant Thornton LLP (2001), Cost Benefit Evaluation of Venture Capital Programs, Ministry of Small Business, Tourism and Culture.

<sup>33</sup> Daniel Sandler (2004) “Venture Capital and Tax Incentives: A Comparative Study of Canada and the United States”, Canadian Tax Paper 108, Canadian Tax Foundation: Toronto.

<sup>34</sup> The provincial marginal tax rate for someone with a taxable income of \$50,000 is 9.2%, rising to approximately 14% at a taxable income of \$100,000.

flows to the provincial treasury, the Treasury will have made a loss of \$5 million on the program, but the residents of British Columbia have been made much better off overall, inclusive of the implied tax liability.

d. Program Impact:

Program impact concerns the overall effect of the program. As we understand the program objectives, the most important effect would be the development of successful B.C. companies that would not otherwise have been as successful. These successes should be reflected in increased employment and increased income. Another important potential impact of the program would be a more vigorous private equity market in British Columbia. In addition, we might hope to increased commercialization of innovation technology than would otherwise take place.

At this stage it is much too early to assess the performance of the EBC program on these dimensions, as it has only been operating for two years, while the gestation period for emerging companies is normally several years. As for the VCC program, a full benefit assessment of the program is beyond the scope of this study. In the following section, however, we describe three high profile and successful examples of the ECP supported companies, and we also provide systematic information about companies covered by our random sample of supported companies.

## **7. Case Studies and Overview of Investees**

### **7.1 Introduction**

In this section we provide brief case studies of three high profile companies that have been supported by the ECP. These companies are among the most successful ECP-supported companies and are therefore not to be taken as representative. However, they are useful in showing what can be achieved by the program.

### **7.2 A.L.I. Technologies Inc.**

Perhaps the most conspicuously successful company supported through the ECP is the former A.L.I. Technologies Inc. (ALI), renamed as the McKesson Medical Imaging Group following McKesson Corporation's purchase of ALI in 2002. The company is a world leader in digital imaging for medical uses and provides digital imaging systems to a wide variety of medical installations throughout the world. The head office of the McKesson Medical Imaging Group remains in Richmond, B.C.

The original company was founded in 1986 by three partners, Len Grenier, Chris Hannan, and Peter Van Bodegom, with the goal of applying infrared light technology to detect breast cancer tumours. This technology was made redundant in 1988 after new x-ray solutions proved more effective. On the verge of shutting down, the three partners decided look at refocusing the company. As described by Len Grenier:<sup>35</sup>

"We sat down to a very a painful meeting: would we kill the business or was there technology we could extract? The partners looked long and hard at what we had, in particular the electronic image management software that was part of our computerized breast imager. We thought the software had commercial potential, and made the decision to develop it".

The partners incorporated their company under the name A.L.I. Technologies on April 11, 1988 and began working on applying their new digital imaging system to the North American ultrasound market. ALI became the first company to develop a Picture Archiving Communications Systems [PACS], a state-of-the-art digital image archiving system for hospitals and clinics that creates, distributes, and archives medical and diagnostic image reports. By automating these image networks and eliminating the use of hard-copy films, ALI's technology has reduced operating costs, improved productivity and efficiency, increased the timeliness and accuracy of diagnostics and has improved general patient care in over 550 facilities in Canada, the United States, Europe and elsewhere. ALI's multi-site, enterprise-wide PACS installations rank among the world's most sophisticated digital image systems for radiology.

ALI had a long and difficult evolution, requiring a variety of equity infusions to keep it going. The equity history is shown in Table 9.

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<sup>35</sup> "Teching Care of Business", University of Alberta Engineer Magazine, Winter 2003.



**Table 9: ALI Equity History**

<b>Date</b>	<b>Type</b>	<b>Amount (\$)</b>	<b>Note</b>	<b>Source</b>
1-Jan-86	Angel Investment	5,000,000	Milton Wong	1
24-Dec-92	ECP Investment	140,000	VPL Ventures (VCC) Inc.	4
Dec-92/Dec-93	VC Investments	Unknown	VC Rounds 1 and 2	2
3-Feb-93	ECP Investment	60,000	VPL Ventures (VCC) Inc.	4
30-Jul-93	ECP Investment	140,000	VPL Ventures (VCC) Inc.	4
2-Sep-93	ECP Investment	60,000	VPL Ventures (VCC) Inc.	4
28-Jan-94	ECP Investment	504,000	ExFund, VPL & Prometheus Inc.	4
22-Apr-94	ECP Investment	216,000	ExFund, VPL & Prometheus Inc.	4
21-Apr-94	Initial Public Offering	3,250,000	Vancouver Stock Exchange	3
1-Jun-94	VC Investment	Unknown	VC Round 3	2
1-Dec-94	VC Investment	Unknown	VC Round 4	2
22-Mar-95	ECP Investment	367,481	Ex. Tech. Fund 2 (VCC) Inc.	4
22-Nov-95	Private Placement	1,600,000	Incl. insiders	5
28-Nov-95	ECP Investment	157,492	Ex. Tech. Fund 2 (VCC) Inc.	4
12-Jan-96	Private Placement	750,000	Arms length inst. investor	5
1-Mar-96	VC Investment	Unknown	VC Round 5: sub. debt	2
4-Mar-96	ECP Investment	780,000	VPL Ventures (VCC) Inc.	4
1-Jun-96	VC Investment	Unknown	Round 6: common shares	2
18-Sep-96	ECP Investment	200,000	Ex. Tech. Fund (VCC) Inc.	4
7-Apr-97	ECP Investment	400,000	Ex. Tech. Fund 3 (VCC) Inc.	4
25-Apr-97	Private Placement	13,389,132	General Electric and others	3
Jul-97/Oct-97	ECP Divestments	(769,371)	Ex. Tech. Fund 3 (VCC) Inc.	4
7-Aug-97	ECP Investment	100,000	Ex. Tech. Fund 2 (VCC) Inc.	4
30-Sep-97	Public Offering	863,000	Warrants & Options Exercised	5
31-Oct-97	ECP Investment	117,000	VPL Ventures (VCC) Inc.	4
19-Dec-97	Market Upgrade	-	TSE: ALT	5
31-Dec-97	ECP Divestment	(190,468)	Ex. Tech. Fund 3 (VCC) Inc.	4
27-Apr-98	Public Offering	1,054,000		5
22-May-98	Private Placement	13,500,000		5
1-Jun-98	ECP Divestment	(65,134)	Ex. Tech. Fund 3 (VCC) Inc.	4
30-Sep-98	Public Offering	613,000	Warrants & Options Exercised	5
30-Sep-99	Shares repurchased	(3,145,000)		5
Sep-99/Sep-01	Public Offerings	605,000	Warrants & Options Exercised	5
Sep-00/Sep-01	Shares repurchased	(2,717,427)		5
Sep-01/Mar-02	Public Offerings	1,981,000	Warrants & Options Exercised	5
12-Sep-02	Cash Acquisition	536,000,000	McKesson Corp. (NYSE)	6

The equity history represents our best efforts, using a variety of sources,<sup>36</sup> to identify significant equity events for ALI. As can be seen, the initial major equity investment was from Vancouver Angel investor Milton Wong in 1986. This allowed the company to survive and redevelop its product. Mr. Wong patiently and diligently stayed on as the primary angel investor and as a director until acquisition by McKesson in 2002. At the time of acquisition Mr. Wong owned 20% of ALI.

As suggested by the equity history shown in Table 9, ALI found it necessary to seek new equity capital infusions in the early 1990s, receiving venture capital investments in 1992 and 1993, as well as a series of smaller infusions totalling \$400,000 from angel/VCC investor Paul Lee through VPL Ventures VCC Inc. This coincided with ALI's first system installations which began with an installation at B.C. Women's Hospital in Vancouver in June 1992. In 1993 their system was approved by the US Food and Drug Administration, giving them access to the lucrative US market. The 1992 and 1993 venture capital investments were needed to finance this commercialization and marketing stage of development. In addition, ALI "went public" and raised \$3.5 million in an initial public offering on the Vancouver Stock Exchange<sup>37</sup> (VSE) in 1994.

Expansion in the 1990s was also funded through a total of slightly over \$3.2 million in capital raised under the Equity Capital Program. The first sizeable amounts were provided by a syndicate led by the Exceptional Technologies Fund in 1994. After this the contributions were split between VPL Ventures VCC Inc. and the Exceptional Technologies Funds 2 and 3 (Discovery Capital Corporation Funds), who provided \$0.9m and \$1.2 respectively.

ALI also received significant private placement investments in the mid '90s, made up of a \$1.6 million investment in 1995 from a group including officers and directors and \$750,000 in the same year from an undisclosed institutional investor. We have learned that investor was Discovery Capital Corporation – a retail VCC. A large investment of \$13.4 million occurred in 1997, primarily from General Electric. More specifically, General Electric Medical Systems purchased 19.6% of ALI as part of a strategic alliance, which included a technology and marketing agreement intended to create value for both parties through cooperation in the development and marketing of medical image management technology, products, and systems.

At the end of 1997, ALI moved up to the Toronto Stock Exchange (under the symbol AST). Over the next year, ALI issued over \$15 million in shares and warrants as the company began to expand rapidly. The years 1998 and 1999 saw ALI move beyond just the ultrasound imaging market and expand into enterprise-scale image management systems serving all radiology image modes.

By 1999, ALI was employing approximately 180 people in B.C. (up from 45 as recently

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<sup>36</sup> The sources used are (1) Wendy Stueck, May 3, 2002, "McKesson to buy B.C.'s ALI", Globe and Mail, (2) Macdonald and Associates, (3) [www.fpinfomart.ca/fphr/pdf/ar12987\\_6873.pdf](http://www.fpinfomart.ca/fphr/pdf/ar12987_6873.pdf), (4) Investment Capital Branch: ECP Tax Credit Database, (5) ALI Technologies' Annual Reports, as in SEDAR, (6) Brent Holliday (2002) "Something Ventured", [www.bctechnology.com](http://www.bctechnology.com). Investments recorded in the ECP Tax Credit Database were provided with ruling dates for the tax credit, not with the actual date of investment. ECP Investments in 1994 were provided by a syndicate consisting of the Exceptional Technologies Fund (VCC) Inc., VPL Ventures (VCC) Inc., and Prometheus Ventures (VCC) Inc. VPL Ventures (VCC) Inc. is an investment holding company for Paul Lee, an angel investor, and Prometheus Ventures is an investment holding company for a number of ALI employees.

<sup>37</sup> The Vancouver Stock Exchange was ultimately absorbed by TSX Venture Exchange.

as 1996) and was listed as B.C.'s 33rd ranked technology company by revenue on the T-Net list of B.C.'s top 100 technology-based companies<sup>38</sup>. By 2002 annual revenues were up to \$56 million and ALI was in 22<sup>nd</sup> place on the T-Net list.

As revenues and cash flows increased, ALI's need for outside capital decreased. Exceptional Technologies Fund (VCC) divested \$1 million, and almost \$6 million in shares were repurchased. The company's success culminated in 2002, when it was purchased by McKesson Corporation (NYSE: MCK) for \$536 million, the largest cash acquisition of a B.C. technology company as of that date. Long time investors in the company (such as Milton Wong) are believed to have earned very large returns on their original investments.

ALI represents a striking success story for British Columbia. It is a high-technology operation that generates significant employment in the Province, generates significant tax revenue for the provincial treasury and, what is most important from an overall social welfare point of view, has significantly improved patient care in B.C. and elsewhere. It also contributes to the development of a life sciences "cluster" in B.C. and should therefore provide "spillovers" to further biotech developments in British Columbia. Ideally, the provincial government would like the ECP to generate more success stories like ALI.

One issue that is difficult to address concerns how important the ECP was to the development of ALI or, more to the point, what would have happened if the ECP had not been in place. ECP-supported investments provided very important equity infusions at a critical time in ALI's development. In addition, the "human capital" or mentoring support provided by VCCs (particularly Paul Lee) also played an important role in the development of ALI. Possibly the company would have failed or been forced to move or sell its technology to a different jurisdiction in the absence of these investments and/or the associated mentoring. This is difficult to assess. In aggregate numbers, ECP-supported investment was only a modest part of the total equity investment in the firm and the investment occurred when ALI was already into the commercialization phase, and it is difficult to assess the relative importance of ECP-related mentoring. It is possible that ALI could have obtained sufficient other investments and human capital support, albeit with difficulty, even in the absence of the ECP.

One interesting question concerns the comparison of provincial tax revenues arising from the ECP investment in ALI with the cost of the ECP. The following section provides a very rough calculation in order to get an idea of rough orders of magnitude.

### **7.3 ALI Tax Effects**

In considering tax effects there are 3 main sources of tax revenue: provincial income taxes paid by employees of ALI resident in British Columbia, corporate income taxes paid by ALI, and provincial taxes paid on capital gains. Consider the year 2002, the last year in which ALI operated independently. According to our information, ALI had 240 employees with an average income of about \$51,000. Applying different provincial rates to different levels of income, we estimate that total income taxes paid by ALI employees to the provincial treasury were about \$888,000. Corporate earnings were about \$8.8 million. Applying a 13.5% provincial corporate income tax rate implies about \$1.2 million in tax revenues. Finally, there are capital gains to consider. ALI was purchased for over \$500 million in 2002. A large part of this sum represented capital gains to B.C. residents, although it is difficult to know exactly how much. We

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<sup>38</sup> "1999 Rankings" and "2002 Rankings", [www.bctechnology.com](http://www.bctechnology.com)

know that a substantial part went to Milton Wong but returns to other B.C. residents are hard to estimate. However, we believe that the overall capital gains to B.C. residents would be between \$150 million and \$300 million. Applying a 7.5% provincial capital gains tax rate implies a return of between about \$11 million and \$22 million. This represents a total that would need to be annualized over the average holding period to get an annual return. Mr. Wong had held his investment for 16 years, and most other investors had holding periods of 5 to 10 years. An average holding period of about 7.5 years suggests an annualized return of between \$1.5 million and \$3 million. The midpoint is \$2.25 million.

Adding up these three sources of tax revenue implies that, as of 2002, the annualized tax return associated with ALI attributable to that year was on the order of \$2.1 million in taxes on continuing earnings and a similar or slightly larger amount in annualized taxes on capital gains, yielding a total on the order of \$4.3 million per year. In previous years the contribution was less. One question concerns what fraction of the personal income tax was incremental. Presumably, even if ALI did not exist, the employees would have had other jobs and would have paid some tax revenue. Taking account of this effect, the incremental annualized tax associated with ALI as of 2002 would certainly have been under \$4 million.

The more difficult question concerns the share of the ALI-related tax revenues that can be reasonably attributed to the ECP. Some observers might argue that the ECP was essential and that all tax revenues should be attributed to the ECP. However, the same argument could be made for the other equity investments. It is hard to see why all the revenues should be attributed to the ECP and (by inference) none to other investments. We do not know the total equity investment in ALI and therefore we do not know the share of ECP-supported investments. However, based on the equity history it seems that ECP-supported funding certainly accounted for less than 10% of the equity funding that went into ALI and probably about 5%. Therefore, we conclude that the provincial tax attributable to the ECP, on an annualized basis as of 2002 would have been on the order of \$200,000 per year and certainly less than \$400,000 per year.

Arguably additional tax revenues should be attributed for PST on sales of products in B.C. and for income tax paid by people in the investment community working the on ALI finances. However, this would be unlikely to affect our estimate significantly. Therefore we conclude that, while total taxes paid by ALI are significant relative to the cost of the ECP, the share attributable to the ECP would be small compared to the program cost. On the other hand, it would not take a large number of similar success stories to provide tax revenues that would represent a significant part of the ECP program cost.

#### **7.4 Case Study 2 – TIR Systems**

TIR Systems Ltd. [TIR] is a Burnaby, B.C. lighting and fixture manufacturer. The company was founded in 1982 by Lorne Whitehead and Roy Nodwell. These two professors at the University of British Columbia formed TIR to commercialize prism light guide technology they had invented at the University. This technology involved the manipulation of conventional lighting with their product, the Light Pipe, for use in the architectural market, transportation applications, and remote access applications. The company went public on the Vancouver Stock Exchange in 1987, raising enough capital to pursue commercialization of the “Light Pipe” product. Large contracts were obtained with MacDonalds (1989), 3M (1992) and the City of Boston (for the Callahan Tunnel, 1993).

In the late 1990s TIR shifted into solid state lighting using the Light Emitting Diode (LED) technology. This could lead to a major breakthrough in the light source industry. This shift

in strategic focus required a significant equity infusion, much of which was provided by ECP-backed investments between 1999 and 2001. These investments were from the Exceptional Technologies Fund managed by Discovery Capital (a retail VCC).

The shift in strategic direction was very successful. By 2004 TIR had annual revenues of \$22.4 million, had upgraded to the TSX and had undertaken a major public offering. Largely to provide capital for the future, TIR upgraded its stock listing to the TSX exchange, and followed this up with a \$10 million public offering. Discovery Capital was able to divest much of its holding in TIR in 2003, generating attractive returns on its investment.

### 7.5 Case Study 3 – Aspreva Pharmaceuticals

Aspreva Pharmaceuticals is a pharmaceutical company based in Victoria, B.C. The company is engaged in "drug discovery". However, it does not undertake the costly and time-consuming research and development of its own drugs. Instead it purchases the rights and/or licenses related to existing drugs that have the potential to treat ailments other than those for which the drug is currently approved and used. Aspreva then tests, develops and commercializes the drug for these new applications. Aspreva focuses particularly on under-served markets. As stated on the Aspreva website<sup>39</sup>:

"There are fiscal and structural challenges that preclude pharmaceutical companies from developing drugs for underserved diseases, particularly those with lower prevalence. Yet the industry faces increasing criticism that progress in pharmaceutical medicine only happens in highly profitable markets. An Aspreva partnership enables pharmaceutical companies to overcome these challenges, enhancing both profitability and their corporate reputation. Aspreva's trademarked vision 'Pharmaceutical Social Equity' captures the concept of making available modern pharmacotherapy to disenfranchised underserved patient populations."

Aspreva is at a much earlier stage of development at present than ALI or TIR and illustrates a different aspect of ECP program success. In this case, the striking success indicator is that an ECP-backed VCC was able to put together a large financing package bringing in large investments from venture capitalists in other jurisdictions – Alberta and Texas. A description of the equity history follows.

Aspreva unsuccessfully sought seed level investment in 2001 and 2002, which it needed in order to acquire its first drug license. An important source of finance during this period was the credits cards of the founders!<sup>40</sup> In late 2002, Aspreva approached Roche AG, a large Swiss drug manufacturer, with the hopes of using Roche's transplant medication CellCept for the treatment of autoimmune deficiencies (such as Lupus). Roche agreed to let Aspreva perform preliminary research to this end. On January 16, 2003 Aspreva received a \$1.7 million seed investment. Quest Emerging Biotech Fund (a VCC now merged into BC Advantage Funds) was the lead investor. Two local angel investors also contributed significantly at this stage: Julia Levy (former CEO of QLT Inc.) and Don Rix (Chairman of BC Advantage Funds and MDS Metro Laboratory Services). During 2003, Aspreva raised an additional equity infusion exceeding \$1 million from retail VCCs.

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<sup>39</sup> "Corporate Overview", [www.aspreva.com/investors.html](http://www.aspreva.com/investors.html)

<sup>40</sup> Brenda Clarke, "Local drug firm hits biotech jackpot", [www.vicweekendition.com](http://www.vicweekendition.com)

Clinical trials on CellCept proved successful and in October 2003 Aspreva acquired the worldwide rights (excluding Japan) to develop and market the drug for the treatment of autoimmune diseases. At this time the company required substantial start-up stage capital for the development and commercialization of the drug. On March 9, 2004, Aspreva received \$79.8 million in private series “A” financing, the second largest life sciences venture capital financing in Canadian history.<sup>41</sup> This round of financing was led by Sprout Group (one of the oldest and largest institutional investors in the US) as well as several other US life sciences venture funds.<sup>42</sup> On January 24, 2005, Aspreva announced that it had applied to the SEC and Canadian securities regulators for an initial public offering. Aspreva intends to raise US\$100 million on the NASDAQ (symbol ASPV) and TSX (symbol ASV) exchanges.<sup>43</sup> “Aspreva will use the proceeds from its IPO for clinical trials, market research, medical education, product launch preparation, potential new formulations and for working capital and general corporate purposes.” The company has incurred no revenue from sales to date and has therefore not yet entered the commercialization phase. Expenses so far have exceeded \$25 million. Expectations for Aspreva are very high at present although it is not clear when commercialization will occur.

