

COMPARATIVE VENTURE CAPITAL GOVERNANCE: PRIVATE VERSUS LABOUR SPONSORED VENTURE CAPITAL FUNDS

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Abstract

Private independent limited partnership venture capital funds receive capital from institutional investors, without tax incentives. Limited partnership investment activities are governed by restrictive covenants that are determined by negotiated contract between the fund managers (general partners) and the institutional investors (limited partners). By contrast, Canadian Labour Sponsored Venture Capital Corporations (LSVCCs) receive capital only from individual investors who receive tax breaks on capital contributions of up to CAN\$5,000. LSVCC investment activities are governed by statutory restrictions. This chapter contrasts the governance of LSVCCs to limited partnerships. We also summarize Canadian evidence on the impact of LSVCC governance and tax incentives: (1) on the distribution of venture capital funding between private and LSVCC funds; (2) on the unusually large overhang of uninvested capital in the Canadian venture capital industry; (3) the portfolio size (i.e. number of investee firms per fund) of private funds versus LSVCCs; and (4) the performance of LSVCCs relative to other types of venture capital organizations and other comparable investments for individual investors.

JEL G24, G28, G32, G38, K22.

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1. Introduction

Venture capital investing has attracted much governmental interest in the past decade owing to the importance of venture capital in funding small technology firms, and the perceived importance of these firms to economic growth. Many governments have in fact launched initiatives designed to strengthen their domestic venture capital industries and thus give a boost to their high technology sectors. This chapter examines one such initiative – the Canadian Labour Sponsored Venture Capital Corporation (LSVCC), with a view to determining whether the tax expenditures that underlie the LSVCCs are well spent.

First conceived in the province of Quebec in the early 1980's, the LSVCC concept spread to most of the other provinces in the early 1990's. The basic structure of the LSVCC is as follows. A labour union must agree to act as the fund sponsor. The fund may then be formed as a corporate entity in any province with legislation allowing for the creation of an LSVCC, or pursuant to similar federal legislation (although the fund may then operate only in provinces specifically permitting federal funds to carry on business). The labour union, however, will have ownership interest in the fund; it will typically hold a class of shares that are not entitled to receive either dividends or any portion of assets on winding up. It will agree to act as sponsor in return for the payment of either a fixed fee or some percentage of the fund's assets under administration. Despite the absence of an ownership interest, however, the union is statutorily required to appoint a majority of the fund's board of directors, giving it *de jure* control of the fund. As a practical matter, however, the fund will be run by a team of managers and advisors who are contractually engaged by the fund to supply management services (in some cases, augmented by a team of in-house managers and advisors). Indeed, in many cases, the initiative to form the fund will originate with the management company, rather than the labour union.

Only individuals may invest in LSVCCs. Because a primary motivation for making an investment is the generous tax benefits that attach to an LSVCC investment, most contributions are made in the three months preceding the end of any given tax year.

The LSVCC is thus a hybrid between a traditional mutual fund and a venture capital fund, although there are material differences from each. While a traditional mutual fund invests primarily in the securities of publicly traded corporations, an LSVCC is constrained by its incorporating legislation to invest primarily in small and medium-sized private corporations. And while a traditional venture capital partnership invests in similar types of small and medium-sized enterprises, it will be capitalized by a combination of

institutional investors, corporations, and wealthy individuals. Moreover, it will be organized as a limited partnership, with the management company assuming the role of general partner.

Because ownership and control achieve perfect separation in the LSVCC, it would appear to be a structure that is destined to generate significant agency costs, and therefore poor returns. In this chapter, we summarize previous and current research dealing with Canadian LSVCCs. This research shows that LSVCCs: (1) have inefficient statutory governance mechanisms, (2) have low managerial quality, (3) have poor returns both in absolute terms, and in comparison to both mutual funds and private venture capital funds, (4) are associated with large tax expenditures, (5) have achieved significant capital accumulation despite their low returns, and (6) have crowded out more efficient private venture capital funds.

We proceed as follows. Section 2 discusses LSVCC statutory governance. Section 3 describes the tax breaks provided to LSVCCs, and section 4 presents LSVCC capital accumulation relative to other types of funds in Canada. Section 5 discusses LSVCC capital structure choices. Section 6 describes the size of venture capitalist portfolios for different types of venture capital funds. Section 7 discusses evidence on LSVCC crowding out of private venture capital investment in Canada. Section 8 considers comparative evidence on US and Canadian investment performance. Section 9 summarizes evidence on the performance of LSVCCs. The last section concludes.

2. LSVCC Governance¹

The traditional venture capital firm in both the United States and Canada is organized as a limited partnership (LP) (Gompers and Lerner, 1999, 2001). The limited partners are the capital contributors, which consist mainly of institutional investors (and in particular pension funds), corporations, and individuals. However, contributions are typically subject to a significant minimum contribution requirement, such that, as a practical matter, only wealthy individuals invest in such partnerships. The general partner is the management company, which also organizes the fund and solicits investment contributions.

¹ See also Cumming and MacIntosh (2002a) for a related analysis of LSVCC governance in the context of crowding out.

In this traditional form of venture capital organization, the relationships between the limited and general partners are determined by contract (subject, of course, to general legislation and common law dealing with LPs, contract law, taxation, and other matters). Research by Gompers and Lerner (1996, 1999) suggests that LP agreements typically contain three types of restrictive covenants: covenants relating to the management of the fund (e.g., the size of investment in any one firm, the use of debt, coinvestment, reinvestment of capital gains); covenants relating to the activities of the general partners (e.g., coinvestment by general partners, sale of partnership interests, fundraising, the addition of other general partners); and covenants restricting particular forms of investment (e.g., investments in other venture funds, public securities, leveraged buyouts, foreign securities and other asset classes) (Gompers and Lerner, 1996). Gompers and Lerner also find that the ‘technology’ of restrictive covenants has changed over time as experience with venture capital partnerships has accumulated. Further, the relative frequency with which different types of restrictions are used changes over time in response to changes in economic conditions. The form of the contractually-based LP is thus subject to learning over time and is responsive to changing economic conditions.

The LP form is advantageous for a number of reasons. One is the flexibility of the LP form. While corporations are subject to an extensive “standard form contract” deriving from the governing corporate legislation, LP legislation supplies a minimal set of mandatory rules. Thus, the LP contract can be more highly tailored to the specific interests of the capital contributors and the management company. It may also be amended more easily should the need arise. As noted above, there is evidence that this flexibility has been important in the evolution of the LP form.

Thus, for example, the corporate form imposes limitations on how profits may be distributed. In order to distribute profits differentially to different owners, multiple classes of shares must be created. By contrast, in the LP form, the distribution of profits is entirely contractual in nature, reducing the transaction costs of creating a suitable distribution structure.

A further corporate straight-jacket arises in that all shares must be fully paid when subscribed; the concept of partly paid shares has been abolished in both the United States and Canada. This makes it awkward to create a corporate structure pursuant to which the fund may draw down money from investors when and as needed for particular investment projects. In a LP, by contrast, the fund may simply enter into appropriate contractual arrangements for limited partner draw-downs (from previous contractual commitments) when required.

Another advantage resides in the tax-advantageous treatment of LPs. Many of the investors in a private fund will be non-taxable institutional entities such as pension funds. Use of the LP arrangement allows for pass-through of the fund's profits directly to the limited partners, thus avoiding taxation both at the fund and investor levels (at least for non-taxable investors) and minimizing the aggregate fund/investor tax burden. This enhances the return to non-tax-paying institutional investors and thus makes it easier to attract funds from such investors.

In addition, use of the LP form lowers the manager's tax payable. Because the manager receives its remuneration as a contractually agreed share of profits arising from its ownership interest, these profits are taxable at the capital gains rate, rather than the higher rate applicable to income. By contrast, limitations on the permissible range of corporate capital structures arising by operation of law make it difficult to remunerate the manager via capital gains. The corporate alternative – a purely contractual relationship between the manager and the corporation – leads to the manager's remuneration being taxed at the higher rate applicable to income.

A further advantage of the LP form relates to the life span of the LP. An LP typically terminates in 10 years, subject to possible extensions with the approval of the limited partners. This imposes discipline on the management company. Faced with the prospect of returning investors' capital at a specific termination date, the manager has a more potent incentive to manage the fund's assets efficiently. Relatedly, the termination date supplies a benchmark by which the VC can be evaluated. This is both a benefit and a constraint for the management company, in that it gives the manager a performance benchmark that will either assist or hinder it in raising money for subsequent VC funds.

One potential disadvantage of the LP form is that it creates some risk that the limited partners will lose their limited liability. In a LP, only the general partner is allowed to manage. A limited partner that participates in the management of the fund is liable to being treated as a general partner, and thus deprived of the benefit of limited liability. This problem is usually dealt with in practice by interposing a limited liability corporation between the fund and the investor, although there can be no guarantee that a court will not extend liability beyond the corporate shell by "piercing the corporate veil".

A related disadvantage stems from the inability of the limited partners to exert significant influence over management, or to replace management - a privilege ceded to corporate shareholders (who

can at any time replace the managers by voting in a new board of directors). This problem is partly mitigated by the common practice of setting up an advisory board with representatives from the ranks of the limited partners, although by its nature the advisory board's function is merely precatory.

However, venture capital is a repeat game in which management companies typically seek to raise money for further funds in the future. Thus, reputational constraints tend to ensure alignment of the manager's and the limited partners' interests. Further, while a limited partnership itself will lack independent directors, such directors can be placed on the board of the management corporation. The management corporation will in fact typically appoint an investment advisory committee that is independent of management. These devices, particularly when viewed in the context of strong reputational constraints, tend to compensate for the facially inferior governance regime of the LP.

