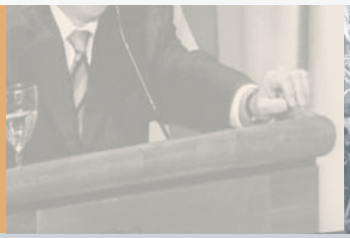
Participant's Guide
Including important background information on each session
To be read before the conference

PUBLIC POLICY **FORUM** on Venture Capital



Monday, October 19th, 2009
8:30 am - 5:00 pm

Frontenac Room
Fairmont Le Château Frontenac

Breakfast 7:30 to 8:30 am
Bellevue Room

The Quebec City Conference
www.QuebecCityConference.com
6th annual

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Introduction

This year's themes

How is our day organized?

What you will find in this Participant's Guide

One year has elapsed since the 2008 edition of the Public Policy Forum. In most countries, this period has been characterized by a dramatic fall of the VC activity. According to Thomson Reuters, compared to 2007, the level of venture capital investment during the first half of 2009 was down by 51% in the US, 57% in Canada, 54% in Western Europe and 34% in Israel.

The decline in fund raising is in the same order of magnitude.

Obviously this is to a large extent due to the cyclical impact of the financial crisis. However, the crisis is also reinforcing some of the more structural issues we already pointed out last year: poor returns of the industry outside a handful of US States; a growing number of questions around the VC model ("Is the model broken?") and its exportability outside of the US; increasing dissatisfaction of many LPs with the asset class and the LP/GP model.

On the other hand, the case for supporting the development of technology start-ups and, more generally technology sectors is growing stronger in the present period of economic stimuli: beyond bailing out industries of the past, should emphasis not be put on innovation, commercialization of research and the development of technologies of the future? More than ever, innovation is seen as a driver of economic recovery and a path to quality jobs.

As a consequence, the critical role played by venture capital to support the creation and development of fast growing technology companies and to spur innovation becomes also all the more important, at a time when this industry is facing many challenges, including a financing crunch.

How should public policies to support the financing of emerging technology companies respond to this challenge? How should they be designed and implemented to overcome these obstacles, adapt to the situation of our various countries in order to build a more permanently sustainable financing environment for technology start-up companies? What can we learn from experiences developed around the world? These are the questions this Public Policy Forum is designed to address.

Dr Josh Lerner is going to set the stage for our day by presenting and discussing the conclusions of his book on public policies related to venture capital. Based on this research, he will draw some lessons concerning the present situation. You will find in this *Participant's Guide*, the Summary Chapter of the book. You are invited to read it before the Forum in order to contribute to a higher level discussion. The book will be distributed to all participants at the Conference.

Then we shall have three panels on topics which tackle both structural issues facing policy design and implementation as well as challenges due to the present crisis:

- "How the venture capital industry is evolving in response to crisis – Public policy responses to current challenges"
- "Public policies to support business angels investing in technology start-ups and their role in the ecosystem"
- "Public/Private Venture Capital Partnerships: Fund Managers' Perspective"

You will find in the *Participant's Guide* a detailed presentation of the themes of the panels, the bios of the panellists, as well as some background information which the panellists would like you to have read before the Forum in order to better participate in the discussion.

In the afternoon, to go more into specifics, we shall present and discuss a business case, on the model of the Harvard Business School. We have chosen "Capital for Enterprise Ltd" in the UK, which appears to be an innovative program to finance new funds which target seed and early stage investments (the "Equity Gap"). The case was prepared by the Coller Institute of Private Equity at the London Business School under the leadership of Pr. Eli Talmor, in collaboration with Josh Lerner and Rory Earley, the CEO of Capital for Enterprise.

You will also find in the *Participant's Guide* the document presenting this case. ***It is important that you read it in advance in order to be able to participate fully in the session***.