The key success for the ECP program illustrated by Aspreva is that ECP-supported equity infusions provided important and possibly essential investments that allowed equity investments from outside British Columbia to be brought into B.C. and to contribute the develop of the local biotech sector. If we were to attribute this increased investment entirely to the ECP it would imply a much larger contribution of the ECP to early stage equity than our calculations in Section 6.2. Thus the Aspreva case supports the "jumpstart hypothesis" described in Section 6. Under this hypothesis a modest amount of ECP funding is leveraged into much more funding for sources outside B.C.

There are two cautions in interpreting the Aspreva case. First, as always, the question remains of what would have happened in the absence of the ECP. Possibly Aspreva might have obtained comparable funding. The second caution is simply that Aspreva might be a "one-off" example. Before concluding that the ECP has a large jumpstart or leveraging effect we would want to see some additional comparable cases. However, despite these cautions, the Aspreva example casts a very positive light on the ECP.

## **7.6 Overview of ECP supported companies**

Table 10 provides some background data about the ECP program. It shows that in 2003 and 2004 approximately \$300 million in tax credits were requested by RIVs. In each year just over half of the total amount requested came from EBCs, and just under 10% came from non-retail (NR) portfolio VCCs. Retail VCCs increased their requests by about \$10 million in 2004, thereby increasing their share of the tax credits requested from 19% to 24%. In contrast, single-purpose VCCs reduced their requests from \$60 million (20% of the total) to \$46 million (17% of the total).

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<sup>41</sup> Policy Forum - Biotechnology in BC, Vancouver Board of Trade, September 23, 2004.

<sup>42</sup> These include Axiom Venture Partners, BioAsia Investments, HBM Partners, InterWest Partners, and Thomas Weisel Venture Partners (Source: Macdonald & Associates).

<sup>43</sup> “Aspreva Pharmaceuticals Files for Initial Public Offering (IPO)”, January 24, 2005, TechFinance.ca News Service.

<b>Table 10: Amounts Allocated and Requested (Can \$m) Under the ECP by Type of RIV for 2003, 2004</b>							
Type of RIV=	Allocated	Wait-Listed	Denied or Not Allocated	Requested	% of Total Requested	Amount Allocated as % of Amount Requested	Amount Allocated as % of Funds Allocated
<b>2003</b>							
EBC	128.7	0.0	30.3	159.0	53%	81%	50%
Single-purpose VCC	57.3	0.0	2.8	60.1	20%	95%	22%
NR Portfolio VCC	23.1	0.0	2.0	25.0	8%	92%	9%
Retail VCC	46.7	0.0	10.0	56.7	19%	82%	18%
<b>Total</b>	<b>255.8</b>	<b>0.0</b>	<b>45.1</b>	<b>300.9</b>	<b>100%</b>	<b>85%</b>	<b>100%</b>
<b>2004</b>							
EBC	45.8	34.1	62.7	142.5	51%	32%	35%
Single-purpose VCC	14.5	5.2	26.8	46.5	17%	31%	11%
NR Portfolio VCC	6.0	0.5	19.5	25.9	9%	23%	5%
Retail VCC	64.6	0.0	2.0	66.6	24%	97%	49%
<b>Total</b>	<b>130.8</b>	<b>39.7</b>	<b>111.0</b>	<b>281.5</b>	<b>100%</b>	<b>46%</b>	<b>100%</b>

The average amount requested by RIVs increased slightly in 2004 to just over \$1.4 million, but there was a large range. On average, retail VCCs requested \$8.1 million in 2003 and \$9.5 million in 2004. In contrast, the average amount requested by EBCs, single-purpose VCCs and portfolio VCCs ranged between \$800,000 and \$1.8 million over both years. The largest request was for almost \$16 million. The amount of money allocated dropped sharply by \$123 million between 2003 and 2004. While 85% of the money requested in 2003 was allocated, only 46% was allocated in 2004.

In 2003 tax credits were allocated to the RIVs roughly in proportion to the amount requested. For example, EBCs accounted for 53% of the total amount requested and were awarded 50% of the funds available. Similarly, retail VCCs represented 19% of the total amount requested and were awarded 18% of the funds made available. In 2004 the pattern was very different with the proportion going to retail VCCs increasing considerably and the proportion going to the other types of RIVs declining. While retail VCCs accounted for 24% of the amount requested, they received 49% of the allocation. As a result, retail VCCs received 97% of the funds they requested. In contrast, EBCs, NR portfolio VCCs and single-purpose VCCs received 32%, 23% and 31% of the funds they requested, respectively.

Table 11 shows the amount of money raised under the ECP, the number of ESBs affected, the total amount invested by each RIV and the amount they invested in publicly traded companies. The amount of money actually raised through the program was only about 19% of the amount allocated in 2003. While EBCs, NR portfolio VCCs and single-purpose VCCs raised 20% or more of the amounts they had been allocated, retail VCCs raised only 11% of the amount

they were allocated. In 2004, the amount of money that was raised increased despite less money being allocated. This was due to increases in the success rate of securing funds for all RIV types, especially retail VCCs which increased the proportion raised from 11% to 68% of their amount allocated. As a result, retail VCCs accounted for 71% of the total funds raised in 2004.

EBCs raised funds for more companies than the other RIVs combined in both 2003 and 2004. In 2003, EBCs raised between \$5,500 and \$1.4 million for ESBs with an average of \$291,215. In 2004, the average amount raised by EBCs fell to \$164,000. In contrast, retail VCCs invested funds into only six ESBs in 2003 and nine ESBs in 2004. Of course the average amount raised was much larger -- \$840,000 in 2003 and \$4.9 million in 2004.

Table 11 also shows the total amount invested by each RIV in the ESBs. In both years, EBCs invested 100% of the amount raised through the ECP, as implied by the direct investment model. Single-purpose VCCs and NR Portfolio VCCs typically invested more than they raised under the tax credit, indicating that they made additional investments.

All RIVs invested some money in publicly traded companies. The amounts were not large in aggregate – 7% of total investment in 2003 and 8% of total investment in 2004. However, there were significant differences across RIVs. NR Portfolio VCCs invested only 1% of their total funds in public companies (in each year), while retail VCCs invested 51% of their money in publicly traded companies in 2003 and 18% in 2004.

Type of RIV	Amount Allocated Under ECP	Amount Raised Under ECP	Number of ESBs	Amount Invested (Total)	Amount Invested in Public Companies	\$ Raised as % Total Raised	\$ Raised as % of Amount Allocated	\$ Invested as % Amount Raised	% of investments in Public Cos.
<b>2003</b>									
EBC	128.7	25.3	87	25.3	1.7	51%	20%	100%	7%
Single-purpose VCC	57.3	13.5	23	20.1	1.5	27%	24%	149%	8%
NR Portfolio VCC	23.1	5.4	45	15.6	0.1	11%	24%	287%	1%
Retail VCC	46.7	5.1	6	1.5	0.8	10%	11%	29%	51%
<b>Total</b>	<b>255.8</b>	<b>49.3</b>	<b>161</b>	<b>62.6</b>	<b>4.1</b>	<b>100%</b>	<b>19%</b>	<b>127%</b>	<b>7%</b>
<b>2004</b>									
EBC	45.8	10.4	63	10.4	0.4	17%	23%	100%	4%
Single-purpose VCC	14.5	4.0	16	12.8	1.5	6%	27%	320%	12%
NR Portfolio VCC	6.0	3.8	30	7.4	0.1	6%	64%	194%	1%
Retail VCC	64.6	43.8	9	5.9	1.1	71%	68%	13%	18%
<b>Total</b>	<b>130.8</b>	<b>62.0</b>	<b>118</b>	<b>36.4</b>	<b>3.0</b>	<b>100%</b>	<b>47%</b>	<b>59%</b>	<b>8%</b>



Many ESBs received tax credited investment under the ECP program from more than one of the four different RIVs. Table 12 shows the total funds invested by RIVs in 2003 and 2004. The amounts on the diagonal reflect tax credits received by ESBs from one and only one type of RIV in that year. For example, in 2003 EBCs invested \$17.2 million in ESBs where they were the sole RIV investor. The off-diagonal elements reflect amounts that have been invested in ESBs with a partner RIV. The rows indicate the amount invested from that source and the columns indicate the partner. For example, in 2003 EBCs invested just under \$1 million in ESBs that single-purpose VCCs also invested in. Similarly, Table 12 shows that single-purpose VCCs invested just over \$2.9 million in ESBs that EBCs also invested in.

There are four main implications from this table. First, RIVs conduct a considerable amount of partnering. In 2003 (2004), 40% (21%) of the funds invested by RIVs were invested with partners. Second, EBCs and NR portfolio VCCs seem to partner the most in terms of dollar amounts. Third, most of their partnering is with each other and when they invest, they appear to invest roughly equal amounts. For example, they each invested between \$5.3 million and \$5.6 million in 2003, and between \$2.4 million and \$3.0 million in 2004. Fourth, single purpose VCCs do not partner with NR portfolio VCCs.

<b>Table 12: Amounts Invested in ESBs by Different RIVs--Individually and Jointly</b>						
	<b>EBC</b>	<b>Single-Purpose VCC</b>	<b>Portfolio VCC</b>	<b>Retail VCC</b>	<b>Total</b>	<b>Partnering Investments</b>
<b>2003</b>						
EBC	17.24	0.96	5.33	1.80	25.34	8.10
Single-Purpose VCC	2.94	13.73	3.45	0.00	20.12	6.39
NR Portfolio VCC	5.64	2.66	6.10	1.22	15.63	9.53
Retail VCC	0.30	0.00	0.67	0.50	1.47	0.97
<b>Total</b>					62.55	24.98
<b>2004</b>						
EBC	7.24	0.20	2.36	0.56	10.35	3.12
Single-Purpose VCC	0.15	12.60	0.03	0.00	12.78	0.18
NR Portfolio VCC	2.97	0.20	3.98	0.25	7.40	3.42
Retail VCC	0.58	0.00	0.28	5.00	5.86	0.86
<b>Total</b>					36.38	7.57

Table 13 contains information based on our sample of ESBs, which is described in Appendix 2. It consists of 18 ESBs funded exclusively by EBCs, 4 ESBs funded exclusively by VCCs and 14 ESBs that were funded by both EBCs and VCCs. The VCC backed ESBs are all in IT and are all in the GVRD or Victoria region. Sixty percent of the EBCs are in IT and only 50% of them are in the GVRD or Victoria region. The revenues for these firms are usually for 2003. They show huge variability with many firms not earning any revenues and one company with revenues in excess of \$16 million. The number of employees ranged from zero to 52, with the average around 10. The percentage of equity in these companies that was tax credited varied between 0% and 100%, with an average of around 30 percent. One potential measure of performance is change in revenue, but this also varied considerably. In our sample, the ESBs that

were jointly funded by EBCs and VCCs did experience a substantial positive increase in revenue on average. However, the data is highly skewed and the median increase was close to zero for the three funding types. Finally, we asked the ESBs how much equity they think that they would have raised in the absence of the tax credits. Again, the responses varied considerably, from 0% to 100%. It averaged 50% for the EBCs, was higher for the VCCs (66%), and the mixed funded ESBs were in between (60%).

**Table 13: Descriptive Information About ESBs in Our Sample**

Source of Funding	IT	Bio-tech	Traditional	Other	GVR or Victoria	Revenues (Can \$m)	No. Employees	Tax Credited Equity	Change in Revenue (Can \$m)	Equity Would Raise	Sample Size (n)
EBC	60%	6%	28%	6%	50%	0.63	7	29%	0.00	50%	18
					(50%)	-1.31	(12)	(37%)	-1.06	(34%)	
Mixed EBC/VCC	64%	18%	9%	9%	80%	1.57	13	27%	1.35	60%	11
					(40%)	-4.85	(10)	(26%)	-4.20	(30%)	
VCC	100%	0%	0%	0%	100%	0.82	11	34%	-0.13	66%	4
					(0)	-1.34	(16)	(25%)	-2.20	(31%)	

## 8. Analysis of Policy Alternatives

### 8.1 Introduction

The third major focus of this study concerns policy alternatives. It is possible to consider policy alternatives at the broadest level, such as expanding or contracting the program as a whole, down to the level of very specific program design changes. (Appendix 6 provides a detailed statement of the ECP design.)

We see a significant contribution of the study as being the collection of policy change ideas from various interested parties. We provided opportunities for open-ended suggestions to all survey respondents and interviewees. We also provided specific questions regarding a variety of design issues. From the responses the following issues emerged as being of significant interest and/or concern.

#### High Level Issues:

- a. **Fund-of-Funds:** Is a "Fund-of-funds" model an appropriate substitute or a complement to the ECP?
- b. **Program Expansion and Funding Mix:** Should the EPC be expanded, contracted, or maintained at about the current level? Within the EPC what is the appropriate allocation mix between retail VCCs, non-retail portfolio VCCs, single-purpose VCCs, and EBCs?
- c. **National Program?** Should the ECP be extended to the national level and, if so, what is the appropriate mix between a national ECP and the labour-sponsored funds?

#### Program Design Issues:

- d. **Allocation Method:** Should the allocation method be changed to reduce uncertainty and/or to smooth out availability over the year?
- e. **Demand Management and the Tax Credit:** What is the best way of handling excess demand for tax credits? Should the tax credit be changed (raised or lowered) from the current 30% level?
- f. **Program Constraints: Local Content, Size Limits, Holding Periods, and Pacing:** The main local content requirements are that a firm receiving investments must pay at least 75% of its wage bill to employees resident in B.C., it must have at least 80% of its assets in B.C., and it must have a permanent establishment in B.C. Firms are limited to a maximum of 100 employees and there is a maximum ECP supported investment limit for each firm of \$5 million. The primary holding period constraint is that investments must be held for 5 years. The primary pacing requirement is that capital must be raised within the year in which tax credits are allocated to the EBC or VCC. The question is whether these constraints are too strict, not strict enough, or about right.
- g. **Program Understanding:** Is understanding and accessing the program excessively difficult for firms and investors?

### 8.2 Private Equity Leader Interviews and High Level Issues

The "private equity leader" group consists of 11 particularly knowledgeable and experienced people who are very familiar with the ECP and probably know as much about the overall private equity environment as anyone in British Columbia. Accordingly, we believe that their comments should be taken very seriously. On the whole they were very positive about the Ministry's handling of the program and about the intent of the ECP. However, some of their comments were quite critical on particular points. A synopsis of the comments from this group regarding high level issues is provided in the following subsections.

## **a) Fund of Funds**

A fund of funds is a large fund that would obtain money from a variety of sources, including the provincial government and (possibly) institutional investors such as pension funds. Such a fund would then make investments in other venture capital funds. A large fund-of-funds allows greater pooling of risks than standard venture capital funds and may be able to achieve economies of scale in raising capital and in obtaining or creating skilled management capability.

On the whole the private equity leaders were ambivalent about a fund-of-funds, having mixed opinions even if the fund were viewed as complementary to the ECP. If the fund were viewed as a substitute that would divert money from the ECP there would be more opposition. The main point made by the private equity leaders was that the most important issue is program design. A fund of funds could be either good or bad depending on the details of program design. Specific comments follow.

"The BC Focus fund in 1992-93 was the best model that has been tried. It took a \$50 million pool and said to 5 managers: 'we'll match you \$10m for \$10m'. The program made [good] returns and put ... fund managers on the map. ... A fund-of-funds would help, but it has to be run in a non-political manner. They must not "pick" managers. Let the best VCs go to market and then match."

"There [are many] ways to structure a [fund of funds]... From a fund perspective we have a healthy VC count right now... The competitive landscape is dramatically better than 2-3 years ago."

"The fund of funds model was done [before] ... But we don't need the B.C. government to be putting more into this area. We would rather see this money targeted at the early stage."

"My gut feeling is that ... super funds are not the answer. This would end up being more money in the same hands. VCs just don't invest in start-ups... With a fund of funds the manager's expenses plus due diligence, etc. take up too much money."

"A government initiated fund of funds is a very positive thing. We would then have another player in the province. Having a [retail] VCC raise \$8 million for a year is useless.... A government seed fund would be more productive."

"The Fund of Funds model has been proven to work elsewhere.... But a government fund cannot be a job creation program. It must be returns first."

"If [the fund of funds] will be run by institutional investors, they will have no interest in retail funds ... so this isn't a solution for LSVCCs or VCCs. If the source of the funds is the [provincial] government, then the tax credit leverage is higher with the [retail VCCs]."

"The fund of funds idea is a non-starter. But the traditional VCs [are supportive because they] see them as another source of capital."

The following sobering quote comes from a very senior person representing a major pension fund:

"We think there are problems with the various fund of funds proposals. First there is a presumption that there is a shortage of capital across all stages [in private equity]; we just don't

think that is true. The main problem in the Canadian market is that there are an insufficient number of top-tier managers... The performance of the industry over the last 8 years is not good. We have never turned down a fund because of a capital constraint; there just aren't enough good funds in Canada."

Views in the private equity community are very mixed regarding a fund of funds. We did not observe strong support from the VCC community, possibly because they suspect that money going into a fund of funds would not go to them. Traditional VCs, on the other hand, are most positive about a fund of funds as they are able to compete for the funds on a fair basis.

*Recommendation:* Our conclusion is that we do not have enough information to make a confident suggestion regarding a fund-of-funds model. We note that the fund of funds model can work well but that performance will depend on program specifics. We would suggest that a fund of funds should have as few constraints as possible and should be targeted at maximizing returns rather than at local content.

#### **b) Program Expansion and Program Mix:**

The private equity leaders had widely divergent and strong views on these issues. They see the ECP as consisting of three separate components: the retail VCC component, the other VCCs, and the EBC or direct model. Accordingly they have distinct views regarding possible expansion or contraction of each of these components. Comments follow.

"The only sustainable model is to develop competitive capital markets. In an imperfect market there is a role for government, but only on a [temporary] basis. .... these programs [retail VCCs] can't exist without ongoing subsidization by government. ... VCCs sold the story that they would invest in pre-VC deals. But they competed with [traditional VCs]. ... [Traditional VCs] don't want to co-invest with them [because] they are not aligned with the [VC] investment model in terms of structure, incentives or investment terms.....If [the government] removes the cap [on the retail VCC funds] then new private [VC] funds will disappear."

"Individual [single-business] VCCs are an anachronism. With the EBC program in place these are redundant. ... There is a political issue between the [traditional] VCs and the [retail] VCCs. The VCs see the tax credit as subsidized competition but the cost of servicing the retail investors, plus sales and marketing costs, etc. easily eat up the 30% credit. If you want public investors to invest in [early stage equity] they need the tax credit to level the playing field. There needs to be a balance between the VCC and EBC models. For EBCs sizing should be ... demand driven."

"The EBC model is the way to go in the future. It has opened the door for angel investors... [Retail VCCs] don't have the time to mentor management. The more money that gets channelled into these funds, the more management will be overlooked. ... We need more money for the EBC side."

"[A]llocations to the Prospectus Funds [retail VCCs] [need to be] based on performance. The EBCs need to be separate; they need investment throughout the year. [This person was also critical of the high overhead cost of retail VCCs and preferred a model under which VCCs could raise money from accredited investors only and invest in a portfolio of eligible small businesses.]

A traditional private venture capitalist observes that "the tax credit that is applied to all retail funds sets the bar at -30%... this has created enormous distortions in the market".

However, another traditional venture capitalist was positive about the role of retail VCCs in the private equity eco-system, observing that “the presence of the VCC funds in the market is a good thing... We are happy to work with Discovery [and others]” and observing that his firm had recently closed deals with firms originally supported by VCCs. However, this person preferred VCCs based on accredited investors rather on retail investors.