The LSVCC structure (similar to the Venture Capital Trust in the U.K.) is materially different from the LP structure in many respects. LSVCCs are set up as *corporations*, rather than LPs. Despite this, applicable legislation allows LSVCCs to flow fund profits directly to investors, replicating this tax advantage of the LP form. The manager, however, is typically hired on contract, thus exposing the manager to the higher tax rate on income. Thus, the corporate form incompletely replicates the tax advantages of the LP form.

Another disadvantage of the corporate form lies in the fact that, as corporations, LSVCCs have an infinite life span. Thus, the discipline that arises from the fixed time horizon of the LP is lost.

In addition, LSVCC corporations are subjected to the straight-jacket of the corporate legislation, impairing contractual flexibility. The lack of flexibility of the corporate form is somewhat mitigated in that all investors are individuals who, upon the occurrence of a distribution, receive a share of net asset value proportionate to their share holding interest, obviating the need to create a differential distribution structure. However, it is not possible for an LSVCC to effect periodic draw-downs from investors: all contributions are paid into the fund at the time when shares are purchased. This creates an opportunity cost for investors, particularly since uninvested funds are typically invested by LSVCCs in low-paying bonds and money market instruments. Moreover, once funds are committed, the various incorporating statutes typically require that some percentage of these funds (ranging from 50% to 80%) be invested in eligible businesses within one or two years from the date of contribution. Failure to do so may subject the fund to substantial penalties, limits on further fund raising, or the suspension or revocation of the fund's

registration. This can have the effect of forcing managers to commit funds to unsuitable investments should an investment deadline approach.

As noted above, the LP structure is determined by negotiation between arms-length commercial parties. By contrast, the LSVCC structure is fixed partly by private negotiation, and partly by the dictates of the sponsoring legislation, which are summarized in Table 1. This legislation adds restrictions on the activities of LSVCCs that are not replicated in private LP contracts.

Thus, for example, as indicated in item #12 of Table 1, investors in LSVCCs are subject to a lock-in period of seven years in Manitoba, and eight years in all other jurisdictions except Québec (in which the shares must be held until retirement). Individuals withdrawing prior to the elapse of this period lose their LSVCC tax credits (although not the deductability of the contribution, if it was invested via a registered retirement savings plan (RRSP), as most contributions are). By contrast, private LP investors are typically locked in for 10 years. The LSVCCs' shorter lock-in period (and the ability of investors to make demand redemptions following the expiration of the lock-in) force the fund to maintain liquidity against the event of redemptions. This is partly responsible for the overhang of uninvested funds (i.e. funds invested in low risk market instruments) referred to in section 4 below.² Moreover, the longer duration of private funds and the inability of investors to make demand redemptions not only allows for investment of all the contributed capital, but also provides more breathing room to bring investee firms to fruition and more flexibility in exiting. In short, the relatively short LSVCC lock-in can be predicted to lower both the risk and expected return of LSVCC funds when compared to other types of funds.

Other features of the legislative structure depart from contractual arrangements observed in private funds, and are likely to adversely affect performance. In four provinces (Table 1, item #15) there is a limit on the amount of funds raised in any given year, at a threshold (in the range of CAN\$20-40 million) that is likely to prevent the exploitation of economies of scale associated with venture capital

² By the end of 1996, the overhang amounted to three years of venture capital investments. See Canada, Department of Finance, 1996 Budget, Budget Plan, annex 5, Tax Measures: Supplementary Information and Notice of Ways and Means Motions, March 6, 1996. The problem of overhang, coupled with the statutory constraints referred to in the text forced Canada's second largest LSVCC to suspend new capital raising for two and a half years (from mid-1996 to the end of 1998). At the time of suspension, it had only 19% of its contributed capital invested in eligible businesses. See "Working Ventures Puts Capital Raising on Hold" at www.newswire.ca...June996/05/c0564.html.

Table 1. Legislation Governing Labour-sponsored Investment Funds in Canada: An Overview, By Jurisdiction

Saskatchewan (1992), Nova Scotia (1994), and Prince Edward Island (1992) are similar to Part X.3 of the Federal Income Tax Act.

Québec	Federal Government	British Columbia	Manitoba	Ontario	New Brunswick
I. THE STATUTE AND RELATED DETAILS					
1. What is the legislation called?					
Act to Create Fonds de solidarité du Québec (FTQ); And Act to create the Fonds de développement de la Confédération des syndicats nationaux pour la coopération et l'emploi (Fondation CSN)	Part X.3 of the Federal Income Tax Act.	The Employee Investment Act.	The Manitoba Employee Ownership Fund Corporation Act.	Labour Sponsored Venture Capital Corporations Act	New Brunswick Income Tax Act and An Act Respecting the Workers Investment Funds.
2. When was it introduced?					
1983 (Fonds de solidarité FTQ) 1995 (Fondation CSN)	1988	1989	1991	1992	1993/1994
3. What government department is responsible for it?					
Ministry of Finance, Quebec	Finance Canada	Ministry of Small Business, Tourism and Culture	Department of Industry, Trade and Tourism	Ontario Ministry of Finance	New Brunswick Department of Finance
4. What is the rationale for this statute?					
To permit establishment of a labour-sponsored investment fund directed by the FTQ that invests in Quebec enterprises with the goal of creating, maintaining or preserving jobs; facilitates training of workers in economic matters, stimulates the economy through strategic investments; and invites workers to participate in economic development through subscription to Fund shares.	To allow for establishment of national labour-sponsored investment funds that will supply risk capital to small and medium sized enterprises and thereby contribute to Canadian economic development, job creation and protection.	To permit establishment of a labour-sponsored investment fund that promotes job creation and protection in all parts of British Columbia through risk capital supply to value-added small- and medium-sized firms and that facilitates economic and financial education for workers.	To permit establishment of a labour-sponsored investment fund that promotes capital retention and a stable economy, worker ownership, employment and continued resident ownership of firms in Manitoba and that contributes to other goals, such as corporate social responsibility and worker economic education.	To allow for the establishment of labour-sponsored investment funds that supply risk capital to small and medium-sized enterprises and thereby contribute to economic development, job creation and protection in Ontario.	To permit establishment of labour-sponsored investment funds that promote capital retention, a stable economy, and job creation and protection in New Brunswick and, especially in relation to the Workers Investment Fund, that contribute to other goals, such as worker participation in economic matters.

Québec	Federal Government	British Columbia	Manitoba	Ontario	New Brunswick
10. What is the tax benefit?					
15% provincial credit (along with matching federal credit). This applies to a maximum of \$3500 in annual share purchases per taxpayer	15% federal credit with or without a matching credit in every province except Alberta and Newfoundland (national funds obtain the second credit only by satisfying government needs on a province-by-province basis). This applies to a maximum of \$3500 in annual share purchases per taxpayer.	15% provincial credit (along with matching federal credit). This applies to a maximum of \$3500 in annual share purchases per taxpayer	15% provincial credit (along with matching federal credit). This applies to a maximum of \$3500 in annual share purchases per taxpayer	15% provincial credit (along with matching federal credit). This applies to a maximum of \$3500 in annual share purchases per taxpayer	15% provincial credit (along with matching federal credit). This applies to a maximum of \$3500 in annual share purchases per taxpayer
11. Who can be a (common) shareholder?					
Any person. Quebec residency is one of the factors determining if an individual is eligible for tax credits.	Any individual resident of Canada at the time of buying shares	Any individual resident of British Columbia (defined as being employed on a continuing basis for at least 20 hours per week).	Any resident of Manitoba at the time of buying shares	Any resident of Ontario at the time of buying shares	Any resident of New Brunswick at the time of buying shares
12. How long must shares be held?					
Until shareholder's retirement (age 60-65, or 55, if the shareholder avails himself of his right of retirement or early retirement).	Eight years (previously, it was five years)	Eight years	Seven years	Eight years (previously, it was five years)	Eight years (previously, it was five years)
13. Are there any exceptions?					
Yes. Shares can be redeemed earlier under special circumstances, e.g., planned retirement, a return to school, terminal illness, investment in one's company, emigration, an urgent need for liquidity, and a serious reduction in income	Yes. Shares can be redeemed earlier in the event of the holder's death, severe illness/disability, or change of nationality or in the event of sales/transfers (per set conditions)	Yes. Shares can be redeemed earlier in the event of the holder's death, severe illness/disability, bankruptcy, job loss, (persisting for at least six months) or in the event of sales/transfer (per set conditions)	Yes. Shares can be redeemed earlier in the event of the holder's death, severe illness/disability, retirement or financial hardship or in the event of sales/transfers (per set conditions)	Yes. Shares can be redeemed earlier in the event of the holder's death, severe illness/disability, or in the event of sales/transfers (per set conditions)	Yes. Shares can be redeemed earlier in the event of the holder's death, severe illness/disability, or in the event of sales/transfers (per set conditions)
14. Are any payroll deductions encouraged?					
Yes. Quebec employers must remit deductions to the fund if the lesser of fifty employees or 20% of the total workforce so request	No	No	Yes. Manitoba employers must remit deductions to the fund if the lesser of fifty employees or 20% of the total workforce so request	No	Yes, but only for the Workers Investment Fund. NB employers must remit deductions to this fund if the lesser of 50 employees or 20% of the total workforce so request