Our speakers and panellists, as well as our audience, will be composed of senior GPs, LPs, Government officials and academics from North and South America, Europe, Russia, China, Israel and New Zealand who all have interest and high level experience in advocating, designing and implementing public policies in support of a buoyant venture capital ecosystem to finance emerging technology companies. This should set the stage for what we hope will be intense discussions and high quality networking.

We would like to thank all of those who contributed to this Forum: our Organizing Committee, especially Dr Josh Lerner who, for months has acted as special advisor to the Forum's team, as well as the directors of the Quebec City Conference who have wholeheartedly supported this endeavour.

A special "thank you" goes to the Governments of Canada, Quebec and Ontario which partnered with the Quebec City Conference to develop this Forum and have provided a great deal of financial and technical support.

We hope you will find the documents contained in this Participant's Guide interesting and look forward to meeting you in Quebec City.

Gilles Duruflé
President
QCC, Public Policy Forum

Yigal Erlich
Chairman
QCC, Public Policy Forum

Organizing Committee

President

Dr. Gilles Duruflé
Executive Vice President, Quebec City Conference
President, Public Policy Forum

Special Advisor

Dr. Josh Lerner
Jacob H. Schiff Professor of Investment Banking
Harvard Business School

Members

Mr. Francis Carpenter
Special Advisor
Caisse des dépôts et consignations

Mr. Mike Grandinetti
Managing Director, Southboro Capital
Serial Venture-Capital Backed Entrepreneur

Dr. Robin Louis
Former Chairman, Ventures West
Former President, CVCA
Canada's Venture Capital & Private Equity Association

Mr. Randy Mitchell
International Trade Strategist
US Department of Commerce

Résumé of the President

Dr. Gilles Duruflé
Executive Vice President
The Quebec City Conference
President, Public Policy Forum on Venture Capital

Gilles Duruflé is presently Executive Vice President of the Quebec City Conference and President of the Public Policy Forum. He is also an independent consultant advising venture capital and private equity funds, institutional investors and governments.

He was previously Senior Partner at CDP Capital Technology Ventures, in charge of the Funds of Funds portfolio and has been Head of strategic studies at the Caisse de dépôt et placement du Quebec. From 1979 to 1991, he worked as senior consultant in strategic planning firms in the CDC Group in Europe, Africa and North America.

He is a Vice-President of the Canadian Venture Capital Association (CVCA) and sits on the International Private Equity Valuation (IPEV) Board.

M. Duruflé obtained his Masters in Philosophy from the CERP (Paris), his Ph.D. in Mathematics from the Paris VI University and the Diploma of the Centre d'Études des Programme Économiques (Ministry of Finance, Paris). He is a CFA and has published numerous books and articles on various subjects related to economics and finance.

Résumé of the Chair

Mr. Yigal Erlich
Founder, Chairman and Managing Partner
The Yozma Group
Chair, Public Policy Forum on Venture Capital

Mr. Yigal Erlich is the founding father of the Israeli venture capital industry and one of the most prominent figures in the Israeli high-tech arena in the past 15 years.

At the beginning of the 1990s, Mr. Erlich identified a market failure and a huge need in to establish for the first time a professionally-managed venture capital industry that will fund the exponential growth of high tech ventures coming out of Israel.

In late 1992, Mr. Erlich convinced the Israeli government to allocate $100 million for his venture capital vision. Within a period of three years, Erlich, along with the other members of the core team at Yozma, established ten venture funds. These ten funds, which include Gemini, JPV, Nitzanim (Concord), Polaris, STAR and Walden, are the backbone of the vibrant and sophisticated venture capital market that has today.

Mr. Yigal Erlich is the founder of the Israel Venture Association and currently serves as its Chairman. Between 1984 and 1992, Mr. Erlich served as the Chief Scientist of Israel's Ministry of Industry and Trade. During his eight-year tenure as Chief Scientist, Mr. Erlich commanded an annual budget of $200 million, primarily directed at research and development projects of high-technology companies. In addition, Mr. Erlich initiated the Generic Technology program which fostered cooperation on long-term R&D activities through the creation of consortia of companies with research institutes and universities worldwide.