"The EBC program has no middlemen, and so it is absolutely no problem. It is low cost. It is easy to monitor... it does create new [investment]. ... [With retail VCCs] there is too much money chasing too many small deals... they argue that they are seeding companies than that can get funded by [traditional VCs]. That is not happening. ... [Large traditional VCs] have not picked [up many VCC funded companies]... Their ability to come to [traditional VCs] for follow-on financing is not [there]. They are in a completely different market."

"We see an innovation chain ... that begins with peer innovation [especially in Universities]... The second step is Angels ... We are [therefore] enormously supportive of the EBC program. The government should increase the program. The 3<sup>rd</sup> step is up to [retail VCCs and others]... After [retail VCCs] come the later stage [VC] funds and then the public markets. ... The retail VCC funds are seriously constrained for capital... [They] do syndicate with other funds (e.g. Tantalus, which was funded by BC Discovery and obtained subsequent funding from private equity funds based in Alberta and Texas)."

On the whole, the private equity leaders (and virtually all others) were very positive about the EBC program. It was cited as an efficient program with little overhead that targeted genuine early stage investment where the need was high. Both traditional VCs and retail VCCs see it as filling out the "ecology" of private equity and various participants in our surveys argue that it provides significant "additionality". The consensus was for expansion of the EBC program if possible.

The private equity leaders said little about the single-business VCCs and everything that was said was consistent with the view that it should gradually fade away as far as new allocations are concerned now that the EBC program is in place. However, there was an argument for allowing what might be called "portfolio VCCs" based on accredited investors rather than retail investors. Such portfolio VCCs would (like WUTIF) invest in a portfolio of ESBs.

Views on the retail VCCs were more mixed. Representatives from the retail VCC component were of course supportive and argued for a relaxation of requirements and an expansion of funding. However, representatives from other segments of the private equity "ecology" were, on the whole, quite critical of the retail VCCs. One significant criticism is they are not succeeding in providing pre-VC funding – that very few of the companies funded by retail VCCs go on to obtain funding from traditional VCs, although there are some such cases. A second concern is that they incur large overhead costs. Administrative costs are limited to 20% by ECP requirement but that is much higher than with EBC investment. It was pointed out that this is necessary when dealing with retail investors. However, critics argued that it is far from clear that retail investors are appropriate investors at this level as they end up with investments in risky undiversified assets. If the value of the tax credit is largely used up in the cost of attracting and handling retail investors, perhaps they should invest their funds elsewhere.

The third concern was that retail VCCs compete with and inhibit the smaller traditional VCs. Admittedly, this concern arose specifically from the VCs involved and there were very few documented cases of competition between retail VCCs and traditional venture capitalists. It is possible that this concern relates more to concerns about future expansion of the ECP than about

actual past cases in which competition has occurred. However, one objective of the ECP is to increase competition in the supply of private equity, so we would expect some competition between retail VCCs and other private equity investors or intermediaries.

One argument in favour of retail VCCs is that the retail source of funds is less volatile (i.e. more stable) than other sources of private equity, including both institutionally-backed formal venture capital and angel finance. The dominant supplier of retail-backed private equity is a single firm -- GrowthWorks, which manages labour-sponsored funds. The retail VCCs provide some competition for GrowthWorks in both raising funds from retail investors and in making investments in companies.

We obtained from the Ministry of Small Business and Economic Development a statement of the Ministry's view of the role of retail VCCs. The following quote from a Ministry official describes this view.

"In 2001, before the ECP legislation was amended to allow for the formation of the VCC retail funds, B.C. had only 5% of the national venture capital holdings under management... Even more concerning to the ministry was [that] approximately 72% of this capital was managed by [only] two management groups. Government at that time knew it had to create policy that would create more seed capital sources for emerging small businesses and more choices for resident investors that wanted to participate in these markets.

While amending the ECP legislation, the ministry took into consideration the venture capital eco-system to ensure that our limited resources would not be creating "bottlenecks" in the financing continuum. We were aware at that time by creating a "direct investment" model that assisted seed and start-up companies approximately 5 to 10% of these companies would require "follow on" financing that may not have been available without the formation of the VCC retail funds. Our objective here was to maximize the economic potential of these companies while they underwent the phases of development within the province.

It has never been the intention of the ministry to "saturate" the venture capital marketplace with funds raising capital from retail investors using tax credits. We monitor the demand and supply conditions for venture capital on annual basis. In addition, the ministry has and will continue to explore alternative program models that will contribute to a vibrant private capital marketplace including; reviewing the merits of institutional investment obtained through a "fund of funds" model, or by supporting LEBC in its mission of showcasing B.C. opportunities in an effort to secure foreign capital investment"

*Recommendation:* Although the EBC program only started in 2003, we are impressed by the efficiency of the program and by its very positive reception by the private equity investment community. It is clear that the EBC program is reaching firms at very early stages, as intended by the program. It is, at this stage, too early to know if the population of EBC firms is significantly different from the population of firms that would have been supported by single-business VCCs. It is also too early to assess the performance of the firms funded by the EBC program. Follow up in a few years would be appropriate. However, at this stage, there is a strong case for maintenance or expansion of the EBC program.

As for the mix between retail VCCs and the non-retail parts of the program, we understand and support the position that retail VCCs are playing an important role in filling out the early stage equity eco-system in British Columbia. However, we think it is important to monitor the allocation of tax credits between retail and non-retail investment vehicles in the future to insure that tax credits are being allocated to the most suitable investments. An important related question concerns the extent to which traditional VCs and non-retail portfolio VCCs are able to fill in the relevant part of the equity eco-system.

### **c) A National Program**

The authors of this study and the private equity leader interviewees realize that the British Columbia authorities cannot in themselves create a national program. However, there were a lot of comments along these lines, all following a common consensus. The key elements of this consensus are as follows.

- i) It would be good to have a systematic national program like the ECP program, with the federal government providing half of the tax credit, just as with labour-sponsored funds.
- ii) It would be good to eliminate the labour-sponsored distinction and simply allow any qualifying fund – VCC or LSVCC – to qualify for tax credits on the same basis.
- iii) The resulting national program should include both an EBC and a portfolio component. However the portfolio component might not necessarily be based on retail investors.

### **8.3 Program Design Issues**

Design issues were raised by survey participants and in interviews. A wide variety of issues were raised. We have selected the issues that seemed most important for discussion here.

#### **d) Allocation Method**

The program design issue that generated the most attention was the allocation method. Several respondents to the surveys were very unhappy with Ministry budget controls that program participants describe as a "claw back" in 2004.<sup>44</sup> In addition, many respondents expressed concern that funding in the EBC program is not available on a year-round basis.

We believe that funding should be smoother throughout the year, without what participants see as a "claw-back". This process was both inefficient and damaging to credibility, and the "lumpiness" of the allocation pattern is also a problem.

There is of course unavoidable uncertainty and variation in the business opportunities, availability of investors, etc. The question is who should bear the risk associated with this uncertainty. Basic finance suggests that this kind of risk should be borne by large economic agents that can diversify. In this case, the government should bear the risk rather than individual firms or investors. This does not mean that the government needs to put in additional resources. It just means that fluctuations should be borne by the government.

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<sup>44</sup> Comments included "it almost killed the company" and the "claw back was a disaster for the business" along with less severe negative comments.



We would suggest that it would be advantageous to have a mechanism under which EBC applicants could be evaluated at any time of year according to clear and well-understood criteria. It would also be good if, once an allocation were made, it could be treated as guaranteed for some period of time, possibly a year, or possibly less (like 6 months). This might mean that the program would “overshoot” in a given year. We would suggest that the ECP have the capacity to overshoot in a given year, subject to a fixed budget for 2 or perhaps 3 years. Thus, over-commitment in one year would be offset by less investment in a subsequent year. There would be little aggregate risk to the Treasury if the program parameters were set appropriately. In effect, the Treasury would have the advantage of pooling risks, rather than forcing fledgling firm to bear potentially very costly uncertainties.

### **e) Demand Management and Tax Credit Levels**

One important feature of the ECP is that there was "excess demand" for tax credits in fiscal 2003-04 and (we believe) in 2004-05. Some parties who wanted to receive tax credits were unable to do so because of the overall budgetary constraints on the program. One concern about excess demand is that high value investments might be lost as a result of the "rationing" of tax credits. There are several ways in which excess demand could be reduced, including increasing the available tax credit budget, allowing tax credited investment to be "blended" with other investments by VCCs or other parties, or reducing the value of the tax credit to something less than 30%.

Needless to say, beneficiaries of the tax credit would be displeased to see the tax credit reduced. On the other hand relatively few of the people interviewed or of those who filled out questionnaires felt that an increase in the tax credit would have a major positive impact. Many viewed 30% as a focal point – partly because the labour-sponsored funds have a 30% tax credit.

We sought to infer whether a reduction in the tax credit from 30% to 20% or 25% would have a negative impact on the willingness of investors to invest. Any such negative impact would have to be weighed against the advantage of being able to target a larger pool of investment with a given tax credit budget. If, for example, the credit were 20% instead of 30%, then the maximum tax-credited investment from a tax credit budget of \$12 million would rise from \$40 million to \$60 million.

In view of the fact that there seems to be excess demand for tax-credited investment under the current regime at the current budget, basic economics suggests reducing the tax credit. If there is excess demand for the tax credit at a rate of 30%, a lower tax credit would have the effect of screening out some investors or some investments. It would screen out those "on the margin". If a particular investor or investment requires a 30% credit to "break even" in expected terms but is not attractive with, for example, a 25% credit, then it is a marginal investment. Investments that are attractive even with a lower tax credit are likely to be better investments than the marginal investments that are screened out. If tax credits and resulting investments have to be rationed, it is better to allocate them to higher quality investments than to ration by "first come first served" or some other administrative method. In addition, lowering the tax credit would have the advantage of making it possible to have a larger pool of tax-credited investment with a given amount of available tax credits. A given budget goes further if it provides, for example, 25¢ on the dollar rather than 30¢ on the dollar.

If a decrease in the tax credit were considered, a small decrease from 30% to 25% would

probably be the best choice. If the credit failed to “sell out” at this rate it could be raised back to 30% again but, if it did sell out at 25% this would imply that the program was having a larger reach for a given tax credit budget

It was asserted by some parties that lowering the tax credit would cause a sharp reduction in investment by the retail investors who support the retail VCCs given the 30% tax credit for labour sponsored venture capital funds and given tax credits in other jurisdictions.

We recognize that the 30% tax credit associated with labour sponsored funds creates a potential competitive problem in the marketplace. Retail VCCs are, in effect, in competition with labour sponsored funds for money from retail investors. As suggested in point 8.2 c) above, we would favour harmonizing the labour sponsored funds with a national equity capital program with the same tax credit for both. We would also suggest tax credit limits on the harmonized program. If there were excess demand for combined tax credited investment, then the common tax credit should be reduced from 30% to 25%.

SBED Ministry officials provided the following quote indicating some of the problems associated with lowering the tax credit level.

"Competing jurisdictions - several provincial and state jurisdictions offer tax credits at a similar (if not higher) level than the credit offered under the ECP. When the ministry considered the tax credits offered by the LSVCCs, similar ECP programs in eastern provinces and the CAPCO program credits/guarantees offered in the US we found the 30% level not to be unreasonable..."

Competing asset classes - the market for qualified retail investors is competitive. For example, consider the tax credits and flow-through shares offered through federal/provincial programs for resource development that have contributed significantly to the success of the Alberta energy market. Reducing the tax credit level for ECP could redirect capital from our technology sectors (which carry more risk) than the returns historically derived from the energy and mining sectors. The ministry understands it is in the province's long term interest to see both sectors prosper, that said, we've made a commitment to become one of the top jurisdictions for technology and offering a tax credit that is competitive with other asset classes supports this objective."

An additional argument against reducing the tax credit relates to what might be called “transaction costs”. Both within the Ministry of Finance and in the retail VCC community various systems (including information brochures and websites) and many participants are set up for, or “used to”, the 30% tax credit. Changing the rate would therefore come at some cost. Possibly this cost is large enough relative to the benefits in saved credits or additional investments to justify holding steady at 30%.

#### **f) Program Constraints**

Economists generally favour as few constraints as possible on investment. The basic principle is that the projects that offer the best returns are likely to be the best projects. Therefore, any constraint that rules out high return projects in favour of projects meeting some other criterion is likely to impose economic costs.

However, this argument does not address jurisdictional issues. For example, local content requirements might rule out high quality projects in, for example, Ontario. At a national level, if we asked which projects were best from a national point of view, then ruling out such projects would be costly. However, much of benefit would accrue in Ontario. Given that the ECP is fully funded by British Columbia taxpayers, local content restrictions have the effect of insuring that most of the benefits accrue in B.C., even if the national benefits are less than they could be and even if investor returns are less than they could be.

We would favour a national cost sharing program for VCCs (much like the labour sponsored funds) without provincial content restrictions. In the absence of national cost sharing another possibility would be cooperation with another province, possibly Alberta or possibly Ontario, under which costs would be shared and local content would extend to the broader jurisdiction encompassing both provinces. As long as the ECP is fully funded in B.C. we do not see a strong argument for relaxing local content restrictions.

The size restrictions have the effect of ensuring that the program focuses on the small business sector, and the \$5 million contribution limit has the effect of preventing much later stage investment. Both these constraints can be expected to reduce returns as they would rule out follow-on investments in companies on a successful trajectory. However, we view the primary economic rationale for the program as arising from market failure in the early stage. Therefore we do not see a strong argument for relaxing these constraints.

The holding requirement of 5 years seems long and we received a number of comments suggesting that it should be lower, including several suggestions that it be reduced to 3 years. This would increase the liquidity of ECP-related investments. We would support this suggestion.

Allowing firms up to one year to raise capital generated a certain amount of complaint. The economic principle is that a firm that cannot raise capital relatively quickly might not be as good a prospect as a firm that can. Under conditions of excess demand, a shorter period should have the effect of allocating resources where they would be most valuable (i.e. have the highest value added). Accordingly, we would favour reducing the period for raising capital, once a credit has been allocated, to 6 months.

The overall principle is that the program constraints should have the effect of directing resources where they would have the highest value-added, including returns to investors, returns to the Treasury, returns to workers and other returns to the B.C. economy.

#### **g) Program Understanding**

We received only a few complaints about difficulties in applying for tax credits under the program. Given that any system of application normally generates many complaints, we take this as an indication that the application process and associated administrative procedures are operating relatively well.

However, we encountered substantial ignorance about various aspects of the ECP in the relevant communities. In addition, the study authors found it very challenging to draw together the various important sources of program information. We recognize that the program has been evolving and that it is difficult to maintain completeness and consistency of materials. The Ministry does maintain websites with a significant amount of information. However, we would suggest that some additional effort on this area is warranted. Specifically, a more complete set of information on the ECP should be available on the website. In addition to existing

descriptions of how to apply, we would suggest the following items as points of emphasis:

- i) a glossary of terms and acronyms
- ii) ensuring consistency of terminology
- iii) information about program history
- iv) "ordinary language" summaries of relevant legislation

In addition, while we do not favour a large advertising or information budget and have not looked into Ministry information efforts, we would suggest emphasis on low-cost targeted awareness campaigns, possibly emphasizing the use of e-mail.

# **Appendix 1: Detailed Calculation of Estimated Angel Investment**

## **Overview**

The Ministry of Small Business and Economic Development made available data on all investments through the program from January 1, 2000 through to the start of work on this study in September 2004. We refer to this data as the ECP [Equity Capital Program] data. Due to the waiting list for credits in effect in 2004, we believe that the ECP data provides a complete set of allocations until the end of the December 2004. The British Columbia Securities Commission [BCSC] also provided complete records on all companies that have filed placement exemptions between January 1, 2001 and December 1, 2004. These are exemptions that allow companies to issue securities without issuing a prospectus, as described in multilateral instrument 45-103. There are several categories of exemption. We have records of exemptions under family, friends, and associates (Section 3) and accredited investor (Section 5) subsections. We would view all of the accredited investors, and many of the associates and friends as angels. We refer to these filings as “the BCSC data”.

The BCSC data provided us with three useful groups of companies that had received Angel investment. The first group was ECP recipients, the second was non-ECP companies that appear comparable to the ESBs, and third was a group of companies that had received venture capital, probably in addition to Angel investment. We found that the majority of companies do not file the exemptions. Part of this may be simple non-compliance (possibly through lack of awareness) but we believe that most of it arises from exemptions under Section 2 of Multilateral Instrument 45-103, which do not require filing. Section 2 relates to small private companies that are “closely held”.

We note that 26 ECP recipient companies reported to the BCSC, while the remainder did not. This allowed us to determine a reporting rate for angel investees, and the percentage of equity invested through the ECP for ESBs. The reporting rate was 30.28% (on a dollars reported basis). We therefore estimated that the total angel investment in ECP-eligible sectors was about \$355 million over the 23 month period from January 2003 to December 2004.

## **Calculation Details**

### **ECP Data Summary**

The ECP data is essentially complete, some minor discrepancies withstanding, and provides absolute figures for the total amount of Angel investment resulting from the program. This Angel investment (note that we treat the retail VCC investment separately) comes from two sources: the direct EBC model and the indirect (non-retail) VCC model.

For the period (Jan 2003 to Dec 2004) there was:

- Direct Model: CAN\$ 35,690,292 invested in 150 investments into 110 EBC ESBs.
- Indirect Model: CAN\$ 42,949,381 invested in 227 VCC investments into 77 ESBs.
- Both Models: CAN\$ 78,639,673 invested in 377 ESB investments into 156 ESBs.

### **BCSC Data Summary**

In the BCSC data it was possible to identify ECP recipient companies, VC backed companies and non-ECP Angel recipients. The VC backed companies’ investment almost

certainly included syndicated Angel investment but as it was not possible to identify the individual contributors, and so the relevant amount(s), of this Angel investment, this group was eliminated from the calculation. This is one of several factors that results in the calculation being conservative. The distribution of the non-ECP angel recipient's investments was checked against that of the ECP companies; the resulting similarity confirmed that we have indeed identified Angel investment that occurred outside of the program.

For the period (Jan 2003 to Dec 2004) there was:

- ECP Companies: CAN \$ 26,257,800 invested in 38 investments into 26 ESBs.
- Non-ECP Companies: CAN \$ 81,302,534 invested in 793 investments into 114 Angel recipient companies.
- VC Backed Companies: CAN \$ 190,399,860 invested in 195 investments into 18 private companies.

### **Common Reporting**

By examining the companies that went through the Equity Capital Program and filed with the BCSC, we can determine both the percentage of equity raised within the program for these ESBs recipients, and the reporting rate for all ESBs.

In total (Jan 2003 to Dec 2004):

- For ECP Companies that reported to the BCSC: CAN \$ 23,810,556 was invested in 61 investments into 26 companies through the program.
- For these 26 companies (from above): CAN \$ 26,257,800 invested in 38 investments was reported to the BCSC.

Thus we can estimate that:

- 90.68% of invested dollars ( $23,810,556 / 26,257,800$ ) for ESBs are raised through the ECP.
- 16.67% of ESB companies reported to the BCSC ( $26 / 155$ ).
- 30.28% of dollars invested through the ECP are reported to the BCSC ( $23,810,556 / 78,639,673$ ).

There is a clear discrepancy in the number of investments, with the program reporting 61 and only 38 (yielding a higher total invested amount) being recorded by the BCSC. This was attributed to the partial aggregation present in the BCSC data as we obtained it. However a more detailed analysis and exact matching of investment was not possible, so this could not be confirmed.

### **Dollar Based Estimation**

Taking the percentage of dollars reported, rather than the number of companies reporting, and so again ensuring the estimate is conservative, we proceeded as follows.

Supposing that:

- 1.) 90.68% of all ESB investment is through the program, as it was for the 26 companies
- 2.) 30.28% of dollars invested into non-ECP companies are reported, as was the case for their ECP counterparts
- 3.) There is no Angel investment syndicated with the VC investment,

We estimate that:

- CAN\$ 86,722,242 was raised by 156 ESBs (of which CAN\$ 78,639,673, or 90.68%, went through the program).
- CAN\$ 268,519,755 was raised by companies outside of the ECP (of which CAN\$ 81,302,534, or 30.28%, was reported to the BCSC).
- Yielding a total of CAN\$ 355,241,997 invested into private companies in B.C. by Angel investors (CAN\$ 268,519,755 + CAN\$ 86,722,242), in 2003 and 2004.