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II. RULES GOVERNING SHARE DISTRIBUTIONS					
15. Is there a limit on how much capital can be raised per year through share sales?					
Not presently. There was a temporary ceiling imposed by provincial authorities in the period 1993-1994	No	Yes. No more than a total of \$40 million can be raised annually	Yes. No more than a total of \$30 million (or as determined by the provincial government) can be raised annually	No	No
16. Does the Act allow for the sale of shares by representatives trained by the Fund, including employees and/or Fund representatives?					
Yes	No	No	Yes	Yes (in the case of First Ontario Fund)	No
17. What public authority monitors a fund's sales activity?					
The Commission des valeurs mobilières du Québec	The securities commission or the appropriate authority in each province where sales occur	The British Columbia Securities Commission	The Manitoba Securities Commission	The Ontario Securities Commission	The New Brunswick Department of Justice
18. What is the role of regulatory authorities?					
Protecting the public in share sales transactions, information disclosure requirements, etc.	Protecting the public in share sales transactions, information disclosure requirements, etc.	Protecting the public in share sales transactions, information disclosure requirements, etc.	Protecting the public in share sales transactions, information disclosure requirements, etc.	Protecting the public in share sales transactions, information disclosure requirements, etc.	Protecting the public in share sales transactions, information disclosure requirements, etc.
19. What provinces are currently open to national funds?					
No.	Not applicable.	No.	No. (But Saskatchewan is open.)	Yes.	Yes. (Nova Scotia and Prince Edward Island are also open.)
20. What is the required period of fund shareholding?					
Until shareholder's age of retirement.	Eight.	Eight.	Seven.	Eight.	Eight.
21. Does the jurisdiction allow for Union-directed share distributions?					
Yes.	No.	No.	Yes.	Yes (First-Ontario LSVCC).	No.
22. What are the investment level enforcement measures (see also #31)?					
Restrictions of subsequent capital-raising.	Deficiency taxes.	Temporary suspension or revocation of fund registration.	Temporary suspension or revocation of fund registration.	Deficiency taxes.	Deficiency taxes.

Québec	Federal Government	British Columbia	Manitoba	Ontario	New Brunswick
III. FUND DECISION MAKING					
23. Who directs a fund?					
A Board of Directors, a majority of whom are nominated by the FTQ, i.e., 10 members	A Board of Directors, at least one-half of whom are nominated by the labour sponsor	A Board of Directors, at least one-half of whom are nominated by the labour sponsor	A Board of Directors, a majority of whom are nominated by the Manitoba Federation of Labour	A Board of Directors, at least one-half of whom are nominated by the labour sponsor	A Board of Directors, at least one-half of whom are nominated by the labour sponsor (in the case of the Workers Investment Fund, the New Brunswick Federation of Labour).
24. Who else sits of a Board of Directors?					
-- 2 members elected by shareholders -- 4 members representing: individual enterprises, financial institutions, social-economic interests, and a fourth -- the 17th member is the President/CEO of the Fund	Shareholder representatives elected at an annual general meeting and others as determined by the labour sponsor	Shareholder representatives elected at an annual general meeting and others as determined by the labour sponsor	Elected or appointed representatives of Class A, Class G and Class I shareholders	Shareholder representatives elected at an annual general meeting and others as determined by the labour sponsor	Shareholder representatives elected at an annual general meeting and others as determined by the labour sponsor
IV. REQUIREMENTS OF INVESTMENT					
25. In what kinds of business must a fund invest?					
A small- or medium-sized company/partnership (defined as having no more than \$50 million in assets; or the net value of which is a maximum \$20 million).	A small- or medium-sized company/partnership (defined as having no more than 500 employees and \$50 million in assets)	A small- or medium-sized company/partnership in a new and/or value-added sector (e.g., manufacturing and processing industries, high technology, tourism, aquaculture).	A small- or medium-sized company/partnership (defined as having a maximum of \$50 million in assets). One-quarter of newly-raised capital must go towards deal sizes of less than \$1 million.	A small- or medium-sized company/partnership (defined as having no more than 500 employees and \$50 million in assets). At least 10% of total investments must go to very small companies (defined as having no more than 50 employees and \$5 million in assets)	A small- or medium-sized company/partnership (defined as having no more than 500 employees and \$50 million in assets).
26. Where can a business be located?					
Anywhere, as long as the majority of employees reside in Québec	At least one-half of company activity (e.g., defined as 50% of salaries and wages paid) must take place in Canada	At least one-half of company activity (e.g., defined by 50% of salaries and wages paid) and most assets must reside in B.C.	The majority of a company's assets and workforce must reside in Manitoba	At least one-half of company activity (e.g., defined as 50% of salaries and wages paid) must take place in Ontario.	At least one-half of company activity (e.g., defined as 50% of salaries and wages paid) must take place in New Brunswick
27. What is the nature of the investment?					
Any financial assistance in the form of loan, underwriting, equity, shares, etc.	New equity in a company, et al	New equity in a company, et al	New equity in a company, et al	New equity in a company, et al	New equity in a company, et al

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28. What is the required level of fund capital in equity (i.e., no debt securities) investments?					
60% of previous year's average.	60% within one year.	80% within three years of capital raising.	60% of previous year's average.	70% within two years.	60% within one year.
29. Are there limits as to how a business can use a fund's investment?					
No	No	Yes. For instance, a company cannot re-lend the money or invest in activity unrelated to the firm	Yes. For instance, the money cannot be used to unionize workers	Yes. For instance, a company can not invest the money in land unrelated to the firm or outside Canada	No
30. What level of total capital must be invested in business projects?					
At least 60% of the previous year's average net assets.	60% of capital accumulated by each year's end must be placed in projects by the following year. (Special provisions apply for investments in very small companies, i.e., with up to \$10 million in assets	80% of capital must be placed in eligible projects within three years of it having been raised	At least 60% of capital of the previous year's average net capital. For the period 1996-97, the requirement was 75%. A majority of assets should support worker ownership and participation in some form	50% of capital must be placed in projects within one year of having it and 70% within two years	60% of capital accumulated by each year's end must be placed in projects by the following year. In the case of national funds, the provincial government determines individual agreements for re-investment of sales proceeds in N.B.
31. What happens if this level is not met?					
The fund is restricted in subsequent capital raising	The fund pays a 20% deficiency tax and additional penalties (including possible revocation of a possible revocation of a fund's registration) depending upon the case.	A fund's registration may be temporarily suspended or revoked, depending upon the circumstances	The fund's registration may be permanently revoked	The fund pays a 20% deficiency tax. A rebate on this tax is available if appropriate action is taken by the fund.	The fund pays a 20% deficiency tax and additional penalties (including possible revocation of a fund's registration) depending upon the circumstances.
32. How are the rest of the assets to be invested?					
In reserves of liquid securities (e.g., cash, government bonds) or in other vehicles according to the investment policy approved by the Board of Dir.	Primarily, in reserves of liquid securities (e.g., cash, government bonds) in the start-up period. Thereafter, as determined by a fund.	Primarily, in reserves of liquid securities (e.g., cash, government bonds). Generally, assets must be invested domestically.	Primarily, in reserves of liquid securities (e.g., cash, government bonds) or as determined by the fund.	Primarily, in reserves of liquid securities (e.g., cash, government bonds). Generally, assets must be invested domestically.	Primarily, in reserves of liquid securities (e.g., cash, government bonds) in the start-up period. Thereafter, as determined by a fund.
33. Are there other investment-related program requirements?					
Yes. For instance, the fund is encouraged to provide training to workers on economic and financial matters and to give economic development	No	Yes. For instance, a fund is encouraged to provide education to workers on economic and financial matters and give priority to community and regional economic development.	Yes. For instance, the fund is encouraged to emphasize worker ownership, economic education and empowerment of workers, and corporate social responsibility	No	Yes. The Workers Investment Fund is encouraged, for instance, to promote economic awareness and empowerment of workers.

Québec	Federal Government	British Columbia	Manitoba	Ontario	New Brunswick
V. RESTRICTIONS ON INVESTMENT					
34. Is a fund restricted from investing in certain firms or sectors?					
No	No	Yes. A fund is restricted from investing in natural resource industries (e.g., fishing, forest products, mining), the financial sector, land development and retail	Yes. A fund is restricted from investing in natural resource industries (e.g., agriculture, mining, oil and gas), the financial sector land development and retail	Yes. No more than 15% of a fund's total investment can go towards publicly-traded enterprises	No
35. How much can a fund invest in a single business?					
No more than 5% of the fund's total capital (or up to 10% under special circumstances) at the time of an investment	The lesser of \$15 million or 10% of fund capital at the time of an investment	No more than \$5 million per company for a period of two years	No more than 10% of total fund capital at the time of an investment	No more than \$10 million or 10% of fund capital at the time of an investment, whichever is less	No more than \$10 million or 10% of fund capital at the time of investment, whichever is less
36. Is a fund restricted as to its controlling share in a business?					
No	No	Yes. Majority control is not permitted except under special circumstances (e.g., worker buyouts/ ownership or financial distress)	No. Majority control is encouraged if it facilitates worker buyouts/ownership	Yes. Majority control is permitted by the Ontario Minister of Finance on a temporary basis in select situations (e.g., worker buyouts, financial distress)	No

investing. Further, in response to the common practice of placing up to half or more of a fund's capital in treasury bills and similar low risk instruments (the problem of "overhang" referred to above), all of the provinces now require that an LSVCC invest a certain portion of its capital contributions in eligible businesses within one or two years of receipt (Table 1, items #28, 30-31). As noted above, this can have the effect of forcing the fund to invest in inferior businesses if an investment deadline looms.