Mr. Erlich also started the Technology Incubator Program that led to the creation of 24 Incubation Centers throughout Israel. Mr. Erlich was instrumental in the establishment of several bi-national industrial and technology R&D cooperation agreements with Canada, France, the Netherlands, Singapore and Spain. Mr. Erlich was the Chairman of the Executive Committee of the US-Israel Bi-national Industrial Research and Development Foundation (BIRD), and a Director of the Dead Sea Works, Israel Chemicals, Israel Oil Refineries, Hadassah's commercialization company - Hadassit, and the Technion Research and Development Co. Ltd.Mr. Erlich holds B.Sc. and M.Sc. in Chemistry and an MBA from the Hebrew University of Jerusalem.

Program

Monday, October 19th, 2009

7:30 to 8:30 am	**Breakfast** offered by the PPF Organizing Committee		
8:30 to 8:50 am	**WELCOME:**	**Mr. Christian Racicot** Co-Founder and President The Quebec City Conference	**Mr. Yigal Erlich** Founder, Chairman and Managing Partner The Yozma Group Chair, Public Policy Forum on Venture Capital
	INTRODUCTION:	**Dr. Gilles Duruflé** President, Public Policy Forum on Venture Capital	
8:50 to 9:40 am	**KEYNOTE SPEAKER:**	**Dr. Josh Lerner** Jacob H. Schiff Professor of Investment Banking Harvard Business School	
9:40 to 10:30 am	**FIRST PANEL: How is the venture capital industry evolving in response to the crisis - What are public policy responses to the present situation?**		
10:30 to 10:50 am	**NETWORKING BREAK**		
10:50 to 11:40 am	**SECOND PANEL: Public policies to support business angels investing in technology start-ups and their role in the ecosystem**		
11:40 to 12:30 pm	**THIRD PANEL: "Public/Private Venture Capital Partnerships: Fund Managers' Perspective - One Year Later"**		
12:30 to 13:30 pm	**NETWORKING LUNCH**		
13:30 to 15:15 pm	**BUSINESS CASE STUDY : Capital for Enterprise Ltd**		
15:15 to 15:45 pm	**NETWORKING BREAK**		
15:45 to 16:30 pm	**GENERAL DISCUSSION : conclusions and next steps**		
16:30 to 17:00 pm	**CONVERGENCE SESSION with leaders of the Institutional Investors Forum**		
17:00 pm	**All attendees are invited to The Quebec City Conference which follows immediately.**		

Boulevard of Broken Dreams – Why Public Efforts to Boost Entrepreneurship and Venture Capital Have Failed and What to do about it