Note that this is the same as applying the 30.28% reporting rate to the total Angel investment (CAN\$ 107.6m = CAN\$ 81.3m + CAN\$ 26.3m) reported to the BCSC (CAN\$ 107.6m / 30.28% = \$355m).

## **Methodology**

### **ECP Data Methodology**

The Equity Capital Program Data [ECP Data] was provided by Todd Tessier from the Ministry of Small Business and Economic Development. The data was extracted as three reports (each consisting of multiple spreadsheets) from the program's Oracle database. This database suffers from known limitations and the three reports exhibit some (relatively minor) discrepancies. The three reports were converted into three sets of database tables (each with a primary table and lookup tables) as follows:

- ECP Recipients
- ESB Investments
- Prospectus Fund Investments

### **ECP Recipients**

The ECP Recipients data reports on the tax credit's Registered Investment Vehicles [RIVs], their equity raised and their resultant tax credit claim. RIVs encompass EBCs, Accredited investor VCCs (including both single-purpose VCCs and non-retail portfolio VCCs, denoted as generically as "AVCCs" in this section) and Retail VCCs (denoted as RVCCs in this section).

For EBCs this source therefore provides (partial) equity histories for the receiving companies. These equity histories (2003 & 2004) are complete when a company is able to receive a tax credit for all equity capital raised. However, no breakdown of the size of the individual investments, which together constitute the year's single round of Angel financing, were available (c.f. BCSC reports on private placement on both points). For AVCCs and RVCCs this source provides complete fund-raising histories, not a record of their investments.

The ministry provided multi-sheet spreadsheets for 2003 and 2004 (the two program years) of differing standards and capabilities. From these we extracted complete records for the RIV's Name, Date of Application, Application Amount, Type (i.e. EBC, AVCC, and RVCC), Requested Amount, Authorized Amount, Amount Raised and Date of Raising Submission. To this we added Registration Status, which was stated as approved for 2003 and assumed as approved for 2004 (as the waiting list sheet was handled separately). Other program variables were derivable for some records from the sources, including the program (i.e. ECP, CVCP, or NMVCP), Net Authorized amount, Step-down, Final Submitted equity amount, as well as many program management type variables. Only the ones listed above were taken.

This allowed three separate analyses to be performed:

- EBC amount raised per RIV per program year
- AVCC amount raised per RIV per program year
- RVCC amount raised per RIV per program year

### **ESB Investments**

The ESB investments dataset details investments made into Eligible Small Businesses [ESBs] through either the EBC or (non-retail fund) AVCC model. The data on EBC investments was compared with that in the ECP Recipients table; as it was found to be an incomplete subset it was discarded. Although no comparison was available for AVCC investments this dataset was provided explicitly for this analysis and so was assumed complete.

Again, data was extracted from an Excel sheet that was generated as a report from the Ministry's Oracle database, and again this data was processed and a new database structure (a primary table with lookup tables) was created. The data provides information on the RIV Name, the Business Name (into which the RIV invested), the Former Name (if any), the Type (of the RIV, so EBC or AVCC), the Investment Amount and the Ruling Date. It should be noted that the investment amount is an aggregate per company per AVCC.

This allowed a further single analysis to be performed:

- AVCC invested amount per ESB per program year

### **Retail VCC Investments**

The Ministry provided four data sheets for BC Advantage, BC Discovery, Pender Growth fund, and the Exception Technologies funds [ExFunds] (The ExFunds preceded the current retail VCC model but continue to make follow-on investments. It is managed by Discovery Capital and examined in detail in appendix 6). These sheets were assumed complete. The atomic unit of this data is a single round of investment from an RVCC into a recipient company. Also present are changes in valuations of these companies (listed as a zero value investment), but these were discarded prior to the analysis that follows. Data was combined into a set of database tables that list the Business Name (who received RVCC financing) and the Fund Name (that made the investment), as well as Date, Investment Amount, Divestment Amount, Cost Base, and the Gain Or Loss. Two analyses were performed:

- RVCC invested amount per round per ESB per program year
- ExFunds invested amount per round per ESB per year (1994-2004)

### **BCSC Data Overview**

The British Columbia Securities Commission [BCSC] provided the study with complete but partially aggregated data on every company which received a private placement of funds for equity and filed under one (of the many) securities act exemptions. The data was received on the 13<sup>th</sup> Dec 2004 and contained listings of placements from the 1st Jan 2001. However, since filing is not immediate (or electronic) and as data preparation was time-consuming for the BCSC staff, the data was only complete until the 1<sup>st</sup> Dec 2004. We restricted our interest to the section 45-103 exemptions, which allow placements without an offering memorandum or prospectus. These exemptions specifically target friends and family and accredited investors and so are accepted as the "Angel Investment" filings. Whilst it is mandatory for all companies to file within 10 days of receiving a placement, the compliance rate was found to be low. As stated above, this could be attributed to a number of causes.



## **BCSC Data Processing**

The data was provided as a multi-sheet Excel file, with a complete listing for each year on a separate sheet. These sheets were combined, and then the data was imported into a database table and look-up tables were created. Company name indexed reference tables were then constructed and populated with lists of names that matched against other known data populations (i.e. Public companies). Matching was done by custom built computer software. Then further company name indexed reference tables were created for industries and company types. These were computed by keyword matching (again performed in custom built computer software) of words that appeared in both company names and “clear meaning” lists.

## **Reference Sets**

Crucial to this process, therefore, was the matching of company names from the BCSC filing data against company names in known data populations. The known data populations were:

- Toronto Stock Exchange Companies [TSE] whether listed on the TSX or TSX.VN (the ventures exchange). This list was determined directly from the TSE online database and is complete for all currently listed companies (at the time of this report).
- NASDAQ and NYSE listed companies. As Canadian companies often list exclusively on these two US markets, a complete list of currently listed companies was extracted from the respective exchange databases.
- Sedar - Initial Public Offering filings are mandatory for all Canadian companies that wish to offer securities for sale to the public. The Sedar database was mined and provided a complete record set for all IPOs of Canadian companies since January 1, 1997 to the present day.
- Macdonald & Associates provides the most complete listing of Venture Capital Investments available for Canadian companies. Some investments would be missing from this list, but the vast majority should be included. The name of each recipient of a recorded VC investment since 1994 was included.
- A complete listing of all federally incorporated companies in Canada (since 1836 to the present day) was obtained from the Corporations Canada database provided through the federal Government’s Strategis service.
- A complete listing of all B.C. incorporated companies was obtained through the B.C. Government’s BC Online service.
- The lists of EBCs, VCC recipient ESBs, and Prospect Fund investees were taken from the ECP database (see above) and individually matched.

The TSE, NASDAQ, NYSE and Sedar reference list matches were (binary) coded individually in a master reference table, as well as being considered together to create a composite coding for public companies. All companies not marked as public were assumed private. The matching to federally and B.C. incorporated company records allowed us to utilize other data on these companies, such as the date of incorporation, current status, and so forth, but this was beyond the scope of this study.

## **Name-based Matching**

Further to the matching against known populations, company names were analyzed for containing “clear meaning” words. As an example, company names containing the words “mining”, “minerals” or “zinc” were classified as “Resource” Companies. Likewise “Oil”, “Gas” and prefixes like “Petro” were used for Energy. Classifications were created for Resources,

Energy, Real Estate, and Financial (i.e. investment/holdings companies) sectors, as well as for Non-corporate entities (i.e. partnerships), and for funds (other than venture capital, which was excluded separately) and trusts. No attempt was made to classify companies within IT, Life Sciences, or other sectors of interest, and each key word was required to be semantically unambiguous (so “technologies” was not allowed as it could have referred to biotech, IT, or other technologies based sectors).

All sectors that fell outside of the domain of Angel investment (i.e. incompatible with the ECP sectorial requirements) were excluded prior to analysis. The resultant list of companies was reviewed on a number of factors (date, amount, filing code, etc.) and each company name was checked for reasonableness. The industry was clearly deducible on this basis for in excess of 80% of the companies. A small number of recognisable companies in the excluded industries were still present after this process; these were manually reclassified by the researchers. The resultant data contained a large number of EBC and VCC recipients, none of which had been excluded, and had many known Angel recipients. These were known either because they appeared on a Venture Capital Look Sheet provided by a leading B.C. venture capitalist, or because the companies had participated in the Telus New Ventures BC competition (where the research manager acts as a judge), or were known to the research manager personally through his involvement in B.C. equity capital community.

### **BCSC Data Reduction**

Public companies, funds (venture or otherwise), trusts and partnerships, and VC (including Retail Fund) backed companies were excluded (see (3) below), as were non-appropriate industries. The resultant companies were, of course, limited to those that made 45-103 filings only. The data was of sufficient granularity to show each investor’s allocation of equity for a given company in a given year, but did not reveal the identity of the investors.

Three separate analyses were conducted on this data:

1. The EBC and VCC funded ESB recipients were excluded creating a non-ECP backed Angel investment dataset.
2. For the EBCs and VCC backed ESBs that did file (note: this is a subset of all ESBs) the total equity raised (as opposed to the total Tax Credit eligible) was considered in terms of the individual investor contributions (as opposed to the aggregated amount). It is assumed that the VCCs investors are captured exhaustively within these individual contributors.
3. In a final analysis, only VC (including Retail Fund) backed private companies were included (the industry and other constraints were retained). This was performed to better understand the individual contributors within a single round of VC financing and to compare it with the Angel investment rounds. However, it was not used to calculate the total amount of Angel investment.

Several key points should be made:

- Only a relatively small percentage of Angel investment recipients make a 45-103 filing.
- In the cases where a company does file, it is (reasonably) assumed that all equity investments receive a filing.
- In the case of ESB companies that file, it is assumed that all equity investment through the ECP would be in the BCSC filings, and that there may be additional investment that fell outside of the ECP. In the case of EBCs, it is not possible to tell which filings are attributable to the ECP, and which are not. However, the BCSC data provide the distribution of the individual (component) contributions and allows a calculation of the net excess funding above and beyond that secured through the program.

## **Appendix 2: Company Survey – Questionnaire, response summaries**

### **Overview**

We conducted telephone and email/fax based surveys with 83 companies using a questionnaire that examined their financials, equity histories, maturities, and the impact they had experienced after receiving, or not receiving, a tax credit. It also allowed program recipients to provide extensive feedback on the difference the tax credit had made to their companies and their recommended changes to the program. The questionnaire is provided at the end of this appendix.

The companies were sampled from 4 different groups: EBCs, Non-retail VCC ESBs, Unallocated ESBs (companies that had applied to the program but did not (at least yet) receive an allocation), and non-ECP companies (companies that never applied to the program but had secured angel investment). The EBCs and the non-retail VCC ESBs were sampled from the data sheets provided by the Ministry. It was later discovered that some cross-over exists, with a single ESB receiving funding from more than one model. This was discussed in section 7.5. However, for the purpose of the data reported in this section, the EBC sample consists of companies primarily funded under the EBC model, occasionally with some syndicated VCC investment. Likewise the non-retail VCC ESBs received rounds led by either single-purpose or accredited portfolio VCCs, but some companies also received funding as an EBC or from a retail VCC. The four groups were found to exhibit marked differences in their maturities and equity histories, however all groups were almost entirely equity backed and were at a level of development below that necessary to secure traditional venture capital.

We found that the tax credit was important for securing the interest of investors. However, the companies that had received the credit reported that they would have raised 50% or more of their equity without it. In conjunction with an analysis on the perceived rate of interest without the tax credit for friends and family and accredited investors, we concluded that the larger accredited investors are less sensitive to the tax credit. Approximately half of the respondents requested an expansion to the Ministry's program, and an increase in the provincial tax credit budget. One third of all respondents also recommended that the allocation mechanism currently used by the Ministry be changed, to make it fairer and more efficient.

### **The Four Samples**

A sample for each of the four groups was derived separately. 30 "EBC" companies were randomly drawn from the list of all primarily EBC backed companies that received an allocation from the Ministry. 10 companies were randomly drawn from the list of all companies primarily funded by Non-retail VCCs. It was later determined that these companies had an almost equal mix (6:4) of portfolio accredited VCC and single-purpose VCC lead investors. Likewise a random set of 10 companies was drawn from lists of each of the two unallocated ESB populations (those with a historic unallocated status, and those on the waiting list). Finally a number of sources, including the Telus New Ventures Competition list, Venture Capital Look sheets, and Angel forum, Angel Network and Vancouver Enterprise Forum presenter lists, were pooled.

These sources were all known to be rich in Angel recipient companies and all contained numerous ESB companies, suggesting they would provide comparable companies but with investment from outside the program. A reduction process was undertaken, eliminating all ECP recipients, VC recipients and public companies. 30 companies were randomly drawn from the resulting list, and then each candidate company was checked for existence and residence in BC.

This produced 23 companies for the non-ECP control group.

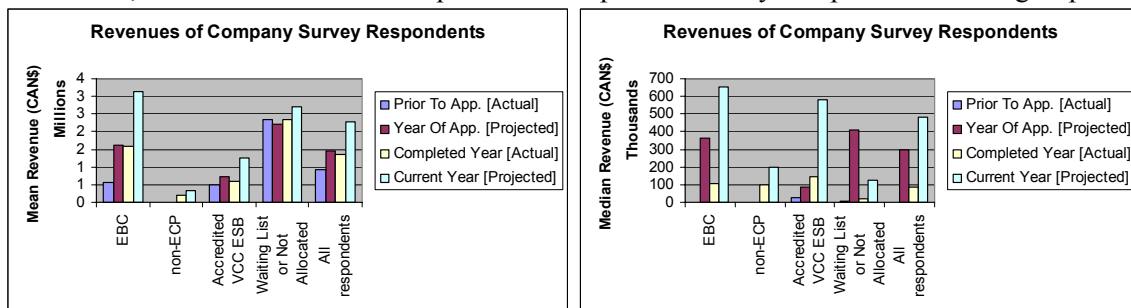
Thus the sample contains a total of 83 companies. There was an exceptionally high compliance rate with only 5 companies declining to take part. These companies were replaced using random re-sampling from the population. Note that the primarily retail VCC backed companies were not included in this survey and are examined separately.

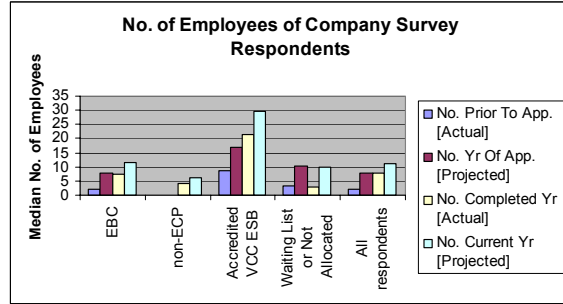
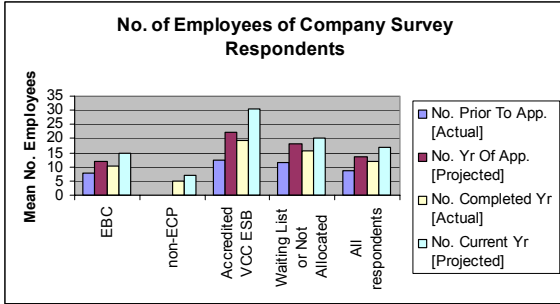
### Maturity and Equity History Indicators

There are considerable differences in the level of maturity and equity histories between these four groups. We considered both revenue and the number of employees as indicators of each company's level of maturity. For the equity histories, we recorded the share of the total equity owned by each category of investor, their perceived equity uptake in the absence of the tax credit, the number of each type of investor that was approached, and the usage of debt.

For both the revenue and the number of employees we recorded four amounts: the actual amount in the year prior to the application, the projected amount for that year, the actual amount for the last completed year and the projected amount for the current year. For the groups that filed applications with the Ministry (whether successful or otherwise), the first two of these four amounts was recorded directly from the first submitted application form. For other groups, this data was requested as a part of the survey. Companies that applied to the Ministry did so in either 2003, 2004 or both years. Thus, excepting the group that applied solely in 2004, where the first two amounts should be equal to the last two amounts, the actual completed year amount serves as a confirmation of the previous projections. We therefore expect progressive growth from the prior to the application year, confirmation in the completed year, and further growth projected in the current year. This trend is clearly evident in the means of both the revenue and the number of employees.

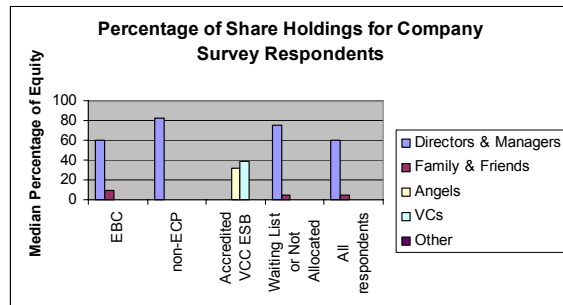
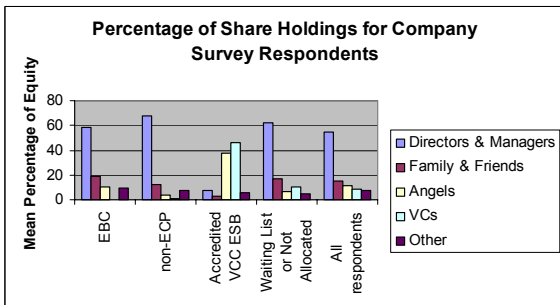
The graphs below show the mean and median revenues and number of employees for each type of company. We find the non-ECP companies dramatically behind their program counterparts. The difference in stage of development is so pronounced that it may be an indicator that the program is already servicing those companies who are suitable for outside equity investment, or that the non-ECP companies do not provide a truly comparable control group.



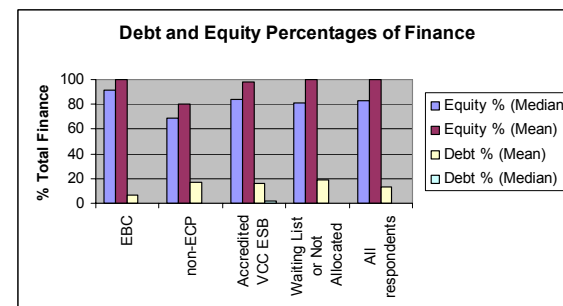


Generally we see that, in terms of revenue and employment, all program related companies have actual and projected amounts below what we would expect from traditional venture capital recipients, and that these companies are indeed at a seed or start-up stage. In terms of the number of employees, where the means and medians show clearer trends, we see marked difference between the EBCs and the non-retail VCC ESBs, with the latter double the size. This would indicate that portfolio accredited VCCs or single-purpose VCCs are lead investors either in later rounds and/or in more mature companies.

The equity histories of these difference groups show a marked difference too. The EBCs are surprisingly owned almost entirely by the directors and managers, with friends and family making a distant second contribution. 10% was the median amount of Angel holdings, and there was no venture capital investment. A similar pattern was noted for the unallocated group, although here the result was more expected. The non-retail VCC ESBs were dramatically different from the other groups; these ESBs were predominantly owned by the Angels and venture capitalists (although we feel that many respondents have mistakenly included their non-retail VCC as a venture capitalist because of the “VCC” acronym in the investment company’s name).

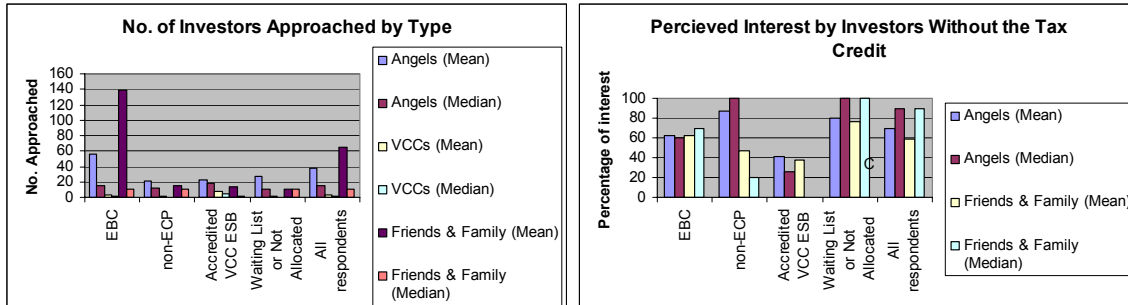


The immaturity of the non-ECP companies is also a possible explanation for their debt to equity ratio. All other groups were almost entirely equity backed, with means consistently greater than 99% and medians greater than 80%. Only the non-ECP companies had a mean of 80% and a median of 69% equity financed.