LSVCCs are also geographically constrained; typically a majority of the salaries and wages paid by the fund (or assets or employment) must be located within the sponsoring province (Table 1, item #26). This limits the businesses that can be vetted for investment purposes, and may also impose a constraint on any relocation of the business as it grows and/or participation in follow-on investments. In Ontario (the province in which the majority of LSVCC investments are made), the fund cannot acquire "control". However, this constraint may be more apparent than real, since control is defined as the ability to "determine the strategic operating, investing and financing policies of the corporation or partnership without the co-operation of another person".³ The provincial administrators take the view that this does not prohibit a shareholding in excess of 50%. A similar prohibition against control in B.C. is defined in the traditional manner, excluding majority ownership, thus limiting a B.C. fund's governance options.

While private venture capital LPs rigorously and single-mindedly pursue profit maximization. By contrast, while the principle motivation that underlies the LSVCC legislation is to enhance the local pool of venture capital, LSVCCs invariably have divided statutory mandates. Thus, for example, Quebec's two funds (each formed pursuant to special incorporating legislation) has the multiple mandate of creating, maintaining and preserving jobs in Quebec, facilitating the training of workers, stimulating the economy through strategic investing, and furthering the participation of workers in economic development through subscriptions to fund shares. Some of all of the non-profit making goals of the Quebec legislation are replicated in the legislation of the other sponsoring jurisdictions. The multiple mandate of the LSVCC funds can be predicted to dilute the vigour with which management will pursue profits for investors. However, the degree to which these non-profit-making goals are pursued in practice varies substantially. The Quebec funds appear to pursue these goals with some vigour (MacIntosh, 1994; Halpern, 1997). However, Osborne and Sandler suggest that in Ontario (where more than half of all venture capital investments by dollar value are made), there is essentially no consideration of objectives other than profit maximization (Osborne and Sandler, 1998). This appears also to be true of funds incorporated in other provinces (i.e. outside of Quebec).

³ *Community Small Business Investment Funds Act*, S.O. 1992, c. 18, s.1(3).

In both the LP and the LSVCC, there is a separation of ownership and control. In the LP, as noted above, investors may only sit on advisory boards and may not direct the fund managers. In the case of LSVCCs, under the sponsoring legislation of all jurisdictions, the labour union sponsor must elect a majority of the board of directors. Thus, the fund's owners (the shareholders) cede control of the fund to the union.

However, in the case of a private LP, the limited partners hold relatively large interests. This greatly assists in overcoming collective action and free rider problems, since holders of substantial interests have an incentive to monitor management, even if they cannot directly control management. By contrast, only individuals may invest in an LSVCC, and most contributions are of CAN\$5,000 or less (Vaillancourt, 1997). This generates substantial collective action and free rider problems and gives individual shareholders little incentive to supply any useful monitoring. In addition, while institutional investors tend to be informed traders, the retail contributors to LSVCC funds will tend to be noise traders incapable of supplying useful monitoring even if supplied with appropriate incentives.

Perhaps more important, the controller of an LP (the management company functioning as general partner) has a potent incentive to exercise its control in the interest of the fund's owners, since, via the carried interest component of compensation, it will typically receive 20% of any appreciation in the value of the fund's assets. By contrast, in an LSVCC, the union has a substantially smaller economic interest in the fund. For acting as sponsor, it will typically receive either a fixed yearly fee, or a small percentage of the net asset value of the fund. In the first case, there is no incentive at all to maximize the value of the fund (although there is an incentive to ensure its survival). In the second case, the variable fee is similar to the manager's carried interest and serves to align the union's interest with that of the shareholders. However, the variable fee is typically a fraction of a percent of net asset value, and thus a highly imperfect (perhaps even trivial) motivator.

While the manager will be motivated by the receipt of carried interest fees that are similar to those of private funds, the manager does not formally control the fund, and is thus subject to the whims of the controlling union. The LSVCCs thus appear to have an inefficient governance structure, and one that can be predicted to result in higher agency costs than private funds.

In some funds, these problems are addressed by contract: the union will contract with the

manager to allow the latter to specify the identity of the union's board nominees. The disadvantage of the statutory union control requirement is thus negated by contract. Such arrangements are not universal, however; in many cases, the union makes its own appointments.

Another attempt to overcome these governance problems is through the mechanism of the LSVCC's board of directors. It is common practice for LSVCCs to appoint independent directors to LSVCC boards. In addition, independent directors often control key committees, such as the audit, investment, and valuation committees. Despite these salutary attempts to ensure sound governance, however, extant empirical evidence is highly equivocal as to whether independent corporate directors add material value to an enterprise.

Moreover, there are few LSVCC funds in which the organizer – typically the management company (and not the sponsoring union) – performs all of the services performed by the manager of a private fund. LSVCC funds typically hire a bevy of external experts to assist in various functions such as portfolio management, valuation of assets, sales and marketing, back office functions and administration, etc. This has the effect of separating critical functions (often including investment and portfolio management) from direct corporate control.

In sum, the legislative structure of LSVCC funds leads us to hypothesize that the LSVCC is an inferior form of venture capital organization that will exhibit relatively high agency costs and low returns relative to private venture capital funds. We consider the performance of LSVCCs in the following sections.

3. LSVCC Tax Policy

In order to attract investment, the various jurisdictions allowing for the creation of LSVCCs offer individual investors generous tax credits. The current tax incentives (as of August 2002) for investing in a LSVCC in Ontario are detailed in Table 2. On an investment of up to CAN\$5,000, individual investors receive a combined federal and provincial tax credit of 30% and can simultaneously use the investment as a tax deduction, for a total after-tax cost of about \$1,000-\$2,000 on a \$5,000 investment, depending on the individual's income (see Table 2 for exact details). The governmental sponsors effectively pay the balance of the cost. An individual investor remaining invested for the required hold period will realize a return on

the investment in excess of 100%, even if the fund makes no profits for distribution.⁴ The tax benefits in each of the other provinces are indicated in Table 1, item #10.

The tax-expenditure cost of LSVCCs to the Canadian government are extremely large: Osbourne and Sandler (1998) estimate such costs to be approximately CAN\$ 450 million for one year (1996) alone, without accounting for RRSP tax deduction costs. It seems quite clear that these tax incentives have been the engine behind the spectacular growth of the LSVCC funds (Vaillancourt, 1997), and have made LSVCCs an attractive asset class for individual investors in a way that is at least partially decoupled from the underlying fundamentals of the investment (see section 4 below).

4. LSVCC Capital Accumulation

LSVCCs have accumulated more capital than the sum total of all other types of private equity investors in Canada (including limited partnerships and corporate funds). By the end of 2001, LSVCCs had accumulated more than CAN\$11 billion (US\$ 7 billion) capital under management (in 2001 dollars). Figure 1 indicates the growth of LSVCC capital over the 1992 – 2001 period (the years for which the Canadian Venture Capital Association (CVCA) has reported this information in their annual reports⁵).

Figure 2 presents data for capital under management, capital available for investment and new venture funds for the 1988-2001 period (again, the years the CVCA has reported this information in their annual reports). The capital available for investment reflects the extent to which contributions to venture capital funds have outstripped the funds' ability to invest these contributions. It can be seen from Figure 2 that, historically, there has been a large "overhang" of uninvested capital in Canada. This overhang is largely attributable to the LSVCCs. By the end of 1996, the overhang amounted to approximately three years of venture capital investments (Department of Finance (Canada), 1996). The problem of overhang forced Canada's second largest LSVCC (Working Ventures) to suspend new capital raising for two and a

⁴ The minimum hold period in each jurisdiction is typically 8 years. Early withdrawal of contributed funds results in a penalty fee. Note that all dollar figures are in Canadian dollars.

⁵ Figure 1 is presented in the CVCA Annual Reports (see www.cvca.ca and www.canadavc.com). See also Macdonald (1992); MacIntosh (1994, 1997), Amit *et al.* (1997, 1998); Cumming (2000); Ayayi (2002a).

Table 2. Labour Sponsored Investment Fund (LSIF) Tax Savings Chart

This table presents the tax savings associated with an individual LSIF investment of \$5,000. The table shows that returns vary from at least 109.21% to up to 323.73% from the tax savings only, before any gains or losses on the net asset value of the LSIF.

Taxable Income (2002 \$Can):	Up to \$20,753	\$30,754 - \$30,813	\$30,813 - \$53,811	\$53,812 - \$61,508	\$61,509 - \$61,628	\$61,629 - \$63,505	\$63,505 - \$100,000	Over \$100,000
Registered Retirement Savings Plan (RRSP) Investment	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
Federal Tax Credit	\$750	\$750	\$750	\$750	\$750	\$750	\$750	\$750
Provincial Tax Credit*	\$750	\$750	\$750	\$750	\$750	\$750	\$750	\$750
Combined Federal and Provincial Tax Credit	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500
RRSP Tax Savings	\$1,110	\$1,410	\$1,560	\$1,655	\$1,855	\$1,970	\$2,170	\$2,320
Combined Federal and Provincial Income Tax Rates	Up to 22.20%	28.20%	31.20%	33.10%	37.10%	39.40%	43.40%	46.40%
Total Tax Credits and Tax Savings	Up to \$2,610	\$2,910	\$3,060	\$3,155	\$3,355	\$3,470	\$3,670	\$3,820
Net Out of Pocket Cost on \$5,000 Investment	At least \$2,390	\$2,090	\$1,940	\$1,845	\$1,645	\$1,530	\$1,330	\$1,180
Initial Return** = (\$5,000 - Out of Pocket Cost) / Out of Pocket Cost	109.21%	139.23%	157.73%	171.00%	203.95%	226.80%	275.94%	323.73%

* Ontario provincial rates are used in this chart. For other provincial rates, see Table 1, item #13.