Keynote speaker

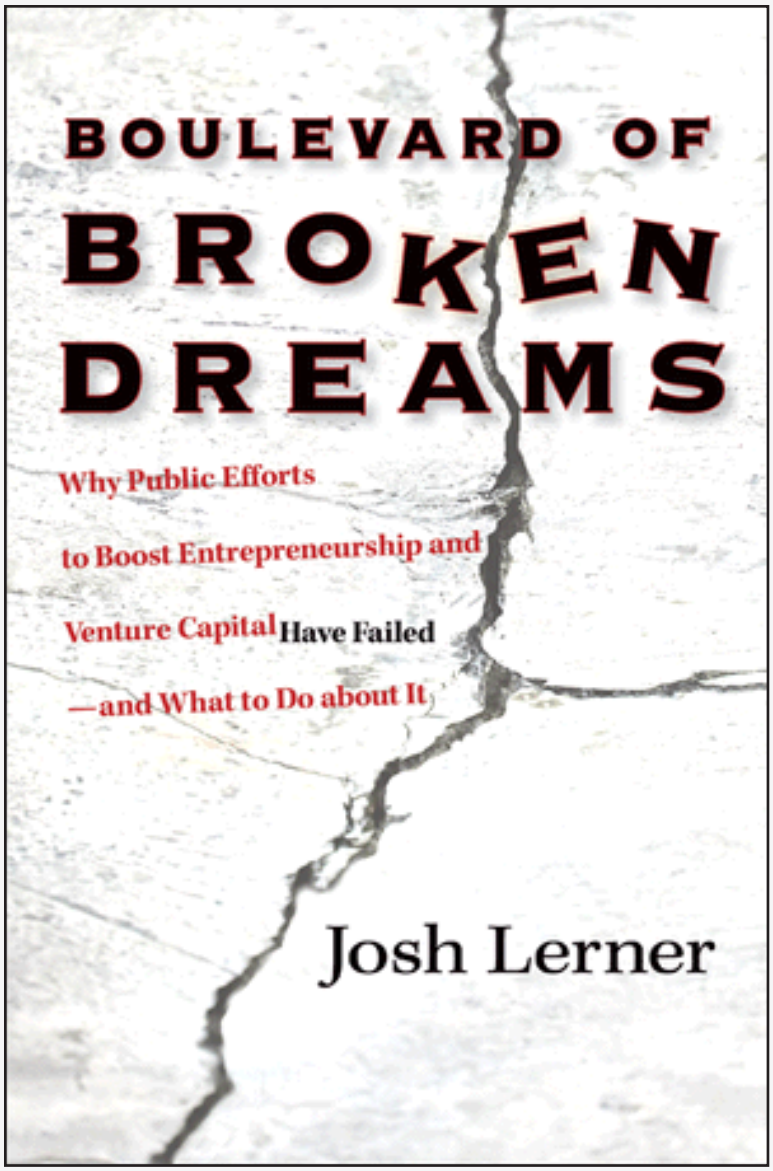
Dr. Josh Lerner

Jacob H. Schiff Professor of Investment Banking
Harvard Business School

Josh Lerner is the Jacob H. Schiff Professor of Investment Banking at Harvard Business School, with a joint appointment in the Finance and Entrepreneurial Management Units. He graduated from Yale College with a Special Divisional Major that combined physics with the history of technology. He worked for several years on issues concerning technological innovation and public policy, at the Brookings Institution, for a public-private task force in Chicago, and on Capitol Hill. He then obtained a Ph.D. from Harvard's Economics Department.

Much of his research focuses on the structure and role of venture capital and private equity organizations. (This research is collected in two books, The Venture Capital Cycle and The Money of Invention.) He also examines technological innovation and how firms are responding to changing public policies. (The research is discussed in the book, Innovation and Its Discontents.) He founded, raised funding for, and organizes two groups at the National Bureau of Economic Research: Entrepreneurship and Innovation Policy and the Economy. He is a member of a number of other NBER groups and serves as co-editor of their publication, Innovation Policy and the Economy. His work has been published in a variety of top academic journals.

In the 1993-94 academic year, he introduced an elective course for second-year MBAs on private equity finance. In recent years, “Venture Capital and Private Equity” has consistently been one of the largest elective courses at Harvard Business School. (The course materials are collected in Venture Capital and Private Equity: A Casebook, whose fourth edition is forthcoming.) He also teaches a doctoral course on entrepreneurship and in the Owners-Presidents-Managers Program, and organizes an annual executive course on private equity in Boston and Beijing. He recently led an international team of scholars in a study of the economic impact of private equity for the World Economic Forum.



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CHAPTER 1

Introduction

The financial crisis of 2008 opened the door to massive public interventions in the Western economies. In many nations, governments responded to the threats of illiquidity and insolvency by making huge investments in troubled firms, frequently taking large ownership stakes.

The magnitude of these investments boggles the imagination. Consider, for instance, the over $150 billion invested by the U.S. government in AIG (American International Group) in September and November 2008 in exchange for 81 percent of the firm's stock, without any assurances that the ailing insurer would not need more funds. Or the Swiss government's infusion of $60 billion into UBS in exchange for just under 10 percent of the firm's equity: this capital represented about 20 percent of the nation's gross domestic product.[1] Moreover, the pressures in Western nations to rescue other failing sectors—beginning with their automakers—seem unrelenting and suggest that yet more transactions are to come.