## Impact of the Program

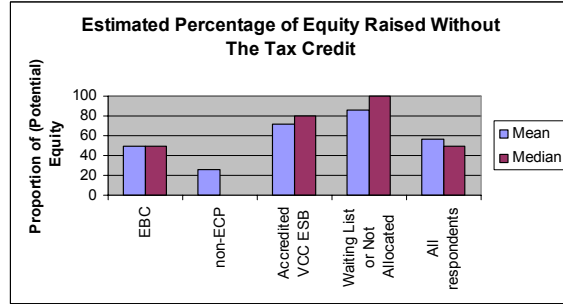
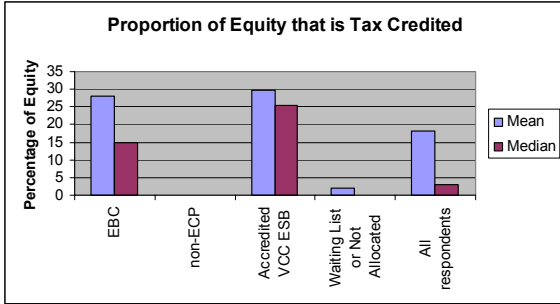
In terms of the number of investors approached, the EBC led group is a clear leader having contacted and presented to, on average, about 140 Friends and Family and 60 Angel investors. The non-retail VCC ESBs are essentially alone in approaching (non-retail) VCCs, with the EBC lead companies approaching a median of one each.



In the context of their size and equity histories, the perceived interest that each group stated they would be able to solicit from Angels and friends and family is now more understandable. The non-ECP group, having no involvement with the program and little contact with the Angels, feels that removing the tax credit will have little effect on their future Angel investment, by indicating that they have access to between 90% and 100% of the Angel capital that they could get with a 30% tax credit. However, they feel that they have secured less than half of the friends and family investment than they would be able to attract with the credit.

The unallocated ESBs, with their strong financials and employment and some early ownership by both Angels and (presumably bona-fide) VCs outside of the program, stated that they have raised between 80% and 100% of what they could have raised with a 30% tax credit, from both Angels and friends and family, their two primary shareholders. The EBCs led companies and non-retail VCC led ESBs show marked differences. For the EBCs, with their strong directors, managers, friends and family share holdings, and some early (mean of 10%) Angel investment, the response was that only 60% of equity would have been raised from each of their investor groups (friends and family and the Angels) without the 30% tax credit. The non-retail VCC ESBs, with their 30% to 50% ownership by Angels, report lower expectations putting both Angel and friends and family investment at 30 to 40% of what they actually were with the tax credit.

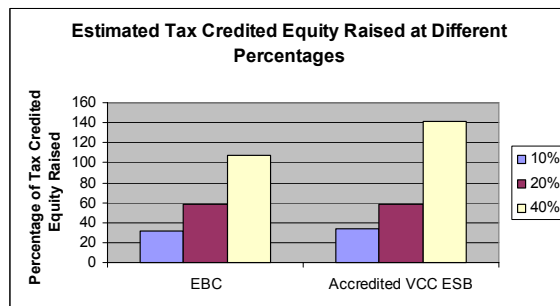
When asked on a scale of 1 to 5 how important they thought the tax credit was to the level of interest they received from investors, on average non-ECP companies and unallocated EBCs answered 3, or 'somewhat important', whilst EBCs and Non-retail VCC ESBs answered 4 or 'important'.

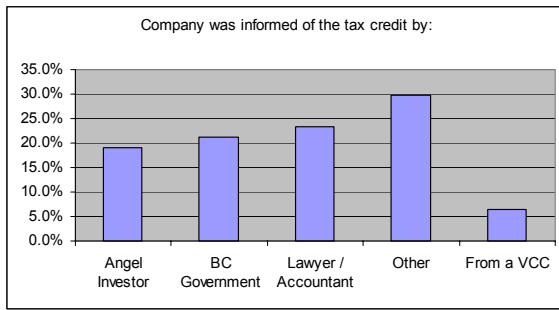


We also considered the proportion of equity that is tax credited, and the estimated proportion of equity raised without the tax credit. As before, the non-ECP and unallocated ESBs groups were asked to answer this second question as: “Given that you haven’t received a tax credit, what percentage of your total potential equity (that you could raise with a tax credit) have you raised without a tax credit”. This became confusing for the non-ECPs who are in the early stage of raising equity investment and less aware of the program, and their response of 25% of equity raised without the tax credit is more a statement of their intention to raise more equity investment, with or without the tax credit. We found that generally 15%-30% of EBC investment and 25-30% of non-retail VCC ESB investment was tax credited.

The unallocated group, who previously said that 80% to 100% of their angels and friends and family were interested without the tax credit, now restated this by saying that they had raised 80% to 100% of the equity finance that they could have raised with a tax credit. The EBC led ESBs, with directors and managers as the largest shareholders, followed by the friends and family and then Angels, stated 50% of the equity investment could have been raised without the tax credit, in (relatively) close agreement with the 60% stated as the average level of interest from the last of these two groups. Note that directors and managers are not eligible for the tax credit. For the non-retail VCC ESBs things are somewhat different. With their high rate of Angel and VC investment, 70% to 80% of money could have been raised without the program, despite the 30% to 40% perceived interest of Angels and friends and family without the program. A probable explanation for this is that the investors who invest the larger amounts (i.e. VCs and larger accredited investors) are less sensitive to the tax credit. This is consistent with the results from the EBC led group.

For the EBC and non-retail VCC ESB led groups, we also wished to examine their sensitivity to the tax credit percentage rate. We asked both groups how much of their tax credited equity would they have been able to raise at a 10%, 20% and 40% tax credit rate. For the EBC led ESBs, the 30% current rate seems close to optimal, however, the non-retail VCC led ESBs thought a higher percentage would yield significantly more investment.





Across all four groups, including those backed outside of the ECP, we found that 95.7% of companies were aware of the program, with the same number aware of the program's constraints. For program recipients 61.7% of companies stated that their authorisation limit from the province did not adversely affect the amount of equity investment they raised and 85.1% stated that they thought the program constraints would not affect their ability to

raise more capital. Looking back, 72.3% said that the credit did allow them to secure more investors and 87.2% thought that the tax credit induced each of their investors to invest more.

Finally we note that the companies had heard of the tax credit from a variety of different sources. The high rate of awareness, even among non-recipients, is indicative that the Ministry's staff has been very successful in their efforts to promote the program.

### Recommendations for Changes to the Program

In addition to collecting information about the companies themselves, we also recorded their feedback on the program. A total of 59 respondents provided comments on the difference the tax credit has made to their business. These comments were reviewed and classified into six distinct, but somewhat interrelated categories. These were 'Expansion', 'Leverage more investment', 'Product development & commercialization', 'Unspecified significant impact', 'None or insignificant impact, and 'Business would fail without tax credit'.

31% of respondents gave an answer of 'Expansion' or 'Leverage more investments'. These answers were characterized by phrases like "increased employment" and "grow faster" or "triggered more investments" and "made company more attractive to investors", respectively. Next most common, and closely related was 'Product development and commercialization', stated as a direct difference of receiving the tax credit by 25% of the companies. Following that was both 'unspecified significant impact' and 'none or insignificant impact' at 15% and 14%. In the category unspecified significant impact were comments like "on a scale of 1 to 10, the benefit was a 7" and "very useful in fully funding our early growth stage". Finally, 5% of respondents indicated that their business would fail without the tax credit. Thus, in total, 86% of companies reported that the tax credit made a significant or crucial contribution to their development, but generally these companies indicated that this was a difference of expediency, not survival.

54 of these 59 respondents went on to provide their recommendations for changes to the tax credit program. 11% of these 54 respondents used this opportunity to state that they felt no change was required. The largest recommended change, perhaps unsurprisingly, was that the provincial funding limit should be increased. Almost half (46%) of respondents made this recommendation in their comments. This was echoed by a more modest 11% who felt that the cap on an individual company's investment needed raising, and 9% who suggested that the tax credit percentage itself should be increased.

Second greatest were the recommendations that involved adjusting the allocation mechanism. One third of all respondents (33%) stated that the allocation mechanism needed revising. These comments varied in their actual recommendations, but most comments were those like "once an allocation is given it should not be retracted", "[it] should be more market



based rather than first come first serve”, or “[it should provide a] quarterly budget and allocations rather than yearly”. This requires particular consideration as the EBC appears, prima facie, more efficient than it’s VCC counterpart, and an effective allocation mechanism could make it a strong model for future programs in other provinces or an integrated federal/provincial incentive system. 17% of companies recommended, generally minor, changes to improve the program management, 4% suggested giving allocations based on industry or size, and a single respondent suggested changes to the application process, from which we may infer that the application process itself is well-regarded.

Thirdly, respondents directly stated their preference of the EBC model over the VCC model. Generally these were of the form “VCCs get way too much of the funds” or “give EBCs a higher credit or more allocations” and were made by 11% of the respondents. A further 6% were more aggressive, suggesting that the B.C. government either abandon the VCC program or implement an auditing system for them.

The various constraints in the program on either companies or investors were also an issue with 15% and 7% of respondents respectively. The most common of these was a request to reduce the 5 year eligibility constraint, with some companies ambitiously anticipating an IPO, but a complaint against the constraint of remaining (for the most part) in B.C. was also seen several times. On the investors side the advice was unanimous; open up the credit to anyone and everyone. Companies resented the arms-length issue, especially for former consultants and wanted non-BC, even non-Canadian, investors to get back 30% of their investment. Finally there was some small comment (6%) that the program should be harmonized with other tax incentives, especially the RRSP.

## **Conclusion**

The different groups of companies within the sample showed marked differences in their maturity and equity histories but with a strong correlation between the two. As companies begin they are predominantly funded by directors and managers before approaching friends and family. Later in their history they approach (or are approached by) accredited investors, most usually in an organised effort (or a ‘round’). The equity capital program has a number of apparent effects on this process.

- a.) The ECP encourages companies to organise a round of investment from multiple sources. For EBCs these sources are predominantly more friends and family, and accredited investors outside of those organising their investment through a VCC, suggesting that fund raising is managed internally. For VCC backed ESBs the round is made up of a mix of accredited investors, both inside and outside of non-retail VCCs, and perhaps indicates that these companies are allowing one or more lead non-retail VCC(s) to introduce them to a syndicate of other investors.
- b.) It allows ESBs access to capital that they would not be able to secure otherwise. The EBC led ESBs believe that they would have been unable to raise 40% to 50% of their capital without a 30% tax credit. The non-retail VCC led ESBs would not have raised 20% to 30% of their investment without a 30% tax credit, but this portion would have come largely from friends and family and (smaller) Angels and so altered the ownership structure of the company. Both groups stated that the tax credit had allowed them to access more investors and more money from each investor.
- c.) The total capital raised by ECP companies, and their total economic output, should not be considered incremental or “additional”. For EBC led ESBs, the tax credited amount itself is additional, and there is a small leverage factor (perhaps attributable to the organised effort each EBC must make to raise funds). For non-retail VCC led ESBs the tax credited

amount itself is additional. By examining the perceived rate of investor interest, for various types of investor, in conjunction with the estimated percentage of equity raised with the tax credit, we concluded that larger investors are less attracted to the tax credit (i.e. would invest regardless). Nevertheless, it is fair to treat the tax credit as bringing an incremental benefit equal to or greater than the tax credit's value; overall 40% to 50% additionality is reasonable.

Furthermore, the two groups of non-ECP backed companies provide several interesting conclusions about the program:

- a.) Non-ECP companies are at far earlier stage of development than their program counterparts. As this sample was derived from lists of companies known to be competing for the same capital, whether that is Angel investment, venture capital or other otherwise, they should not be more than a single successful fund raising effort behind. This was not the case, even a year later they remain less developed than their program counterparts were when they entered the program. We entertained the hypothesis that this was because the ECP had reached a level of saturation, with all eligible companies applying. However, we found that the BCSC filings data indicated that there were many companies outside of the program that were directly comparable in terms of fund raising, and so conclude that our non-ECP sample was not an adequate control group. 84.6% of these companies were aware of the program, but none applied.
- b.) The unallocated companies were arguably the strongest of all groups and have migrated to the program. They either did not receive an allocation or are currently on the waiting list. These companies estimated that they would be able to raise up to 20% more capital with tax credits, but do not appear to have suffered from this deficit.

# Company Survey Questionnaire

## Introduction

This questionnaire consists of three components: a telephone survey, an emailed or faxed financials form, and data recorded directly from the ECP forms that each company filed during application to the program. The telephone survey is broken into three parts: Investment, Investors, and Tax Credit.

The instrument presented below was used for the EBC led ESBs and non-retail VCC led ESBs, a variant of the instrument, which rephrased the Tax Credit section as conditional statements, was used for the unallocated and non-ECP companies. An example is: “Would a tax credit increase the number of investors you could raise capital from?” rather than “Did the tax credit increase the number of investors you were able to raise capital from?” Questions are multiple-choice (indicated by bullet-points), open answer or other format (indicated in brackets) and yes/no if not otherwise indicated.

## The Telephone Survey: Investment Section

Over the past two years was your industry:

- Expanding
- Declining
- Stable

Are there 2 or more companies similar to yours within a 30 minute drive of your location?

Do you perceive your company as being part of a cluster?

If you had not secured arms-length equity investment in the last 3 years, would you have (choose one only):

- Stopped all business activities?
- Postponed some activities or proceeded slower?
- Secured debt finance or money from elsewhere?
- Continued as planned?
- Other (please specify)?

What was the stage of product development?

1. At the end of the fiscal year prior to application to the ECP
2. At the end of the fiscal year after application to the ECP
3. At the end of the current fiscal year

Choose from:

- Research And Development
- Working Prototype
- Sales of product
- 2<sup>nd</sup> (or later) generation of product
- Other (Specify)

What share of your total financing is from equity investment?

What are the proportions of your equity investment (percentage split amongst)?

- Friends and Family
- Directors and Managers
- Professional Angel Investors
- Venture Capitalists
- Other (please specify)

What share of your total financing is debt financing (%)?

What were the proportions of debt finance at the end of your last fiscal year (%):

- From commercial banks
- Friends and family
- From arms-length individuals (i.e. an Angel - not friends, family, yourself, people previously involved with the company)
- From trade creditors
- Other (specify) (includes VCs)

Did you have to secure this debt finance?

- No
- Yes

How was it secured (tick all that apply)

- Personally secured
- Secured against a capital asset (specify)
- Other (specify)

Have you received any grants or other government backing (not including the Equity Capital Program) in the last 5 years?

- No
- Yes

Describe the largest of these grants:

- How much
- When
- Specify source (including level of government) and description

### **The Telephone Survey: Investors Section**

How many professional Angels or VCs have you discussed your business plan with in the last 3 years?

- Of those, how many were VCCs (B.C. government tax credit approved)?
- What percentage voiced concerns over the constraints imposed by the program?
- Of the three most serious, did you approach them or did they approach you (three separate answers)?
- What percentage would not have been interested without the tax credit?

Concerning the Friends & Family investors that you discussed your business plan with:

- How many were there in total?
- What percentage would not have been interested without the tax credit?

- Did you approach them or did they approach you (or both)?

Did you choose your investor(s) according to one (or more) of the following criteria:

- The investor has made investments to other similar companies
- The investor brought new business expertise
- The investor is able to introduce the company to further sources of investment
- The investor had readily available capital and was willing to invest
- Other (specify)

### **The Telephone Survey: Tax Credit Section**

How did you find out about the Equity Capital Program? (Tick one)

- From an (potential) Angel investor
- From a (potential) VCC investor
- Directly from the B.C. government
- From an accountant or lawyer or other professional advisor
- Other (specify)

What percentage of your equity financing has tax credit status?

Would you have been able to secure comparable equity investment without the tax credit (i.e. 100%)? (If not, what percentage would you have been able to secure?)

The tax credit program places some constraints on your business:

- Are you aware of these constraints? (yes/no)
- Did your tax credit authorization limit affect the amount of equity investment you were able to attract? (Yes / No / don't know)
- Do you think the constraints will affect your ability to raise subsequent capital? (Yes / No / don't know)

Did the tax credit increase the number of investors were able to raise capital from?

How important was the tax credit to the level of interest of potential investors?

- 5-point scale: Very important – Not at all important; or don't know.

Did the tax credit increase the amount that each of your investors contributed? (As a result of their capital cost being reduced)? (Yes / No / don't know)

Is there any reason why your business might be ineligible for the tax credit in the future?

How would you characterize the effect the tax credit program made on your business? (Big Picture: Did it affect employment, products/services, overall company success/profitability, location, size, R&D or any other important aspects of your business?)

What percentage of your equity raised under the tax credit program would you have been raised if the tax credit were: (answer in percentage for each)

- 10%
- 20%
- 40%

What changes to the program would you propose? (Tick all that apply, and note answer)

- Tax credit percentage
- Total tax credit limit for the province
- Total tax credit authorization limit placed on your business
- Eligibility requirements
- Program constraints

### **Data that was entered from SBED Application Forms**

Company Details:

- Company Name
- Contact Name
- Contact Title
- Telephone Number
- Email Address
- City
- NAICS Code (Deduced from “Briefly describe your business activity” - 5 digits of detail)
- Date of Incorporation
- Date of Application

Financials:

1. For most recently completed fiscal year
2. For current year

Variables:

- Revenue
- No. Employees
- Employment costs

Assets and Expenses criteria (from financial statements or as projections)

- Assets
- Expenses

Use of funds:

1. Received to date
2. Proposed

Variables:

- Buildings
- Equipment
- Inventory
- Wages and Salary
- Marketing Expenses
- Administration Costs
- Professional Fees
- Research and Development Expenses
- Other (Specify)

### **Financials from Emailed/Faxed Form**

What are the values of the following variables?

1. For the most recently completed fiscal year (or at the year end)
2. For the current year (or at the year end)
  - Sales

- Total Assets
- Total Liabilities
- Expenses
- No. Employees
- No. Full-time equivalent workforce
- Total Payroll Expense (includes CEO if salary is under payroll)

What share of your total financing is from equity investment?

What share of your total financing is debt financing (%)?

Have you received any grants or other government backing (not including the Equity Capital Program) in the last 5 years?

- No
- Yes

Describe the largest of these grants:

- How much
- When
- Specify source (including level of government) and description

## **Appendix 3: Investors Survey – Questionnaire, summary responses**

### **Overview**

We surveyed investors with a detailed instrument designed to record their Angel investment, their involvement with the tax credit program, and their feedback for the Ministry. The response rate was insufficient to make generalizations about Angels in BC, or make a well justified analysis of the tax credit program. However, the results are interesting and so are reported below. We found that the Angels evaluate their investments in a professional manner and have extensive knowledge of this asset class. The two major recommendations for changes to the program exactly echo those found in the company survey. Angels, like their recipient companies, want the provincial tax credit budget increased and the allocation mechanism reviewed and changed.

### **The Sample**

The investor survey was administered on an opt-in basis. An information sheet was prepared detailing the purpose, method and details of the survey, and this was distributed (both electronically and in hard-copy) to Angel investors through the Angel Forum, Angel Network, Vancouver Enterprise Forum, and directly by industry leaders on behalf of the study. This information sheets provided two contact phone numbers and an email address for the Angels to initiate contact. Two researchers were available from Monday to Friday from 9am to 3pm, for one week only, to book appointments and administer the survey. Despite the industry representatives assistance in disseminating the information sheet to several hundred investors only 12 participants replied, all in the first three days. However, all 12 were active accredited investors in B.C. and we believe that the information contained in their responses is therefore of considerable interest.