** Initial Return calculation does not account for any returns (losses) that may or may not be generated by a LSIFs' investment activities.

Source: http://www.bestcapital.ca/why_invest.htm, and Department of Finance, Canada.

Figure 1. Venture Capital Under Management by Investor Type in Canada: 1992-2001

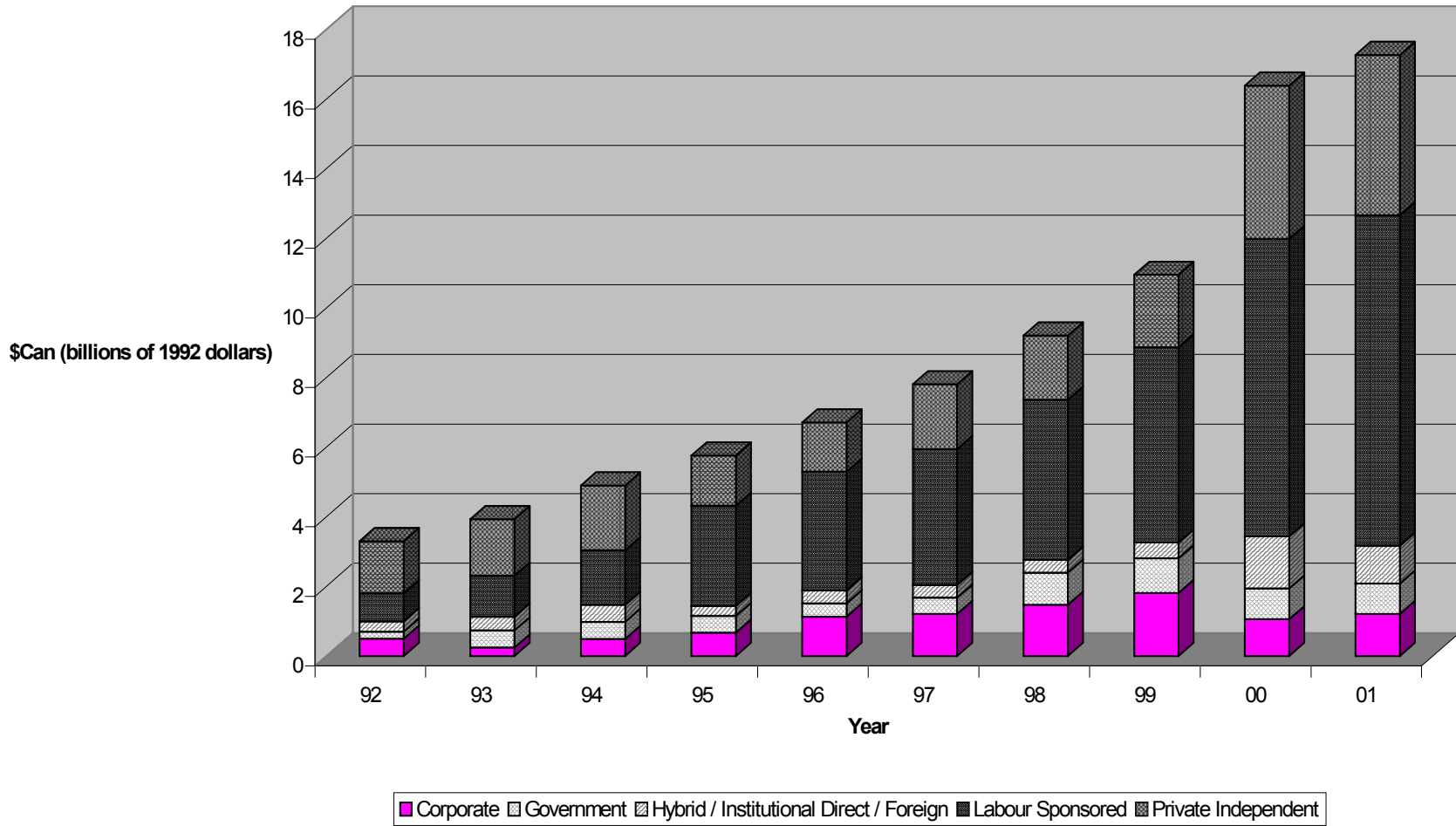
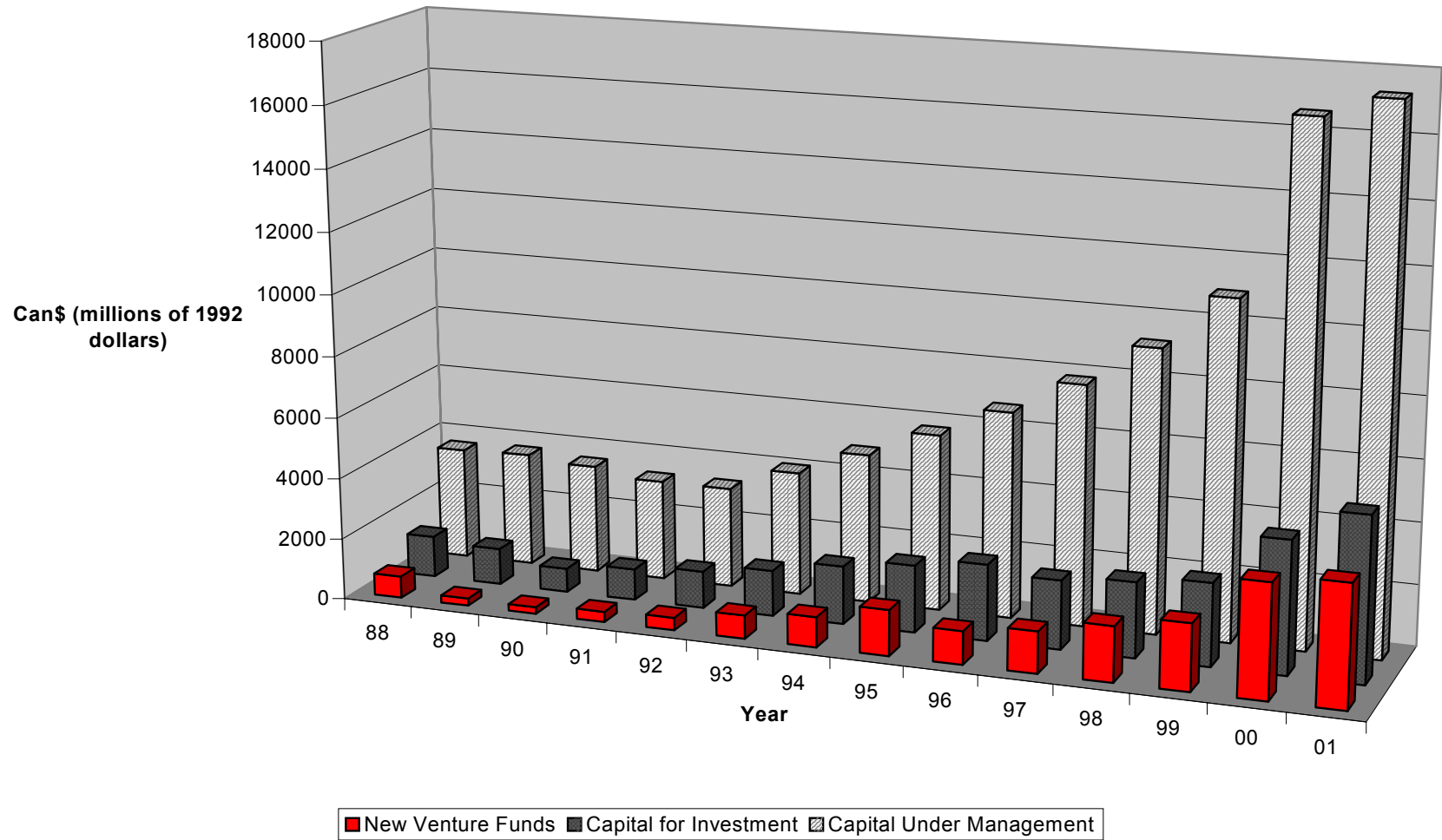


Figure 2. Venture Capital Funds in Canada: 1988-2001



half years (from mid-1996 to the end of 1998). At the time of suspension, Working Ventures had only 19% of its contributed capital invested in eligible businesses.⁶

It is noteworthy that the uninvested capital in Figure 2 is understated. The Canadian Venture Capital Association assumes that LSVCCs must keep a certain percentage in liquid securities when calculating the overhang of uninvested capital (40% for federal and Quebec LSVCCs, 30% for Ontario, Saskatchewan and Atlantic Canada LSVCCs, 25% for Manitoba LSVCCs, and 20% for LSVCCs in British Columbia). This is incorrect. There is no such requirement in the LSVCC statutes (see Table 1). As such, the uninvested capital in Figure 2 (the middle bars labelled Capital for Investment) is in fact significantly high than that reported. As it is not possible to precisely calculate the correct values, Figure 2 reports the same (understated) values for the overhang as reported by the Canadian Venture Capital Association.