Many concerns can be raised about these investments, from the hurried way in which they were designed by a few people behind closed doors to the design flaws that many experts anticipate will limit their effectiveness. But one question has been lost in the discussion. If these extraordinary times call for massive public funds to be used for economic interventions, should they be entirely devoted to propping up troubled entities, or at least partially designed to promote new enterprises? In some sense, 2008 saw the initiation of a massive Western experiment in the government as venture capitalist, but as a very peculiar type of venture capitalist: one that focuses on the most troubled and poorly managed firms in the economy, some of which may be beyond salvation.

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Meanwhile, in a different part of the globe, in Dubai, the bittersweet fruits of a different type of public intervention can be seen. The emirate experienced truly extraordinary growth in its entrepreneurial environment for much of the past decade. This transformation could be seen through several metrics: new business creation rates, the inmigration of talented and creative individuals from around the region and the world, and the establishment of a regional hub of venture capital, growth equity, and investment banking activity. To cite one, albeit quite noisy, indicator, in the 2007 Global Entrepreneurship Monitor survey, the United Arab Emirates was ranked first among the forty-two countries rated for hosting start-ups geared primarily toward export markets.[2] Among the overall ranking in the number of start-up businesses begun in 2007, the nation moved up to the seventeenth position from the twenty-ninth spot the year before.

The role of the public sector in effecting this transformation in Dubai is unquestionable.[3] The initial vision for the potential of the government's capital and leadership in transforming the city can be traced back to the 1950s, when the late Sheikh Rashid bin Saeed Al Maktoum dredged the Dubai Creek. The waterway was crucial to Dubai's trading and reexport businesses. (These activities had emerged as the city's primary industries after the collapse of the pearl trade in the aftermath of the Great Depression and the invention of cultured pearls in Japan.) At the time a city of roughly 20,000 residents with few natural resources, Dubai was unable to afford the dredging and expansion project itself. To finance the effort, the sheikh essentially had to mortgage the emirate to the emir of Kuwait. Once the dredging work was complete, trading volume promptly increased and Dubai was able to rapidly repay the loan.

This successful project was only the first of a series of investments made by Sheikh Rashid. The most dramatic of these was undoubtedly the decision in 1972 to build a huge new port at Jebel Ali, massive enough to accommodate global shipping vessels, large cruise ships, and aircraft carriers. It was—and remains—the largest port in the region by far. The project, widely seen as hopelessly uneconomic at the time, created one of the world's most successful ports and a key transshipment point for trade between the West and China. Numerous

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other investments followed, such as initiatives to catalyze development of a major airport and the flag carrier Emirates Airlines, hotel and resort projects, and major sporting arenas and events.

Another illustration of this aggressive policy can be seen in the creation of Dubai's Internet City (DIC).[4] This effort was announced in 1999. At the time, technology investment worldwide was booming, and the effort was seen as a way to diversify Dubai's economy from its dependence on the emirate's rapidly dwindling petroleum supply. In addition to developing office space, DIC offered a wide variety of incentives to companies that located there, including tax-free status for corporate earnings (guaranteed for fifty years), exemptions from customs duties, and the right to repatriate profits fully. DIC also offered tenants renewable, fifty-year leases on the land, enabling them to plan long-term projects.

A major focus was on providing amenities in addition to office space. These incentives included computer hardware, such as a world-class network built in collaboration with technology giant Cisco Systems. Many more intangible benefits were provided by DIC as well. These goodies included a three-day incorporation process (which allowed accelerated access to the many legal benefits that firms resident in the center obtained), a simplified immigration process for knowledge workers, help lines to answer any questions the new corporate residents had, and many opportunities for knowledge-sharing and networking among the resident firms. Certain services were geared to entrepreneurial firms, such as the availability of furnished one-room offices for rent on a month-to-month basis, with shared conference space. These services were initially provided by the management of the Internet City itself, and then spun off into an independent company. Throughout, the services were priced at a slight premium in comparison to like facilities, reflecting the particular desirability of this location.