### **The Results**

In the investors survey 67% of respondents identified themselves as professional investors, but only 25% own a VCC. The Angels were asked what proportion angel investment comprises of their total portfolio, both before and after the introduction of the program. While the mean percentage remained unchanged, the median increased from 8% to 13%. Similarly, while the mean number of investments made per angel between 1995 and 2004 was 16, or between 1 and 2 per year, the mean number in last two (program) years was 6 or about 3 per year. Both of these results give a weak indication that angel investment has increased.

When asked what percentage of their angel investment they would have made had the tax credit percentage been 10, 20 or 40, the mean responses were all less than 100%. This either indicates that the Angels, for reasons entirely unknown, would be less attracted to the tax credit even if the percentage were increased, or that the Angels did not understand the question. We favour the latter interpretation. Nevertheless, the mean results were 21%, 45% and 80% respectively. On a five point scale measuring the subjective importance of the program, the Angel's mean response was four, or "the program is very important". Only a single Angel rated the program as one, or "not at all important". 83% of the Angels said that they have invested more money into each of their companies as a result of the tax credit, a trend that is reflected in the many comments that the Angels total investment is often calculated net of the credit. In addition, 67% of the Angels said they had invested, or would invest, in more companies as a direct result of the tax credit. A majority of Angels had heard of the program from other Angels



or through networks and associations, and just less than 50% were concerned with the program constraints.

When asked what three characteristics they look for in a potential investment, the Angels responded much like traditional VCs, citing management experience as the most important factor, with quality of product and market potential as close seconds. Only one Angel said that the tax credit was the 2<sup>nd</sup> most important characteristic and only two rated it as third. An early stage of development, a cutting edge product and a growing industry were equally as important as the tax credit. Almost all the Angels stated that they felt they could make a difference to the success of their investments (other than through investing), and reported that their motivation for making this class of investments was based, at least in part, on a desire to help young entrepreneurs, to participate in the management of their companies, and to get involved in developing new products or technologies. 11 out of 12 of the Angels also noted that Angel investment is extremely risky and requires a long time to realize any gains. Most felt that the occasional success made up for the frequent failures. Only one Angel said that he enjoyed higher returns from Angel investment than any other element of his portfolio, and that he now expects 1 to 3 year investment horizons. Incidentally, he was a former entrepreneur and venture capitalist.

### **Feedback and Recommendations**

The twelve participants gave in excess of 30 specific recommendations for changes to the program. The two most common recommendations for change were to raise or remove the provincial limit for the program and to change the allocation mechanism. These comments were both received from 7 out of the 12 Angels. The call for changes to the allocation mechanism are echoed in both the company survey and the discussions with the industry leaders, and this is likely the single most important issue yet to be solved by the Ministry. This issue has a number of facets: Some program users see this as a need for more over-allocation; others specifically criticized the timing when allocations are made, the duration for which allocations are valid, or the ill-will that the claw-back mechanism used by the Ministry generated. The first-come first-served basis on which the program currently operates disadvantages a company who's fund raising, for what-ever reason, takes place at the end of the allocation period.

Approximately a quarter of the respondents also took issue with the constraints placed on the companies, specifically the time frame for which they must hold ESB status, and the balance of the program's allocations between the two models. As elsewhere, the Angels favoured the EBC model over its VCC counterpart, citing efficiency and effectiveness. Several went on to criticize the retail VCC model, requesting that their allocation be redirected to EBCs for the same reasons.

Smaller sets of respondents made recommendations to solicit federal support for the EBC model, retarget the allocations toward specific industries, remove the cap on investment into a single company, allow non-B.C. investors access to the credit, advertise the EBC model more heavily than its VCC counterpart, and to raise the percentage of the tax credit.

# Investor Survey Questionnaire

## Introduction

The investor survey was conducted over the telephone on an opt-in basis as stated above. The questionnaire had three distinct components designed to record the Angel's activities, their involvement with the tax credit and their feedback on the program. Angels were allowed to decline to answer any of the questions but none did. Whilst the response rate was low, the instrument did allow a detailed picture of each investor.

## The Telephone Survey: Angel Activities

Are you a "Professional" Angel in the sense that you have made a series of investments (at least 2) of this type?

Were you previously or are you now:

- A partner or board member in a VC Firm? (Yes/No)
- A (successful) entrepreneur? (Yes/No)

How did you become an Angel investor? (Open Ended)

What percentage of your portfolio is dedicated to Angel investments?

- At present?
- Three years ago?
- Why has this percentage changed? (Open Ended)

How do the returns from Angel investment differ from the returns of all the other elements of your portfolio?

- Are they much higher, higher, about the same, lower or much lower?
- Do they differ in time horizon or your sense of riskiness? (specify)

How many Angel investments

- Have you made in total?
- Have you made in the last two years?

Why do you invest as an Angel? (Open Ended)

What are the three primary criteria you focus on in making investments?

E.g. Quality of product, Management Experience, Stage of Development, Finances in place, Ability to obtain tax credits, Market Potential, Local Operations, Similarity to previous investments, Growing Industry, Cutting-Edge Innovation, etc. (State 1, 2 & 3)

## The Telephone Survey: Tax Credit Involvement

How did you find out about the Equity Capital Program? (Tick one)

- From another Angel investor
- From a VCC/EBC or other program user
- Directly from the B.C. government
- From an accountant or lawyer or other professional advisor
- From a firm seeking finance

- Other (specify)

Of your total Angel investment made in the last two years

- What percentage of were Tax Credit Eligible?
- What percentage actually received a tax credit from the provincial government?
- What was the value of this tax credit investment?

How many times have you invested through?

- An EBC?
- A VCC?

What percentage of you Angel investment in the last two years would you have made if the Tax credit were?

- 10%
- 20%
- 40%

As a direct result of the tax credit, did you:

- Invest more money in each company? (Yes/No/Unsure)
- Invest in more companies? (Yes/No/Unsure)

What percentage of you Angel investment in the last two years would you have made if the Tax credit were?

- 10%
- 20%
- 40%

Are you concerned about the constraints that the program places on your investments? (Yes / No / was not aware)

### **The Telephone Survey: Tax Credit Feedback**

How important is the tax credit to your level of interest in making investors?

- 5-point scale: Very important – Not at all important; or don't know.

How would you characterize the effect the tax credit program made on the businesses in which you invested? (Big Picture: Did it affect employment, products/services, overall company success/profitability, location, size, R&D or any other important aspects of your business?)

What changes to the program would you propose? (Tick all that apply, and note open ended answer)

- Tax credit percentage
- Total tax credit limit for the province
- Total tax credit authorization limit placed on your business
- Eligibility requirements
- Program constraints

## **Appendix 4: Detailed Calculation of Estimated Additionality**

### **Abstract**

For a calculation of the estimated additionality attributable to the ECP, we relied heavily on the results from the company survey. With 40 companies (out of 83) that had received the tax credit, we were able to conduct a detailed analysis of this issue. We also considered the findings of other researchers in other jurisdictions, as well as responses from investors and the private equity leaders. Our findings are that additionality varies for different types of investors and by stage of development of the company. Our best “point estimate” for additionality is 60% but we view this as a very rough estimate, although probably the best estimate available in the literature. We would prefer to think of the range of 50% to 70% as the plausible range for additionality.

### **Results from Company Survey**

In the company survey we analyzed the equity histories of EBCs and Non-retail VCC ESBs, as well as their response to the tax credit. Specifically, we asked both of these two groups three questions:

1. What percentage of your equity is tax credited?
2. What percentage of your equity would you have raised without the tax credit?
3. What percentage of friends and family and accredited investors would have been interested without the tax credit?

In answering question 2 it is possible that respondents might not have been clear about whether we were asking about tax credited equity investment (as intended) or total equity investment. Still the responses provide some useful information about the possible range of additionality. For the EBCs the responses were that between 15% and 30% of their equity was tax credited, and that 50% of relevant equity would have been raised without the tax credit. Furthermore 60% to 70% of both their friends and family investors would have been interested without the tax credit. For non-retail VCC ESBs, 25% to 30% of their investment was tax credited, 70% to 80% of their relevant equity finance would have been raised without the tax credit and only 30% to 40% of their Angel investors would have been interested without the tax credit. Putting these various responses together suggests that additionality in the 50% to 70% range is plausible.

We also examined the equity histories and maturities of the companies and while these were highly correlated we noted substantial differences between the EBCs and non-retail VCCs. The non-retail VCC ESBs employed more people, had a higher percentage of Angel investment (relative to friends and family or directors and managers) and appeared generally closer to being able to secure traditional venture capital. (Incidentally many of them confused their non-retail VCC investors with formal venture capitalists; Angel Capital Corporation, or “ACC”, would be a better name for this model.). The discrepancy between the perceived level of Angel interest and the perceived percentage of equity finance that would have been raised without the tax credit was taken as indication that a small number of Angels generally contribute the majority of the Angel capital and that these Angels are less sensitive to the tax credit.

Thus we expect that the tax credit will have different levels of additionality for differing levels of company maturity, and for different classes of investor. It is likely that more friends and family than accredited investors are induced to invest in the program by the tax credit. Similarly, we believe that relatively small accredited investors are more likely to be affected by the tax

credit than are their higher value, more professional, counterparts. Likewise we expect that the smaller the company, the more new investment they would receive as a direct consequence of the tax credit. This is in alignment with the general notion that professional angels will actively seek out the strongest investments, even without tax incentives. In addition, we noted that the ECP companies were induced by the program to organize a round of investment, which in itself may leverage new investment. This was particularly true for the EBCs who had an allocation of their own to fill.

We also received comments, both in the investor's survey and through the private equity leaders' conferences, that investors will usually calculate their total investment net of the tax credit. As is stated in the report, this places a 23% lower bound (with a 30% tax credit) on additionality.

### **Conclusion**

While the responses do not indicate a completely consistent inference regarding additionality, they suggest that additionality in the 50% to 70% range is reasonable.

## **Appendix 5: Public Companies funded through the ECP**

### **Overview**

Of all of the companies funded through the ECP since January 1, 2000, twenty were found to be publicly traded. These are analyzed in terms of their public stock performance, and the investment they received through the four program models: The Exceptional Technologies Fund (from 2000 to 2002), retail VCC, non-retail VCC and EBC models. The results from this analysis indicate that the public companies are, in general, much larger than other program recipients, and with a mean current market cap of \$42.4m many of these companies appear to have progressed beyond the early stage. They have received a total of \$13.5 million through the ECP since 2000, with half of that occurring after the changes to the program in 2003, representing about 7% of the new program's total investment. Every investment under the revised program took place after the company had had its IPO, and only the Exceptional Technologies Funds (from 2000-2002) can claim an IPO as an exit of a venture investment. For retail VCCs, 40% of their investees are public companies, and these companies typically have market caps in the \$8m to \$15m range, post investment. Four EBCs were also found to be publicly traded, with one receiving investment from both a non-retail VCC and a retail VCC. A portfolio of stock was created using the ECP investment dates and amounts and this was compared to the S&P TSX Ventures Composite Index data from Jan 2001 onwards. The portfolio followed a similar pattern to the index.

### **Summary Information from the Exchanges**

Complete lists of all companies that received investment through the ECP were matched, by custom built computer software, against known populations of TSX, TSX-VN, NASDAQ and NYSE listed companies, as well as against filing records on SEDAR<sup>45</sup>. This matching is expected to be exhaustive, with only companies that have experienced name changes between listing and investment not being correctly identified as having a listing. This matching produced 20 companies (see Table 2 below), each of which was examined in detail. Prospectuses and other filings were retrieved from SEDAR for 13 companies, with complete filing sets available for 12 of these 13.

Price histories, containing both actual prices and prices adjusted for dividend payments and stock splits were retrieved for all 20 companies from the respective exchange databases. Only 6 companies had complete price histories back to their IPO (the original IPO in the case of a re-listing), but 17 companies had price histories that predated their ECP investment, and the missing observations for the remaining 3 companies were acceptably small for them to be used with interpolation. In addition to price histories we also extracted data on the companies' current position, including the number of shares in issue, and the market capitalization.

Two companies had clear re-listings. In both cases prices data was only available back to the latest public offering. In the case of Allon Theurapeutics Inc. we determined that it had previously traded under the name "Neuro Discovery Inc." (we included all ECP investment in to it under this name in the analysis) and TIR Systems was found to have completed a 'graduation'

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<sup>45</sup> The System for Electronic Document Analysis and Retrieval (SEDAR) was developed in Canada for the Canadian Securities Administrators (CSA) to facilitate the electronic filing of securities information as required by the securities regulatory agencies in Canada and to allow for the public dissemination of Canadian securities information collected in the securities filing process.

from the TSX-VN to the TSX. The data for one company, PhotoChannel Networks Inc. presented several serious and unexplainable difficulties. As a result it is not included in any of the price based analysis.

**Table A5.1. Public Companies funded through the ECP since 2000.**

<b>Company</b>	<b>Exchange</b>	<b>IPO Date</b>	<b>Mkt. Cap. Jan-05</b>
Allon Therapeutics Inc.	TSX-VN	03/24/94	14,539,162
CardioComm Solutions Inc.	TSX-VN	12/07/98	6,794,565
Cardiome Pharma Corp.	TSX/NASDAQ	07/25/00	366,844,059
Carmanah Technologies Corporation	TSX-VN	07/26/96	91,341,818
Cogent Integrated Solutions Corporation	TSX-VN	01/03/90	1,291,834
Cryopak Industries Inc.	TSX-VN	02/13/81	2,315,060
eOptimize Advanced Systems Inc.	TSX-VN	09/09/99	3,472,112
Gemcom Software International Inc.	TSX	11/21/97	12,902,197
Imagis Technologies Inc.	TSX-VN	09/29/98	7,939,646
Inex Pharmaceuticals Corporation	TSX	03/25/96	40,109,458
Info Touch Technologies Corp.	TSX-VN	07/05/99	8,339,835
International Water-Guard Industries Inc.	TSX-VN	09/22/89	1,129,515
Medical Ventures Corp.	TSX-VN	05/22/01	13,413,949
Photochannel Networks Inc.	TSX-VN	10/01/01	30,047,898
Photon Control Inc.	TSX-VN	08/17/00	25,764,391
Radiant Communications Corp.	TSX-VN	07/06/99	10,350,434
TIR Systems Ltd.	TSX	05/31/04	89,732,667
Triant Technologies Inc.	TSX	12/21/01	7,246,378
WebTech Wireless Inc.	TSX-VN	01/19/01	13,687,269
Xillix Technologies Corp.	TSX	10/13/92	100,509,776

70% of these companies are currently listed on the TSX-Ventures Exchange, 6 companies are listed on the TSX and one of these six is also listed on the NASDAQ. The average listing date was May 1997, and we found that the companies have a current mean market cap of \$42.4m, with a median of \$13.2m. IPO price information is only available for 12 of the 20 companies, either due to re-listings or changes in the record keeping by the exchange itself. However, of these 12, the mean IPO price was \$7.4m, with four companies beginning as Capital Pool Corporations and raising less than \$0.5m.

### **Historic ECP Investment**

Only three of the twenty companies apparently received their investment from the ECP prior to their IPO, and one of these was PhotoChannel Networks Inc. TIR Systems, which graduated from the TSX-VN, appears a success story having its IPO on the TSX in May 2004 and increasing in value nine fold in the subsequent six months. Triant Technologies Inc., conversely, has seen its market cap drop by almost 50% since its IPO in December of 2001. All three companies were funded through the Exceptional Technologies Fund in April or May of 2000. The remaining seventeen companies all received what traditional VCs call PIPE [Private Investment into a Public Entity] deals. PIPES offer VCs a liquid alternative to conventional private equity investment, but are usually considered outside of the domain of traditional venture capital. This is because institutional investors already have access to this asset class (as do retail investors), and often stipulate that private VCs must invest exclusively in private companies (where they can

not). A total of \$10.3m was invested through the ECP into PIPE deals. An additional \$3.2m was invested prior to a public offering.

Four EBCs were found to be public companies, with a total of \$2.1m in investments. The largest of these four, Photon Control Inc., which had a \$4m IPO in 2000, now boasts a \$26m market cap and appears to have reached a mid-level stage of maturity. Medical Ventures Corp, the second largest with a current market cap of \$18.9m began as a Capital Pool Corporation, raising \$500,000 (the largest amount permissible) in a 2001 IPO. It is interesting in that it raised money from each of the three models in the program since 2003. It raised \$300k from University Technologies I (a non-retail VCC) in May of 2003, had allocations as an EBC in both 2003 and 2004, raising \$260k and \$640k in those years, and then received \$300k from BC Advantage Fund in June of 2004. The other public companies that received EBC status, Cogent Integrated Solutions Corporation and eOptimize Advanced Systems Inc., were both much smaller with market caps of \$1.3 and \$3.5m respectively.

In the new program years of 2003 and 2004, \$6.3m (48% of the public company total) was invested into 10 companies (50%). This was about 7% of the total invested through the ECP in this period (including all EBCs, Non-retail VCCs and Retail VCCs), which stands at \$86m. For the Retail VCCs, however, 6 out of the 15 (40%) companies that they invested in were publicly traded. These 6 companies received \$2.4m (29%) of their \$8.4m invested dollars. Their market caps, with the exception of Cryopak Industries Inc, are in the \$8m to \$15m range and they are all traded on the TSX ventures exchange. Cryopak is the oldest public company to receive ECP money, having had its IPO in 1981, but is now valued at only \$2.3m.



## **Appendix 6: The Design of the Equity Capital Program**

### **Overview**

This appendix is broken into four sections. Section 1 covers the legislative basis of the ECP, providing the criteria for operating and soliciting investment for Venture Capital Corporations, Eligible Business Corporations and Eligible Small Businesses in British Columbia under the ECP. It also provides details of the ECP's sister programs, the NMVCP and the CVCP. Section 2 provides a practical history of the ECP. It considers BC's historic venture capital initiatives, the original VCC Model and the program as it stands now, after the redesign undertaken in 2003. Section 3 contains summaries of programs in other Canadian jurisdictions, as well as the Yozma (Israel) and Small Business Investment Companies [SBIC] (USA) programs that are frequently cited as examples of successful Government intervention and on-going involvement respectively. The appendix concludes with a reference section that provides detail on both past and present programs throughout Canada.

### **Section 1: Legislative basis of the ECP and Related Programs**

#### **Introduction**

The B.C. Ministry of Small Business and Economic Development [SBED]<sup>46</sup> offers three venture capital [VC] programs designed to increase the availability of venture capital to early or seed stage small businesses operating in British Columbia.<sup>47</sup> The Equity Capital Program [ECP] and the Community Venture Capital Program [CVCP] provide direct and indirect tax credit incentives with the goal of stimulating equity investment based economic growth in the local economy. Both programs operate under the Small Business Venture Capital Act [SBVCA] Chapter 429<sup>48</sup> and they differ only in their eligibility requirements for receiving a tax credit. A third program, the New Media Venture Capital Program [NMVCP] uses provisions in the other two programs to specifically target new media companies<sup>49</sup>. The detailing of the program parameters that follows is taken almost exclusively from the relevant legislation.

The SBVCA allows for the allocation of tax credits through two separate models. The indirect method of investing under the ECP, established in 1986, is done through Venture Capital Corporations [VCCs]. But as of 2003, companies themselves may also apply directly to the Ministry to receive Eligible Business Corporation [EBC] status. Nothing prohibits a company from receiving investment through both models.

#### **Venture Capital Corporations**

A VCC is a holding company that raises capital from B.C. resident investors and B.C. taxable corporations and then invests this capital in the voting or non-voting shares of eligible small businesses [ESBs]. Investors will receive a tax credit equal to 30% of their investments

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<sup>46</sup> The Ministry of Small Business and Economic Development is sometimes referred to as the Ministry of Small Business, Tourism and Culture or the Ministry of Competition, Science and Enterprise.

<sup>47</sup> The Investment Capital Branch is the division within the SBED that is directly responsible for the programs. Todd Tessier is the Senior Portfolio Manager.

<sup>48</sup> The Act was originally passed in 1996. In 2003 the Act was amended to cut down on program costs and regulatory requirements, to introduce a direct investment model and to encourage the creation of more VC investment pools.