There appear to be a number of reasons for the LSVCCs' inability to invest all of their contributed capital. LSVCCs raise most of their money through contributions to individual registered retirement savings plans (RRSPs), which roughly correspond to 401k plans in the United States. Most of the fund raising of LSVCCs takes place in last three months preceding the tax filing deadline of each year (April 30), allowing contributing investors to claim tax the LSVCC tax credits (and deductability, if the contribution is made through an RRSP) for the preceding tax year. This makes LSVCC fund raising "lumpy", concentrating contributions at one time of the year, raising the likelihood of a mismatch between funds flow and available investment opportunities, and contributing to the overhang problem.

In addition, LSVCC investors were, until 1996, locked into their investments for only five years, following which they could demand redemption at net asset value. While the lock-in period has been increased to 8 years in most jurisdictions (although in Quebec, shareholders must hold until retirement), the lock-in period is nonetheless still shorter than that of private funds (ten years, with possible extensions). This has prompted the LSVCCs to retain a certain proportion of capital in liquid investments such as treasury bills and bank deposits to satisfy demand redemptions.

We also believe that the overhang problem is a function of the comparative lack of skill of the LSVCC managers, who have had more difficulty than their private fund counterparts in finding promising investments. Evidence consistent with lower skill levels is presented in Brander *et al.* (2002) and Cumming and MacIntosh (2000, 2001, 2002a,b,c,d).

⁶ See "Working Ventures Puts Capital Raising on Hold" at www.newswire.ca...June996/05/c0564.html.

5. LSVCCs and Capital Structure Choice for Entrepreneurial Firms

In addition to lower skill, the statutory constraints faced by LSVCCs may lead LSVCC managers to make inefficient decisions from the perspective of the entrepreneurial firm. One such inefficient outcome relates to the security used to finance the entrepreneurial firm, as explained by Cumming (2000); see also Ayayi (2002b). LSVCC legislation typically requires that 60% of contributed capital be invested in non-debt securities (see Table 1, #28; see Gompers and Lerner, 1996, for similar restrictive covenants used among U.S. limited partnerships). LSVCCs have an incentive to invest the balance in debt-type securities for two reasons. First, the spectacular growth of the LSVCCs, the large tax expenditures that have spurred this growth, and the extremely poor earnings reported by the LSVCCs (as discussed further below) have attracted a certain amount of adverse public attention to the LSVCCs. Second, extremely poor returns on their equity portfolios have prompted some of the LSVCCs, for obvious marketing purposes, to seek alternative investment strategies in order to show a positive return. Anecdotal evidence suggests that both of these factors have led some of the LSVCCs to employ relatively low-risk debt instruments in order to turn a profit.⁷ Cumming (2000) presents empirical evidence in support of the view that this has sometimes led LSVCCs to employ debt, rather than comparatively more efficient equity securities in structuring their investments in investee firms.

6. LSVCCs and Portfolio Size

Recent research has explored the issue of the optimal size of venture capitalist's portfolio from a theoretical perspective (Kanniainen and Keuschnigg, 2000, 2001; see also Keuschnigg, 2002, and Keuschnigg and Nielsen, 2001, 2002). In the Kanniainen and Keuschnigg (2000, 2001) model, as the management company adds more firms to its portfolio, the ability to add value declines, since the provision of advice is costly for the manager. Other things being equal, diluted advice lowers the expected return to the project. However, since effort is costly for the entrepreneur also, too low an expected return will cause shirking. Therefore, in a setting with two-sided moral hazard, and unverifiable and unenforceable actions, the VC must cede a higher proportion of the firm to the entrepreneur in order to elicit a high level of effort. .

⁷ This observation was first made by Mary Macdonald of Macdonald & Associates, Limited (the firm that collects data for the Canadian Venture Capital Association) during a lecture at the University of Toronto Law School in February 1998.

In sum, adding a firm decreases the marginal benefit (i.e., VC retains a lower portion of the firm) and increases marginal costs (i.e., the VC has to provide more advice and the cost function is convex).

Cumming (2001, updated October 2002) tests the Kannianen and Keuschnigg (2000, 2001) theory using a sample of 214 venture capital funds, with consideration to the characteristics of the financing transaction (staging, syndication, and the use of convertible securities), the characteristics of the entrepreneurial firm (stage of development and whether high-technology or not), the venture capital fund characteristics (VC fundraising, VC fund duration, and the number of VC funds operated by the VC firm), and the type of VC fund (corporate VCs, private limited partnerships, government VCs, institutional VCs, and LSVCCs). Cumming's (2001) summary statistics indicate that LSVCCs have the largest portfolios on average (38 entrepreneurial firms per fund), followed by government VCs (32 firms per fund), institutional investors (31 firms per fund), corporate VCs (17 entrepreneurial firms in the portfolio), and private limited partnerships (with an average of 8 entrepreneurial firms per fund). That LSVCCs have larger portfolios is a statistically and economically significant result in Cumming's (2001) multivariate regression analysis based on OLS as well as various Box-Cox specifications. This evidence is highly suggestive that LSVCCs add less value to their entrepreneurial firms than do other types of venture capitalists.

7. LSVCCs and Crowding Out

Figure 3 presents the Canadian Venture Capital Association data on the types of entrepreneurial firms that received venture finance in Canada before and after the introduction of LSVCCs in the various Canadian jurisdictions in the 1980s and early 1990s (as indicated in Table 1). The amount of venture finance increased in Canada, particularly for start-up and expansion investment, after the introduction of LSVCC legislation in Canada. Based on this one-dimensional analysis of the data, it is commonly believed that the LSVCC programs have led to a significant increase in the aggregate pool of venture capital funding in Canada.

Cumming and MacIntosh (2002a), however, point out that if LSVCC growth has simply come at the expense of other types of funds (i.e. LSVCC funds have "crowded out" other funds), then the LSVCC programs may not in fact have added to the pool of venture capital.⁸ In order to test for crowding out,

⁸ See Cressy (2002), Gompers and Lerner (2001), and Lerner (1999, 2002) for an analysis of capital gaps and government sponsorship of venture capital.

Cumming and MacIntosh construct simultaneous supply and demand equations for venture capital based on data spanning the period the 1977-2001 period. Variables used to construct these equations include GDP growth, Toronto Stock exchange returns, real interest rates, the tech bubble, and the number of new companies incorporating under both provincial and federal legislation. Dummy variables are used to test for the effect of the introduction of LSVCC legislation in each province and at the federal level. A bootstrap experiment and other robustness checks are employed.

Counter to the conventional wisdom, Cumming and MacIntosh find strong evidence that LSVCCs have crowded out other types of venture capital funds, including private LPs. The estimated coefficients suggest that this crowding out has been sufficiently energetic to *reduce* the aggregate pool of Canadian venture capital by approximately 400 investments, or CAN\$1 billion *per annum*. This displacement has been achieved at considerable cost to the government. A rough calculation indicates that total tax expenditures by the various provincial governments and the federal government total approximately CAN\$3-4 billion, *without* including the costs of RRSP deductability.⁹ It would appear that the various Canadian governments are spending a large sum of money for the privilege of achieving a reduction in VC investing in Canada.

What is the crowding out mechanism? Because of tax subsidies to LSVCC investors, an LSVCC fund can afford to earn nothing on its investments and still achieve a handsome return for its investors. For example, in Ontario, an investor holding for the mandatory hold period of eight years will realize a return on investment of approximately 100 per cent even if the fund earns a zero return. Thus, the LSVCC's have an extremely low required rate of return. By contrast, even though many investors in private LPs are non-taxable, there is no tax subsidy to such investments. If the fund's return is zero, then that is the return realized by the funds investors. Private LPs have a required rate of return that truly reflects the opportunity cost of a venture capital investment, which will be significantly higher than the LSVCC rate.

The result of these differential required rates of return is that, in respect of any given investment opportunity, an LSVCC can always outbid a private fund and still meet its required rate of return. Under these circumstances, it is not surprising that the level of funding for private LPs remained static through

⁹ It is appropriate to add RRSP deduction tax expenditures only if those making RRSP contributions to LSVCCs would *not* otherwise be making RRSP contributions. Vaillancourt's (1997) evidence suggests that this is often the case, however.

the 1990's (while the LSVCCs were experiencing rapid growth), and expanded only in response to the technology bubble that started in 1999 and ended in 2001.

Exacerbating the problem of crowding out is the possibility that LSVCC investment will *increase* in the future, either because the rate of LSVCC contributions will accelerate, or the LSVCC funds will increase the rate at which they invest their uninvested capital, in order to escape statutory non-investment penalties. Institutional investors have historically been skittish venture capital investors, herding into the market when returns are good, and herding out when they are not (Gompers and Lerner, 1999, 2000, 2001). Anecdotal evidence supports the view that Canadian institutions have tended to stay out of the market because of insufficient returns on their venture capital investments. While this aversion to VC investing is often blamed purely on institutional risk aversion, it now seems clear that the LSVCC programs are a principal cause of this reluctance, by depressing the returns to private LP funds.

8. Comparisons Between Canada and the United States

In a sequence of papers, Cumming and MacIntosh compare Canadian and U.S. venture capitalists in terms of duration of investment (Cumming and MacIntosh, 2001, 2002d), choice of exit vehicle (Cumming and MacIntosh, 2000), and extent of exit (Cumming and MacIntosh, 2002b,c). The overall result of these inquiries is to suggest that Canadian VCs are skilled than their U.S. counterparts. We attribute much of this underperformance to the LSVCC funds.