<sup>49</sup> Small Business Venture Capital Regulation B.C. Reg. 390/98

made into a VCC during the current calendar year or 60 days into the following year. Individuals may receive a maximum of \$60,000 a year in these tax credits, however there is no limit on the amount of tax credits corporate investors may receive. There are three types of VCC, distinguished by both their type of investors and the number of companies into which they invest. One type, the VCC investment fund, is professionally managed and may hold a diverse portfolio of investments. A VCC raises equity capital through public or private share offerings. Public share offerings are used by Prospectus, or Retail, VCCs, of which there are only three currently active in BC: BC Advantage Fund (VCC) Ltd., British Columbia Discovery Funds (VCC) Inc., and Pender Growth Fund (VCC) Inc. A VCC is not restricted on how much capital it can raise in a given year. However, the provincial budget for ECP tax credits is limited<sup>50</sup>, so each VCC is constrained by their given allocation for each year (limiting the amount of tax credits they are eligible to give to their investors).

There are numerous registration requirements for becoming a VCC. A VCC must:

- Be a B.C. incorporated company that is also registered under the SBVCA
- Not have previously carried on business
- Raise a minimum of \$25,000 equity capital
- Have a name that includes “(VCC)”
- Have an authorized share structure with no special rights and restrictions (other than those relating to the redemption of shares by the company)
- Have investors that are at an arms length to major shareholders of eligible businesses
- Have a memorandum restricting the VCC to investing and providing business and managerial expertise to ESBs
- Hold their ESB investments for 5 years before redeeming shares<sup>51</sup>
- Invest 40% of its raised capital by the end of the next completed fiscal year-end and 80% by the end of the second fiscal year-end after investment
- Use no more than 20% of its raised capital for internal administration expenses<sup>52</sup>

### **Eligible Business Corporations**

An Eligible Small Business (as per the constitution requirements stated below) may itself apply for EBC status, and then must raise capital directly from eligible investors. All B.C. residents (excepting directors, founders and other parties not at an arm’s length to the company) and B.C. taxable corporations are eligible investors in EBCs and the tax credit amounts and limits are the same as if they were investing through a VCC. The registration requirements for becoming an EBC are very similar to those of for a VCC.<sup>53</sup>

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<sup>50</sup> The 2004 tax credit budget for the ECP (and its sister programs) was \$20 million, which translates into \$67 million in capital being raised under the program each year. Of this \$67 million, \$34 million was allocated to the three prospectus VCC funds. The remaining \$33 million was available to EBCs and the non-prospectus VCCs. Also, of the total \$67 million budget, \$10 million was allocated to the CVCP and \$17 million to the NMVCP.

<sup>51</sup> The VCC is liable to repay all tax credits related to an investment in an ESB if the money is divested less than 5 years from the initial investment.

<sup>52</sup> These costs include share issue costs, office occupancy costs, legal fees, preparation of financial statements and annual returns, and management fees that do not exceed 3% per annum of the total equity capital raised.

<sup>53</sup> Section 28.2 of the SBVCA, which states registration requirements for EBCs, directly references several subsections of section 10(1), which states registration requirements for VCCs.

In addition to meeting the ESB requirements set out below, an EBC must:

- Have equity capital of at least \$25,000 (existing or new)
- Have the majority of its assets and expenditures substantially engaged in an eligible activity
- Not issue shares to investors that have disposed of EBC shares in the last 2 years
- Not allow its investors to redeem or transfer shares for 5 years<sup>54</sup>

### **Eligible Small Business**

There are also many requirements for what constitutes an ESB [Eligible Small Business]. It must:

- Have no more than 100 employees
- Pay over 75% of wages to employees in B.C. (50% if an exporter)
- Hold no more than 20% of company's assets outside of BC
- Have a permanent establishment in BC
- Eligible activities: Manufacturing, processing or exporting of value added goods, destination tourism, development of proprietary technology (R&D), development of interactive new media or non-traditional agriculture
- Ineligible activities: Primary resource exploration or extraction, provision of financial services, property management, real estate development, traditional agriculture, retail and commercial services, restaurant or food services and sale of tangible or intangible personal property
- Retain majority ownership control after receiving investment
- Not accept more than \$5 million in financing from any one VCC

There are further stipulations on the use of capital provided to an ESB, whether it is provided under the VCC or EBC models. Generally funds can be used for asset expenditures and working capital, and the SBVCA only specifically forbids the following activities:

- Lending
- Purchasing securities, unless a VCC is making a small business investment through a parent company or a limited partnership
- Acquiring land, unless it is considered incidental to the eligible small business activity
- Repayment of debt (with certain exceptions)
- Redeeming or repurchasing existing share capital
- Payment of dividends to shareholders
- Acquiring services or assets from a VCC or EBC investor that is not priced at fair market value
- Acquiring another small business or all of its assets (with certain exceptions)
- Investing outside of British Columbia

### **The ECP's Related Programs**

The CVCP is essentially the same as the ECP, however, it is not available for investments made within the Greater Vancouver or Capital Region (Victoria) Districts. The CVCP's purpose is to support economic diversification and growth in other regions in BC. Small businesses receive capital by either becoming EBCs or through Community Venture Capital Companies (the

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<sup>54</sup> There are certain exceptions on transfers relating to investments made through Registered Savings Plans, or when an investor dies, or through other permitted exceptions under the Act.

CVCP equivalent of a VCC). Small businesses are eligible under the same rules as in the ECP; however a small business may also qualify for investment under the CVCP if it is significantly engaged in an activity that promotes community diversification.

Both the ECP and CVCP programs include provisions to encourage investments in BC's New Media sector; these are referred to as NMVCP investments. To qualify under the NMVCP a small business, in addition to meeting the legislated criteria, must be substantially engaged in the development within British Columbia for commercial exploitation of interactive digital media product that:

- Educates, informs or entertains and presents information using at least two of the mediums of text, sound or visual images
- Is not developed for internal corporate use involving the promotion of products or services
- Is not used primarily for interpersonal communication
- Is not a product for which public financial support would, in the opinion of the certifying authority, be contrary to public policy

## **Section 2: A Practical History of the ECP**

### **BC's Venture Capital Initiatives**

B.C. has had two major experiences in creating fund-of-funds variants, one of which was a true public/private initiative. In both cases the clear intention was "to develop a base of experienced private equity managers in order to foster a permanent and self-sustainable source of capital for young and expanding enterprises in BC"<sup>55</sup>. Interventions by provincial and federal governments have been tried in a variety of jurisdictions with mixed results. Despite the lack of acclaim in the popular press, both of BC's experiences have now proved to be very positive.

Beginning in March 1994<sup>56</sup>, the B.C. government provided \$43.5m<sup>57</sup> directly into a series of five funds under the "BC Focus Funds" as a part of a 50/50 public/private investment initiative (yielding a total \$87m)<sup>58</sup>. Three of these five funds were targeted at specific industries (tourism and forestry) and were operated by merchant banking institutions, but two funds, the "BC Seed fund" and the BC Technology Innovation Fund [BCTIF] seeded private equity managers. The BC Seed fund was managed by Cascadia Capital of Oregon (USA), and the BCTIF<sup>59</sup> was managed by Ventures West. These funds both produced notable successes, including Pivotal and Angiotech, and may have "saved BC's venture capital industry" (as one prominent private equity manager

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<sup>55</sup> From documentation provided by BCTIF/BC Focus fund managers

<sup>56</sup> "The British Columbia Focus Fund was established on March 31, 1994. Investments are generally related to venture capital, buy-out financing or expansion and development financing for companies at various stages of development. The fund was closed as at September 1, 1994. Distribution of net assets to the unit holders will be made as investments are wound up."

[www.bcime.com/publications/pdf/pooledfundstatements/2000/MAR2000Notes.pdf](http://www.bcime.com/publications/pdf/pooledfundstatements/2000/MAR2000Notes.pdf)

<sup>57</sup> [www.bcbiotech.ca/scripts/index\\_esp?action=31&P\\_ID=199&N\\_ID=1&PT\\_ID=183&U\\_ID=0](http://www.bcbiotech.ca/scripts/index_esp?action=31&P_ID=199&N_ID=1&PT_ID=183&U_ID=0)

<sup>58</sup> "It's important, too, for the government to play its role in the promotion of entrepreneurial activity -- in value-added, knowledge-based, pacific-driven economic opportunities that are fuelling the B.C. economy very successfully. This \$87 million fund is going to allow British Columbian entrepreneurs... to have access to a commercially based, hard-nosed fund here in British Columbia, where decisions are made in cooperation with the private sector on the basis of risk and the talent of merchant bankers and venture capital outfits." B.C. Premier M. Harcourt. [www.legis.gov.bc.ca/1994/hansard/h0406pm.htm](http://www.legis.gov.bc.ca/1994/hansard/h0406pm.htm)

<sup>59</sup> Confirmed in conversations with Howard Riback, CFO, VenturesWest.

put it). BCTIF was Ventures West's 4<sup>th</sup> fund, and the B.C. government's investment of \$5m allowed them to raise a total of \$20m. This fund returned over five times its investment (in excess of \$100m), and was directly responsible for keeping Ventures West active in BC.

The early 90's was a critical time in BC's venture capital industry, with technology investment almost non-existent after the 1987 stock market crash, this year saw both the revival of private equity investment and the introduction of Growthworks, BC's largest (and then only) LSVCC. With BDC actively operating a \$20m fund and Royal Bank still investing in venture capital, BC had only five, all small, venture capital providers: one government bank, one commercial bank, one LSVCC and two private equity managers (Ventures West and Cascadia Capital) both supported by the B.C. government.

Following the success of the BC Focus Fund, BDC<sup>60</sup> lead an initiative to set up 3 seed stage funds across Canada, without any provincial or federal government assistance, by becoming a lead limited partner in the fund raising process. BCIMC<sup>61</sup>, BDC and the Bank of Montreal together created the Western Technology Seed Investment Fund [WTSIF] in 1997, putting \$25m of institutional investment into a single fund operated by a general partner consisting of three venture capital groups: BDC, Cascadia Capital and Ventures West. The fund was targeted at the seed stage, and it was expected that the three general partners would then follow-on with their own capital.

The fund was created against the backdrop of an economic boom for technology companies, and ran in parallel to Ventures West's 5<sup>th</sup> and 6<sup>th</sup> funds (\$50m and \$60m respectively). However, the harvesting of these investments occurred in the post 2000 downturn. With the fund expected to wind-up the last of its investments by 2007, it is anticipated that its performance will not reach the level of its BC Focus predecessor, but that it will perform above the level of majority of its privately managed vintage year peers.

### **The Original VCC Model**

Whilst the current Small Business Venture Capital Act was created in 1996 (and amended in 2003) it is clear that the B.C. government has had VCCs [Venture Capital Corporations] receiving tax credits since at least 1992<sup>62</sup>, and conversations with historic participants have indicated that there was a processor to the SBVCA created in 1986. The capabilities of these VCCs were, and are, restricted by several different pieces of legislation. For the selling of their securities these restrictions come from the Securities Act. We therefore expected to find that only VCCs who had produced a prospectus or offering memorandum would have been able to sell securities to members of the public, and that these would have been dedicated "Retail" funds.

We found that there had been two such funds created in the early 90's, but that several

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<sup>60</sup> From conversations with Livia Mahler, former BDC Venture Capital Manager and chief architect of the the WTSIF, and Howard Riback general partner representative for VenturesWest

<sup>61</sup> "Under section 41 of the Financial Administration Act and the enactment of the Public Sector Pension Plans Act, the British Columbia Investment Management Corporation (bcIMC) is authorized to exercise the investment powers, duties and functions of the Minister of Finance and Corporate Relations in respect of these funds, including the management of the pooled investment portfolios. bcIMC was established under the Public Sector Pension Plans Act as a trust company authorized to carry on trust business and investment management services." [www.bcimc.com/publications/pdf/pooledfundstatements/2000/MAR2000Notes.pdf](http://www.bcimc.com/publications/pdf/pooledfundstatements/2000/MAR2000Notes.pdf)

<sup>62</sup> Register of Venture Capital Corporations, Dec 2004.

other VCCs, through exceptions to these restrictions, sold their securities to the public through brokerages. The two funds are of particular interest. Managing money on behalf of a third-party, whether that party is made up of institutional or retail investors, defines venture capital. Thus, through the use of retail tax incentives, the B.C. government leveraged an alternative source of capital and intentionally created a complement to the implementation of a fund-of-funds variant with the ExFunds and Future Fund.

The Exception Technologies Funds<sup>63</sup> [ExFunds] beginning in 1993, created the first Retail VCC model with an inaugural \$5m fund. At the time of the fund's inception the legislation in place under the Small Business Venture Capital Act allowed a private fund to raise a maximum of \$5m, and the Investment Capital Branch allowed a maximum annual tax credit allocation of \$2.5m requiring each fund to sell its securities in two offerings. Whilst the act had provisions for publicly listed funds, with a stated cap of \$20m per fund, this was not permitted by the branch<sup>64</sup>, perhaps as similar models were incurring significant public backlash for inefficiencies and a high failure rate<sup>65</sup>. ExFunds 2, 3 and 4, created in 1994, 1995 and 1997 respectively, were also privately held and raised \$5m each from retail investors.

Discovery Capital, the ExFund's management company, stated that the restriction of being unable to issue redeemable stock and the requirement for providing extensive annual reporting created both liquidity and expense issues for the ExFunds. Private investors were unable to realize their gains or dispose of their stock, and between the necessary double fundraising and the reporting requirement, the ExFunds are said to have incurred significant unnecessary expenses. This situation was rectified in 1998 when ExFund 5 was allowed to go public<sup>66</sup>. Despite the increased cap (\$20 for a public fund), ExFund 5 was cut at \$7.5m due to the changes in market conditions. The ExFund 5 vehicle made a successful take over offer to the private investors in the ExFunds 1, 2, 3, and 4 in 1999, allowing them liquidity too.

Whilst the ExFunds experienced numerous difficulties over the course of their evolution, they did make many successful investments and are generally well regarded by other members of B.C. private equity eco-system. Discovery Capital states that out of 20 companies, 6 made "very good" returns. Sierra Wireless Inc., ALI Technologies Inc., Bennett Environmental, Inex Pharmaceuticals, and Triant Technologies Inc. were all held in their portfolio and produced successful exits.

The "Future Fund" was created by Gordon Skene in 1994. Like the initial ExFunds, the Future Fund raised up to \$5m per year from retail investors as a privately held fund. In 1999, following the ExFunds transition to a public listing, Future Fund listed on the CDNX. The fund was purchased by Pender in August of 2003 and re-launched as the Pender Growth Fund. This purchase involved a buyout of both the management company and Gordon Skene's position, and was reportedly done at market value and for approximately 50% of the fund's investment cost<sup>67</sup>. (Note that Pender also took over the NDI Life Sciences Retail VCC fund in August of 2004 for an undisclosed amount.)

Both the ExFunds and the Future Fund made a significant portion of their investments into publicly traded companies with listings on junior exchanges, citing the importance of

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<sup>63</sup> From conversations with Harry Jaako, CEO and Chair of Discovery Capital

<sup>64</sup> Under Robert Kennedy, former director of the Investment Capital Branch

<sup>65</sup> Journalist David Baynes in numerous articles

<sup>66</sup> Under director Dale Sketchley of the Investment Capital Branch

<sup>67</sup> From conversations with Discovery Capital and Pender.

supporting these small to midsize companies and their role in BC's economy. However, Future Fund does not appear to have enjoyed the same level of success.

### **After the Program Redesign**

After the 2003 program redesign the direct EBC model 'competed' with the single purpose version of the old accredited investor type VCC model. Whilst the EBC model is only two years old, it offers clear structural advantages over its VCC counterpart, more effectively and efficiently deploying capital into the target company. As a result the proportion of single purpose VCCs has fallen dramatically in recent years. However, multipurpose VCCs, particularly those that aggregate accredited investors' funds, can still deliver larger Angel investments, in a range (\$250k to \$500k) that other models fail to service. This model appears to have reached some level of maturity, likely attributable to the increased number of serial Angels now active in the ecosystem.

There are now four Retail VCC funds, with the creation of the NDI Life Sciences Fund (taken over by Pender in 2004) and the BC Advantage Fund in 2003, and the continuance of Future Fund as the Pender Growth Fund, and of the ExFunds as the BC Discovery Fund. Each of these funds has a different stated objective: BC Advantage, with a strong board representation from the local UILOs [University Industry Liaison Office] targets very early stage companies and university spin-offs in two streams: Biotechnology and information technology. BC Discovery and Pender Growth fund target early stage companies, often with a public listing, much as their ExFund and Future Fund predecessors did. And NDI Life Sciences targets only seed or start-up stage biotechnology companies. Thus we have seen an increase in the diversity of retail funds since 2003.

A proposal for a new BC fund-of-fund variant was put forward by PEGM [The (BC) Private Equity Managers Group] in January 2005. Unsurprisingly, they state their first principle is that there must be "no co-mingling of [the] fund-of-fund investment with tax based credit schemes". The four other principles, common to all of the successful fund-of-fund initiatives we reviewed, are:

1. To seed experienced private equity managers, placing capital in the most professional hands, and to recruit and train new professional managers (often brought in from outside jurisdictions or inside of the more established recipients). Most often there are requirements for raising a set amount (\$20m for PEGM) or demonstrating past returns before an equity manager can become eligible to participate.
2. To be returns based; Venture capital should not proceed on the basis of social objectives, such as the creation of employment. It is expected that these benefits will accrue as a secondary effect.
3. To create substantial leverage, both within the initiative and subsequent to it. Institutional investment is primary source of funds for private equity managers so any fund-of-funds model must leverage institutional investment and, if possible, increase their returns attracting investment into the region on a long-term basis.
4. To intervene, place minimal constraints on the use of capital, and then leave market-forces to determine the future. This is most often seen as either a single initiative with a set closure date, or a program of initiatives with a sunset clause. PEGM stress that a jump-start model should not 'breed dependency'.

The vast majority of this report is dedicated to program as it is now, and considers only the last two years (since the legislative changes). The program's history was unduly difficult to assemble; a greater public disclosure of the performance of investments and a detailed recording

of the policy changes would assist greatly in future reviews. However, it seems clear that the program has evolved, both in response to the demands of its users, and towards a more transparent, more accountable system.

### **Section 3: Programs in General**

#### **Introduction**

We examined different equity investment incentive programs that have been tried in six countries. Only Canada has implemented an indirect model funded by retail investors, and has done so at both federal and provincial levels (i.e. LSVCCs and provincial retail VCC equivalents), though other countries, including the US, use provincial level tax credit based programs. Section (4) reviews the provincial equity capital programs in other provinces on a per program basis. Ontario is the only province, other than BC, known to be developing a fund-of-funds variant. This program is currently known as the Next Step Commercialization Program and was proposed in June of 2003. There are several proposals currently being put to the federal government recommending a national fund-of-funds variant, but only the VCIP [Venture Capital Incentive Program] is backed by the CVCA.

Other countries, notably the US, Israel, the UK, Australia, Japan and Germany, have all implemented a fund-of-funds variant or other non-tax credit based program to fill out their venture capital ecology. The two most referenced countries, Israel and the US, are explored below. Israel's Yozma Group was a hugely successful single intervention that lays claim to "jump-starting" the entire Israeli equity eco-system, whilst the US's SBIC program has played a crucial and continuous role in US venture capital industry since 1958.

#### **Summary of Programs in Canadian Jurisdictions**

As a part of the study we reviewed the current and historic programs that have been enacted in other jurisdictions across Canada. Alberta, Saskatchewan, Manitoba, Ontario, Quebec, Prince Edward Island, Nova Scotia, Newfoundland, New Brunswick and the Yukon have all either experimented with a tax based equity investment incentive program in the past, or have one currently active. These programs offered a mix of both indirect and direct models. These are summarized in table (1) below, and then each jurisdictions program has a brief write up stating the specific program details and constraints (ordered west to east, provinces then territories)<sup>68</sup>. British Columbia's Equity Capital Program is the largest program still active in 2005. However, historically, both Quebec and Ontario have implemented larger programs.

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<sup>68</sup> The authors compiled extensive source material on programs in other jurisdictions, both inside Canada and internationally. A limited summary of the relevant jurisdictions is included in this study.



<b>Province</b>	<b>Program Name</b>	<b>Status</b>	<b>Started</b>	<b>Ended</b>	<b>Model</b>	<b>TC%</b>
British Columbia	Equity Capital Program	Active	1996	-	Direct/Indirect	30
Alberta	Small Business Equity Program	Cancelled	1984	1999	Direct	30
Saskatchewan	Venture Capital Tax Credit Program	Cancelled	1984	2000	Indirect	30
Manitoba	Community Enterprise Development Tax Credit Program	Active	2003	-	Direct/Indirect	30
Ontario	Community Small Business Investment Fund Program	Cancelled	1998	2004	Indirect	15-60
Quebec	Business Investment Company Program	Active	1985	-	Indirect	*125-150
Newfoundland	Direct Equity Tax Credit Program	Active	2000	-	Direct	20-35
PEI	Equity Investors Incentive Program	Active	1979	-	Direct	20-25
New Brunswick	Equity Tax Credit Program	Active	2003	-	Direct	30
Nova Scotia	Equity Tax Credit Program	Active	1993	-	Direct/Indirect	30-50
Yukon	Yukon Small Business Investment Tax Credit Program	Active	1999	-	Direct	25

\*Quebec's credit is 125%-150% of the investment as a deductible against income tax

### **Yozma and the SBIC**

Yozma, a classic fund-of-funds model, was launched in 1993 as a joint public/private initiative in Israel. It is frequently cited as founding the Israeli venture capital industry, though Israel did have domestic venture capital as early as 1985 with the founding of Athena Venture Partners. Nevertheless, from 1992 to 2000 the total venture capital invested in Israel rose from \$160m to \$2.3b per year, and this incredible growth can be largely attributed to Yozma. In the early 1990s Israel reworked its legal, accounting and regulatory framework to mimic the United States<sup>69</sup>. This guaranteed US investors parity with US tax rates.

Yozma contained both a classic fund-of-fund type initiative and a single fund. It established a \$100m investment company that seeded 10 drop down funds (with a maximum of \$8m), each of which was required to leverage institutional investors and strategic partners, and made 15 direct investments. Most importantly the program was designed as a one time intervention, and there was a five year option to buyout the government's share.<sup>70</sup> Just five years later we can see that 8 out of 15 companies funded through the direct model had an IPO or were

<sup>69</sup> The Venture Capital Business Environment by Rafiq Dossani in SiliconIndia.

<sup>70</sup> The Israeli Venture Capital Industry – Presentation by Mr. Yigal Erlich, Chairman of the IVA.

acquired, and 8 out of 10 of the drop down funds had exercised their option and bought out the government's position<sup>71</sup>.

The SBIC program in the US is a public/private partnership that has existed since 1958 and undergone many substantial revisions. It is a 'never-ending' fund-of-funds model that illustrates the US government's faith in this asset class through many different economic climates. This program, operated under the Small Business Administration, provides its approved investment funds with long term loans or the purchase of (predominantly debt based) securities for an amount of up to 300% of their privately raised funds, typically for treasury bill interest rates and a small share of the gains (both paid only after the SBIC has earnings, increasing the IRR for other investors)<sup>72</sup>. The actual terms depended on the structure and size of the fund applying and only established private equity managers capable of raising funding from institutional investors outside of the program are eligible to apply. In 2002, 8% of all US venture capital financed dollars were from SBICs, as were a staggering 64% of the seed round dollars.<sup>73</sup>

Some social objectives are achieved through a specialized SBIC model that targets entrepreneurs with social or economic disadvantages, though no new licenses have been issued under this model since 1996<sup>74</sup>. The focus of the program is, however, on leverage and returns. In 2002 less than \$10b of \$37.7b invested in small financings through the program came from SBA-guaranteed funds<sup>75</sup> and a net-to-LP IRR of 25.2% without the program would typically have generated a 42.5% IRR with its assistance.<sup>76</sup>

As of January 2005, the Small Business Administration temporarily stopped licensing new SBICs. This move is in response to \$2 billion in accumulated program losses on the outstanding program guarantees of about \$5 billion (following on from the post-2000 market deterioration). The SBA has proposed several significant changes to the program that would increase the government's profit sharing, increase borrower rates, induce faster principal repayment, and reduce the risk exposure the Government takes on investments. These changes would increase the SBA's share of the distributions to 50% until the funds are returned, and increase the profit payable to the government from 10% to 50%<sup>77</sup>. However, the SBA and the National Association of Small Business Investment Companies were unable to agree to terms on a new deal, forcing the SBA to suspend the program until the next fiscal year (beginning October 1, 2005).<sup>78</sup>

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<sup>71</sup> Ibid.

<sup>72</sup> CFDA – Report 59.011 Small Business Investment Companies.

<sup>73</sup> US Small Business Administration – The SBIC Program, 2002.

<sup>74</sup> US Small Business Administration – State of the SBIC Program Fiscal Year 2002 Special Report

<sup>75</sup> Hellman & Puri. On the Fundamental Role of Venture Capital. Federal Reserve Bank of Atlanta Economic Review. 4<sup>th</sup> Qtr 2002, pp22.

<sup>76</sup> Impact of SBIC leverage, National Association of Small Business Investment Companies.

<sup>77</sup> "SBA Suspends VC Program, Future in Doubt", January 1, 2005, Venture Capital Journal, [www.venturecapitaljournal.net/vcj/1093016078376.html](http://www.venturecapitaljournal.net/vcj/1093016078376.html)

<sup>78</sup> [www.whitehouse.gov/omb/budget/fy2005/sba.html](http://www.whitehouse.gov/omb/budget/fy2005/sba.html)

## Section 4 (Reference): Programs in Other Canadian Jurisdictions

### Alberta

The Alberta Government does not have an active Equity Capital Program. Their policy is to offer overall low tax rates for people and businesses in order to stimulate economic growth. However, they admit that their venture capital investment is lagging behind the rest of Canada and is only significant in the oil and gas industries.

“It takes considerable time, research and development work to bring ideas to the stage of becoming commercially viable products. This creates a need for patient early-stage working capital financing. Representatives of knowledge-based industries suggest that there is a problem in accessing this type of venture capital and that Alberta lags behind other provinces in total venture capital invested in Canada.”<sup>79</sup>

Alberta did have a Small Business Corporations Act in the 1980s and early 1990s. It offered a 30% tax credit for direct investments into eligible small businesses or indirect investments through Small Business Equity Corporations [SBEC] (similar to BC’s VCC model). The amount of capital budgeted to be raised each year under the program reached a height of \$61 million. By the end of 1994, 273 SBECs were registered, and they had raised a total of \$203 million in equity investment.<sup>80</sup>

The program was wound down in the 1990s because of administration and compliance problems. The belief at the time was that the program required too much time and money to monitor, especially in ensuring that the credited capital was being used properly. This was made harder by the fact that the tax credits were given up front and rules and systems for monitoring compliance were not well developed. Eventually the provincial government came to believe that the program was not worth the cost, and did not encourage significant new investment into early stage small businesses (after a report found that “investments would have occurred anyway and cheaper”).<sup>81</sup>

### Saskatchewan

Saskatchewan, like Alberta, does not currently have an equity capital program comparable to BC’s. Their Mineral Exploration Credit is the same as any tax credit for a target industry and is not equity capital investment based. The “Invest in Saskatchewan Program” focuses on Labour Sponsored Venture Capital Corporations [LSVCC] and Employee Investment Funds. The program registered 2 provincial LSVCCs, 2 federal LSVCCs and 25 Employee Funds from 1989 to 2003. The average investor is a middle income worker looking to invest \$1,000 to \$5,000 and there are 8,000 to 10,000 of these investments made each year.<sup>82</sup>

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<sup>79</sup> “Report and Recommendations on Knowledge-based Industries”, Alberta Tax Review Committee, May 1998.

<sup>80</sup> “Tax Credit Programs (non LSVCC) – Jurisdictional Comparisons.” Investment Capital Branch - B.C. Ministry of Small Business and Economic Development, July 2004.

<sup>81</sup> From a conversation with Terry Duffy, Director of Policy Coordination, Department of Alberta Economic Development, November 1, 2004.

<sup>82</sup> “Government of Saskatchewan Annual Report 2001-2002”. Saskatchewan Economic Co-operative Development. [www.ir.gov.sk.ca/adx/asp/](http://www.ir.gov.sk.ca/adx/asp/)

Saskatchewan had a Venture Capital Tax Credit program from 1984 to 2000 that allowed a 30% tax credit on up to \$5 million in investments through an indirect, VCC type, model. Many funds were set up under this program and it received substantial support from the angel community. However, it was cancelled because of cut backs by the provincial government in 2000.<sup>83</sup>

## **Manitoba**

Manitoba is in the process of setting up a Community Enterprise Development Tax Credit Program.<sup>84</sup> It offers a 30% tax credit to companies that are seen as integral to community development. The system primarily utilizes a direct model; the credit is allocated to specific community enterprises and they then pass it to their investors. But there is also an indirect model, where investments are made into community development investment pools who then invest in eligible businesses. The program is to be run by Manitoba's Department of Intergovernmental Affairs. Like BC's CVCP program, there is a large focus on rural development. The following are the eligible business requirements:

- The maximum credit will be \$9,000 for individual investors and unused credits can be carried forward for up to ten years and can be carried back three years (but no earlier than 2004)
- No individual can acquire more than 10% of an issue
- Can raise a maximum of \$500,000 under the program (larger projects may be given special approval)
- Must receive support or sponsorship from a local community development group
- Net assets under \$10 million, gross assets under \$25 million
- Maximum 200 employees
- At least 25% of wages must be paid to Manitobans
- Ineligible activities: professional services, primary industries, mineral exploration, recreational/seasonal enterprises or commercial property developers

## **Ontario**

Ontario had an Equity Capital Program called the Community Small Business Investment Fund Program [CBSIF] (from 1998-2004). However, as of January 1<sup>st</sup>, 2004, the program is no longer registering new Community Small Business Investment Funds and is being wound down.<sup>85</sup>

The program was very similar to BC's retail VCC model, where the fund issues equity shares to investors. Institutional investors receive a 30% tax credit on the amount they invest in the CSBIF and another 30% on the amount the CSBIF invests in small businesses.<sup>86</sup> Individual and other corporate investors receive a 7.5% tax credit on the amount they invest in the CSBIF and another 7.5% of the amount the CSBIF invests in small businesses. Labour Sponsored Investment Funds receive additional incentives.

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<sup>83</sup> From a conversation with Marv Weismiller, Senior Investment Analyst, Saskatchewan Ministry of Industry and Resources, November 4, 2004.

<sup>84</sup> "Community and Business Development." Ministry of Industry and Resources. [www.gov.mb.ca/agriculture/ri/community/ria01s06.html](http://www.gov.mb.ca/agriculture/ri/community/ria01s06.html)

<sup>85</sup> [www.trd.fin.gov.on.ca/userfiles/HTML/cma\\_3\\_28403\\_1.html](http://www.trd.fin.gov.on.ca/userfiles/HTML/cma_3_28403_1.html)

<sup>86</sup> "A Guide to Ontario's Small Business Investment Fund Program." Ministry of Finance. June 2001. [www.trd.fin.gov.on.ca/](http://www.trd.fin.gov.on.ca/)

Ontario places the following requirements on the Eligible Businesses:

- Total assets less than \$1 million at time of initial CSBIF investment
- No more than \$5 million from any one investor
- % of company's assets located in community plus % of company's wages and salaries located in community must be greater than 150%
- Not involved in real estate, property income or personal service businesses
- Cannot use funds for dividends, re-lending, purchasing securities or carrying on business outside Ontario

Furthermore, the CSBIF requirements are similar to those placed on retail VCCs but with differing parameters:

- Funds cannot exceed \$10 million in size
- Must be supported by a community sponsor (municipality, first nation community, university or hospital)
- Must deal at arms length with the small business
- Cannot take more than 20% ownership in small business
- 70% of capital must be invested within 6 years and the fund cannot dissolve for 10 years from registration
- Eligible forms of investment: Equity shares, debt obligations (or guarantees on previous obligations), or options and rights

## Quebec

Quebec's Business Investment Company Program [QBIC] (from 1985-present) is an indirect model (with a prospectus variant available) targeted at small and medium sized businesses in Quebec. It offers tax deductions of up to 150% of money invested into QBICs and up to 30% of the investor's net annual income.<sup>87</sup> There is no cap to the budget for this program.<sup>88</sup> Quebec allows the financing of larger companies than in BC, with Eligible Business requirements as follows:

- Must be a Canadian-controlled private corporation<sup>89</sup> with its head office in Quebec
- Total assets less than \$50 million
- No more than \$10 million from any one investor
- Over 50% of wages in Quebec
- Similar activities eligible as BC, but more emphasis on cultural projects<sup>90</sup>
- Cannot use funds for dividends, re-lending, purchasing securities or carrying on business outside Quebec
- Cannot have made a significant disbursement to shareholders over the 24 months prior to an investment received under the program

The QBIC requirements are as follows:

- At least \$50,000 in common stock before investment
- Must deal at arms length with the small business for 24 months after investment
- Must hold investments for 5 years

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<sup>87</sup> "How to set up a QBIC." Investissement Quebec.

[www.invest-quebec.com/en/que/doc/pdf/former\\_speq/SPEQang.pdf](http://www.invest-quebec.com/en/que/doc/pdf/former_speq/SPEQang.pdf)

<sup>88</sup> From 1985 to 2002, 910 QBICs have registered under the program and have invested \$260 million in Quebec.

<sup>89</sup> Incorporated after April 23, 1985 under part 1A of the Quebec Companies Act.

<sup>90</sup> See Appendix A of "How to set up a QBIC" for full list.

- Must not pay any management fees, bonuses, remuneration, advance or loan to the QBIC or its shareholders for 5 years
- Companies do not receive any tax credits for investing in QBICs
- QBICs cannot hold more than 50% of ownership in any one company (must buy shares in cash and only full voting right common shares offer full tax benefits)
- Must apply to Investissement Quebec for validation on each investment (may be rejected based on risk analysis)

## **Newfoundland**

Newfoundland offers a Direct Equity Tax Credit Program (from 2000 to present) that is comparable to the EBC model, but with a 20% tax credit (35% for certain undeveloped regions), and a \$50,000 credit maximum per investor.<sup>91</sup> The program has a \$1 million budget and places the following requirements on its Eligible Businesses:

- Canadian controlled private company with a permanent establishment in the province
- Total assets less than \$10 million (including associated companies)
- No more than \$700,000 from any one investor
- Over 75% of wages paid in Newfoundland
- Less than 50 full time equivalent employees
- At least \$25,000 in shareholder equity and/or loans prior to applying to program
- Qualifying activities: technology, research and development, aquaculture, forestry and agrifoods, manufacturing, export/import replacement businesses, tourism or cultural industries
- Cannot use funds for paying dividends, re-lending, purchasing securities or acquiring any part of a business as a going concern
- Must hold investments for 5 years
- Can hold certification for a period of three months, unless that period is extended by the Minister. Only those shares which have been issued during this time period will be eligible for the tax credit. The total value of eligible shares shall not exceed the amount authorized under the certification.

## **Prince Edward Island**

PEI's Equity Investors Incentive Program (from 1979-present), provides a direct rebate of 20% to 25% of the cost base of an equity investment.<sup>92</sup> Like Newfoundland, the program is small with a \$1 million budget. The Eligible Business has to obtain and maintain a specific ROI to qualify, and could use the investment to reduce debt (which is forbidden in most other programs). PEI places a specific constraint that companies could not jeopardize existing businesses, but otherwise the requirements are similar to those in BC:

- Can issue common or preferred shares or limited partnership units, but in aggregate this must not exceed 49% of company ownership
- Must hold investments for 5 years
- Tax credit allocation and rate is based on: net economic benefit to the province, long-term viability, management qualifications, employment creation, use of other government

<sup>91</sup>“Direct Equity Tax Credit Guidelines.” Department of Finance: Taxation and Fiscal Policy Division. [www.gov.nf.ca/fin/direquity\\_guidelines.html](http://www.gov.nf.ca/fin/direquity_guidelines.html)

<sup>92</sup>“Equity Investors Incentive Program.” Technology PEI Inc. [www.gov.pe.ca/photos/original/techpei\\_eiip.pdf](http://www.gov.pe.ca/photos/original/techpei_eiip.pdf)

funds, export sales, import substitution, environmental impact and availability of program funds

- Eligible sectors: food development, diversified manufacturing, life sciences, information technology, selected tourism projects or first-of-its-kind exportable services may be considered in other sectors
- Investors must be arms length

## **Nova Scotia**

Nova Scotia's Equity Tax Credit Program (for 1993-present) utilizes both direct and indirect models<sup>93</sup>. There is a 30% tax credit for investing in Halifax area small business and an additional 20% if the investment is into a Community Economic Development Corporation. There is a \$15,000 maximum annual credit for each individual investor, but an unlimited budget and no cap placed on the total investment a single company could receive. Nova Scotia placed the following requirements on its Eligible Businesses:

- Must hold investments for 4 years
- Activities eligible are flexible and based upon benefits and diversification to community
- Investors must be arms length and can't hold more than 20% of eligible business
- Must be 3 or more of such investors per issue
- Less than \$25 million in assets
- Over 25% of wages in NS
- Cannot use funds for dividends, re-lending, purchasing securities

## **New Brunswick**

New Brunswick implemented an Equity Tax Credit in 2003.<sup>94</sup> This program uses a direct model with a 30% credit. There was a \$15,000 personal tax credit limit. The Eligible Business requirements are very similar to those in BC:

- Private company registered to carry on business in NB
- Must hold investments for 4 years
- No more that \$5 million from any one investor
- Minimum \$10,000 raised in total per issue
- Minimum 3 investors (investing at least \$1,000 each) per issue
- Replacement shares (i.e. an individual selling stock in a company and then buying back to get credit) or the purchase of shares with the main purpose of receiving the credit is considered ineligible
- Less than \$25 million in net tangible assets
- Substantially all assets and income must be in NB
- Over 75% of wages in NB (4 year aggregate)
- All New Brunswick business sectors are eligible
- Certified businesses have 90 days to finalize sale of shares authorized by program
- Cannot use funds for paying dividends, re-lending, purchasing securities, investing outside NB or acquiring any part of a business as a going concern

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<sup>93</sup> "Nova Scotia Equity Tax Credit." Ministry of Finance.  
[www.gov.ns.ca/finance/taxpolicy/taxcredits/etc.asp](http://www.gov.ns.ca/finance/taxpolicy/taxcredits/etc.asp)

<sup>94</sup> "Small Business Investor Tax Credit Program." Department of Finance.  
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## Yukon

There are two capital programs available in the Yukon: the Yukon Small Business Investment Tax Credit [YSBITC] (1999-present)<sup>95</sup> and the Venture Loan Guarantee Program (a debt not equity based program).<sup>96</sup> The YSBITC is a direct 25% equity tax credit on investments by individual Yukon investors in eligible Yukon businesses. Individuals may claim a maximum of \$25,000 per year and unused credits may be carried forward seven years and back three. The annual program budget is \$1 million in credits (\$4 million in investments). Eligibility requirements for small businesses are as follows:

- Yukon incorporated and permanently established private company
- At least 50% of assets (plant, property and equipment) located in Yukon
- Pay at least 50% of salaries and wages to Yukon residents
- Not exceed \$25 million in total capitalization
- Investors must be arms length, pay in cash, and not a recent seller of shares in the business
- Eligible investments: Common shares, other voting shares, share of cooperative corporation, and subordinated, non-restrictive, secured debt (investment is not to be used for dividends, stock redemptions, settling corporate accounts, loans and non-arms length transactions)
- Company must earn business income (not passive income from rental income or professional services)
- Investors must hold investment for 4 years

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<sup>95</sup> Yukon Small Business Investment Tax Credit, Yukon Department of Economic Development, [www.economicdevelopment.gov.yk.ca/general/sbitc.html](http://www.economicdevelopment.gov.yk.ca/general/sbitc.html)

<sup>96</sup> Yukon Venture Loan Guarantee Program. Department of Economic Development. [www.economicdevelopment.gov.yk.ca/general/ventureloan.html](http://www.economicdevelopment.gov.yk.ca/general/ventureloan.html)



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