Thus, for example, in our discussion of the duration of venture capital investments (Cumming and MacIntosh, 2001, 2002d), we find evidence that our theoretical framework works much better in the U.S. than in Canada. We attribute this to randomisation in exit behaviour in Canada resulting from comparative lack of managerial skill. We also find that average duration is longer in Canada than in the U.S., consistent with the view that Canadian VCs do not add as much value to their investee firms (and therefore require a longer time to bring these firms to an exit-ready state).

Cumming and MacIntosh (2000) also examine the range of exit vehicles used in Canada and the U.S. (IPOs, acquisitions, secondary sales, buybacks, and write-offs).¹⁰ The Canadian distribution of exit

¹⁰ An IPO involves the sale of shares in the firm to the public market on a stock exchange for the first time in the firm's history. In an acquisition exit, a large corporation purchases the entrepreneur's and venture capitalist's

outcomes (for the years in which the CVCA has presented the data) is presented in Figure 4a. The gross returns to the alternative exit vehicles are presented in Figure 4b (internal rates of return (IRRs) are not available in the CVCA data; see Cumming and MacIntosh, 2000, for IRRs for the exit outcomes in Canada from 1992 – 1995). This data, when compared to the U.S. data, shows that, in Canada, relatively inferior forms of exit - buybacks and secondary sales (see Figure 4b) - are used with much greater frequency. The frequency with which these exit types are used has increased contemporaneously with the growth of the LSVCCs. Our data also indicate that acquisition exits, a relatively superior form of exit, are used with far lower frequency in Canada than the U.S. The data also disclose that Canadian VCs earn lower overall returns than U.S. VCs, as discussed in the following section.

9. LSVCC Performance

Figure 5 presents the performance of LSVCCs over the past 10 years.¹¹ Consistent with the exits evidence documented in Figures 4a and 4b, Figure 5 clearly indicates that LSVCCs have underperformed comparable indices.¹² The LSVCC underperformance supports the view that LSVCC structure and governance is inefficient, as detailed in section 2 and Table 1. It is also consistent with related evidence documenting inferior LSVCC performance relative to US venture investments (see Cumming and

interest in the company. A merger is similar to an acquisition, but the acquiring corporation is of similar size to the entrepreneurial firm at the time of exit. A secondary sale involves the sale of the venture capitalist's interest to another company, but the entrepreneur retains his or her shares. A buyback is a repurchase on the venture capitalist's interest in the company by the entrepreneur. A write-off is a liquidation of the investment. Cumming and MacIntosh (2000) analyze the factors that affect the exit outcome (see also Schweinbacher, 2002), and Cumming and MacIntosh (2002b,c) analyze the choice of full versus partial exits for each of the five exit vehicles.

¹¹ Canadian data sources for Figure 5: www.globefunds.com, www.morningstar.ca; see note 12 for the U.S. data sources for Figure 5. The data do not exhibit survivorship bias because there has not been an LSVCC that has been wound up (the tax benefits provided to these funds, as indicated in Table 2, pretty much guarantees capital inflows regardless of performance).

¹² The US VC Index value from Peng (2001) is not available for 2000 and 2001. Peng's data are from Venture Economics. Venture Economics has posted on their web page (www.ventureeconomics.com) a value of their own index for the date 06/28/2002 (only) of 361.36 that is based over a similar horizon used by Peng. The authors owe thanks to Peng for directing us to the Venture Economics cite for a recent comparable value for the US index. It is noteworthy that Peng's index calculations are more economically and statistically rigorous than that posted by Venture Economics.

Figure 4a. Venture Capital Exits in Canada: 1991-1998

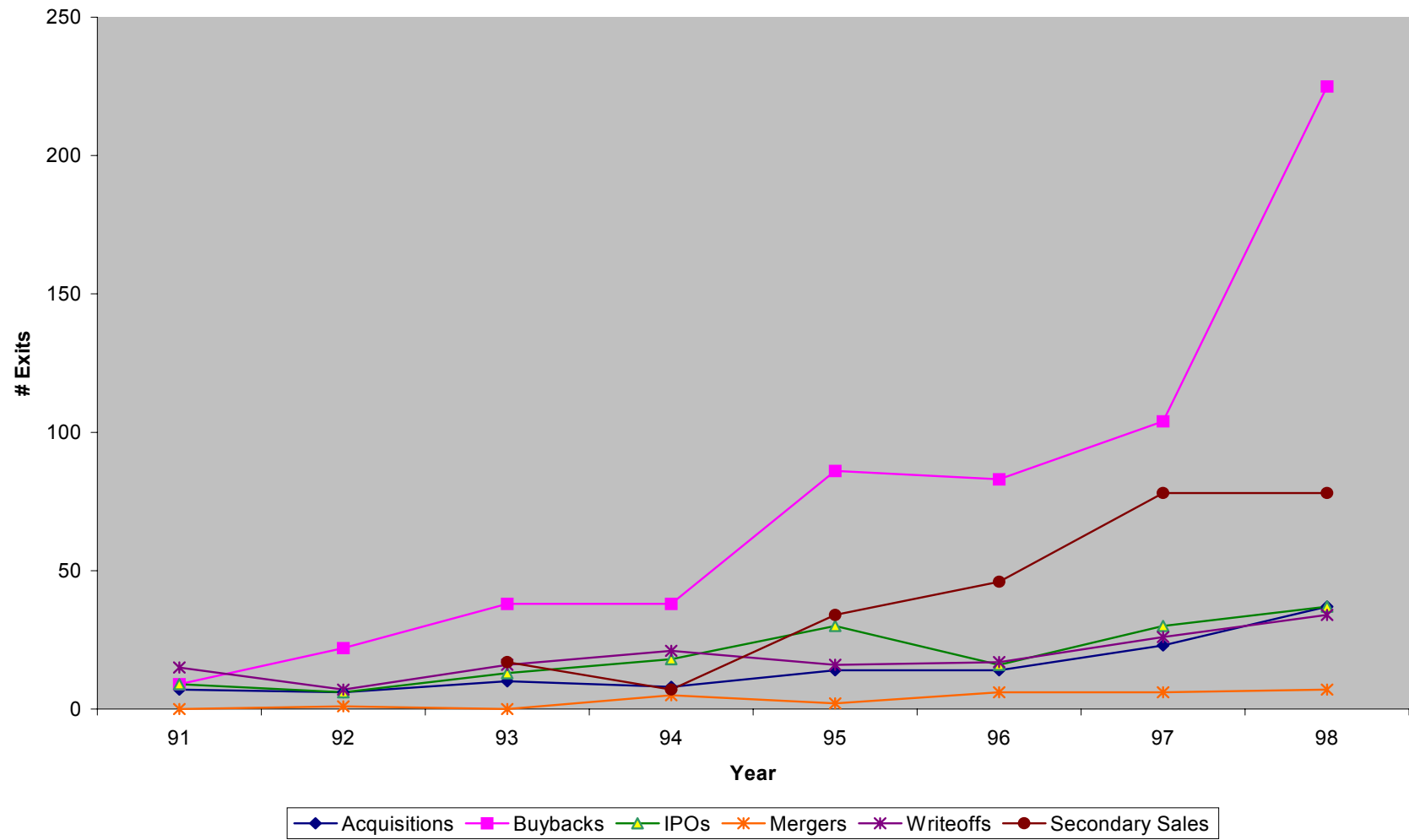


Figure 4b. Venture Capital Exits in Canada: 1991-1998

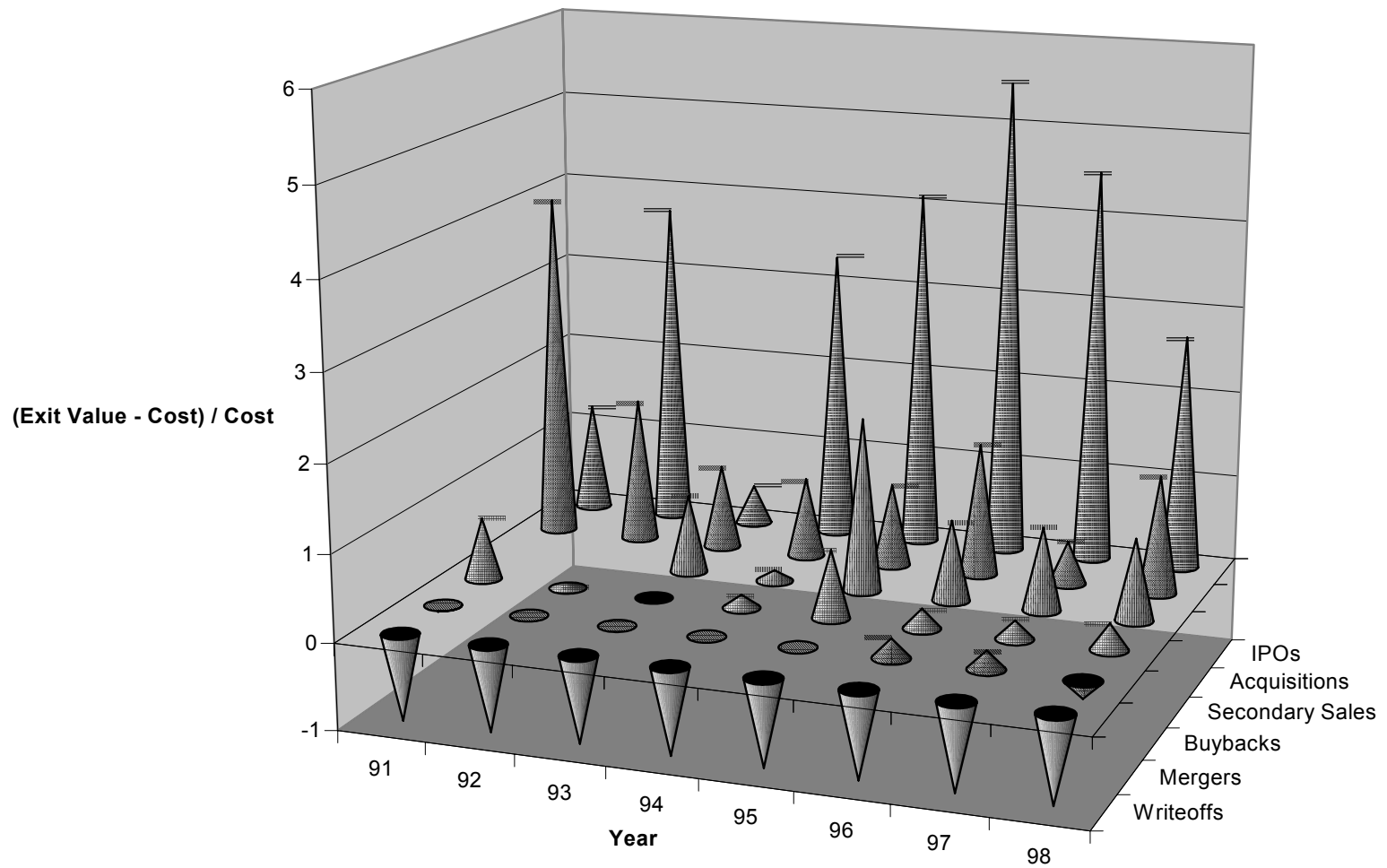
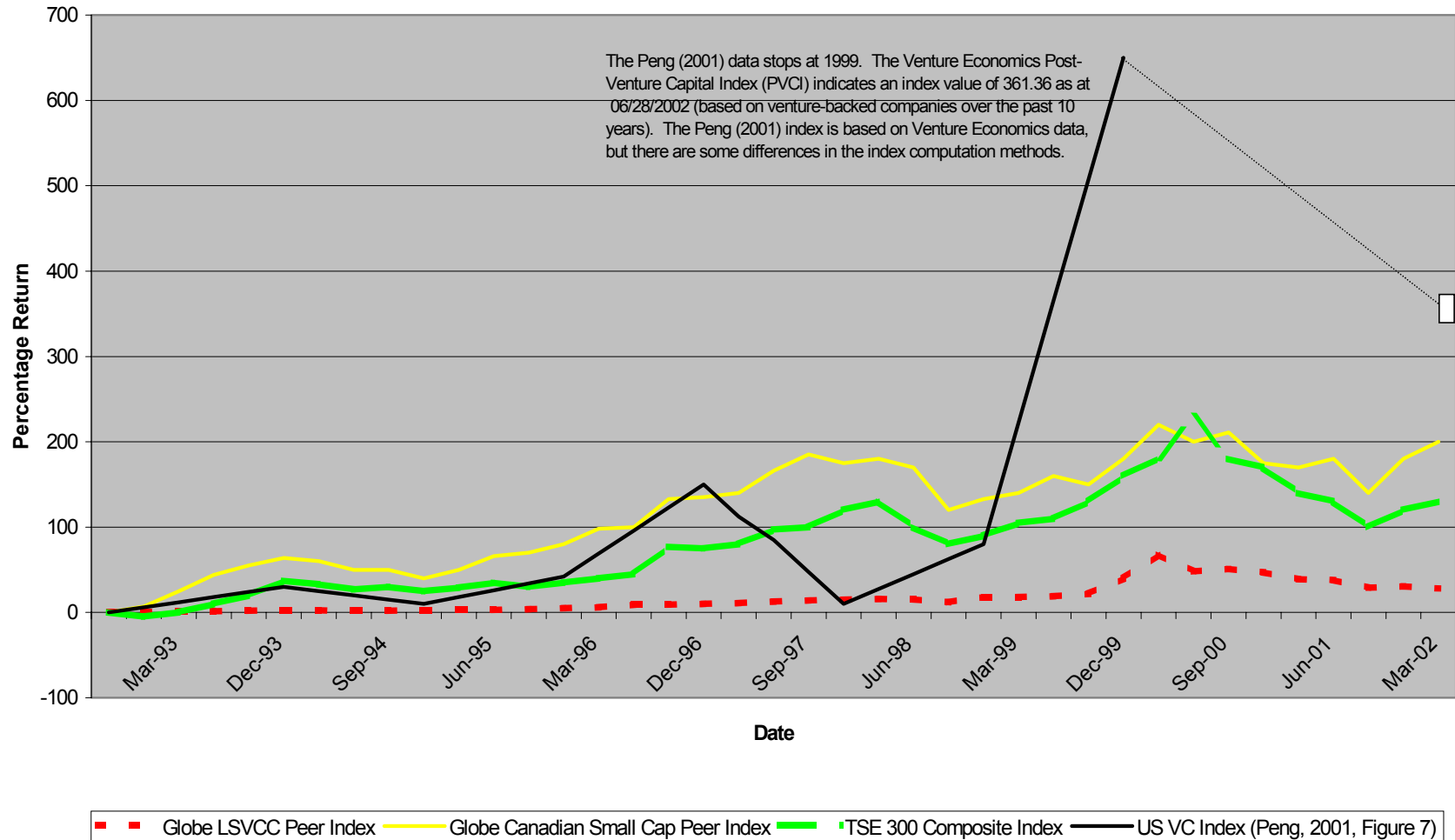


Figure 5. Selected Indices 1992 - 2002



MacIntosh, 2000, 2001,2002b,d), and the inferior performance of LSVCC investments relative to other Canadian private equity investments (Brander *et al.*, 2002). It is also consistent with Smith's (1997) evidence that returns to the Solidarity fund, the oldest and largest LSVCC in Canada, have lagged that of short-term treasury bills, and Osborne and Sandler's (1998) evidence that average LSVCC performance has lagged that of guaranteed investment certificates in Canada. These results are consistent with current theoretical work (Kannianen and Keuschnigg, 2000, 2001; see also Keuschnigg, 2002, and Keuschnigg and Nielsen, 2001, 2002). That LSVCCs have grossly underperformed while simultaneously attracting more capital than other forms of private equity (Figure 1) strongly suggests that private equity has been inefficiently allocated in Canada.¹³

10. Conclusion

The Canadian LSVCC programs were launched by the federal and provincial governments with multiple mandates related to job creation, worker education, and promoting local investment. However, the most important goal was the augmentation of the pool of venture capital in Canada. The LSVCC, however, has a highly unusual structure. While typically organized by a management or marketing company, a labour union must agree to act as the fund's sponsor. The union will usually receive either a fixed fee for agreeing to lend its name to the fund, or a small percentage of the net asset value of the fund. Despite having no other economic interest, the union is required by law to appoint a majority of the directors of the fund, and hence will exercise control. The fund will contractually engage a heterogeneous variety of experts to perform various management functions, including portfolio investment, valuation, administration, and marketing.

We have suggested that this structure is an invitation to high agency costs and low returns. In particular, the divorcing of ownership from control is not as well mitigated by alternative governance devices (and the incentives of the various actors) as it is for private funds. The available evidence supports the view that LSVCCs have achieved returns that are grossly inferior to alternative investments. This is strong evidence that LSVCC managers have lower levels of skill than their private sector counterparts. Despite this, LSVCCs have achieved spectacular growth over the past decade. The evidence indicates that this growth is entirely driven by the available tax subsidies. Indeed, we note that

¹³ The inefficient allocation of capital in Canada as a result of the presence of LSVCCs has been recognized by MacIntosh (1994, 1997), Halpern (1997), Smith (1997), Vaillancourt (1997), Osborne and Sandler (1998), Cumming and MacIntosh (2000, 2001, 2002a,b,c,d), Ayayi (2002a), and others.

very few, if any, LSVCCs market themselves on the basis of returns. Those that do invariably market themselves on the basis of their *after tax* return.

The evidence suggests that the growth of the LSVCCs has been achieved at the expense of other types of funds (including private funds). Without similar tax subsidies, these other funds have higher required rates of return than LSVCCs. They are thus subject to consistently being out-bid by LSVCCs for investment opportunities, lowering their returns and thus increasing the opportunity cost of venture capital investing. The cost of crowding out is large: a significant portion of the pool of Canadian venture capital has, in effect, been spirited from the hands of skilled private sector managers to the hands of comparatively less skilled LSVCC managers. This does not bode well for the future of the Canadian venture capital industry.

The LSVCC programs thus appear not only to have failed to achieve their principle goal (expansion in the pool of venture capital); they actually appear to have been an important factor in *frustrating* the achievement of that goal. The price tag for this failure is in the vicinity of CAN\$3-4 billion of tax expenditures.

Lastly, we note that the very concept of a venture capital fund that is designed to elicit retirement contributions from blue-collar workers (one of founding inspirations and often a statutorily enumerated goal of the programs) seems fundamentally flawed. Evidence suggests that a non-trivial number of contributors to LSVCC funds are unsophisticated investors with few or no other investments. It does not seem particularly wise to invite such underdiversified individuals to contribute their retirement savings to comparatively high-risk investments such as venture capital.

We suggest that the best solution to the problems summarized in this paper is simply to terminate the LSVCC programs. If subsidization of venture capital is thought to be desirable, the LSVCC is not an efficient vehicle for achieving this end.

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