Just as with the Jebel Ali port project, this venture attracted considerable skepticism. The catcalls intensified after the decline in technology and telecommunications stocks in the spring of 2000. But by the time the center opened, a year after being announced, it had attracted about 180 tenants, including major international players in the sector

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such as Cisco, Hewlett Packard, IBM, Microsoft, Oracle, and Siemens, as well as a variety of start-ups. The cluster continued to grow rapidly in the ensuing years, as many corporations chose the location as a regional hub for their business in the Middle East, Africa, and the Indian subcontinent, and new firms in the region gravitated to the facility.

But public intervention also has its dark side in Dubai, as recent events have revealed. While exact data are hard to come by, numerous analysts suggest that the Dubai government—and its government-linked corporations—is awash in a sea of red ink. In the last decade, public funds appear to have been used more and more indiscriminately for a wide array of highly levered real estate development projects, many of which were "me too" efforts with few broad social benefits or even the promise of attractive private returns.

The consequences of this excessive leverage were apparent in the aftermath of the financial crisis that began in 2008. As construction projects ground to a halt and employers contracted, many recent migrants drifted away in search of greener pastures. The debt incurred from the undisciplined pursuit of growth will be a drag on the emirate in the years to come.[5]

Moreover, in many other parts of the Middle East, governments are facing an even worse outcome: debts from large public expenditures with little new growth to show for their efforts. Numerous governments plowed their newfound oil riches into emulating the Dubai model. But in many cases, instead of seeking to copy the key *principles* behind Dubai's success, they slavishly imitated the same distinct steps that the emirate took, regardless of whether their replication could pass a test of economic logic.

Consider, for instance, the efforts to emulate Dubai by creating regional transport and financial hubs. A plethora of economic analyses have suggested that these businesses have strong network effects, where the dominating position afforded an initial mover with a strong competitive position is very difficult to attack. But rather than identifying and exploiting underserved market opportunities—as Dubai's neighboring emirate, Abu Dhabi, has done with its focus on cultural tourism—far too often the approach of neighboring governments has

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been to imitate what has worked for Dubai, no matter how modest the chance of repeated success. It is natural to wonder how many viable airport gateways, financial centers, and high-technology hubs can coexist within a few hundred miles of each other.

This two-sided picture of public investment represents the basic puzzle at work here. When we look at the regions of the world that are, or are emerging as, the great hubs of entrepreneurial activity—places such as Silicon Valley, Singapore, Tel Aviv, Bangalore, and Guangdong and Zhejiang provinces—the stamp of the public sector is unmistakable. Enlightened government intervention played a key role in creating each of these regions. But for each effective government intervention, there have been dozens, even hundreds, of failures, where substantial public expenditures bore no fruit.

This account of the results of public investment might lead the reader to conclude that the pursuit of entrepreneurial growth by the public sector is a massive casino. The public sector is simply making bets, with no guarantees of success. Perhaps there are no lessons to be garnered from the experiences of the successful and the failed efforts to create entrepreneurial hubs.

The truth, however, is very different. In many, many cases, the failure of efforts by governments to promote venture and entrepreneurial activity was completely predictable. These efforts have shared a set of flaws in their design, which doomed them virtually from the start. In many corners of the world, from Europe and the United States to the newest emerging economies, the same classes of problems have reappeared.

The Focus of This Book

Before we plunge into the substance of the book, it is worth highlighting the economic institutions on which we will focus, and mentioning those we won't address.

Fast-growing entrepreneurs have attracted increasing attention both in the popular press and from policymakers. These business creators and the investors who fund them play a dramatic role in creating new

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industries and revitalizing economies. Many nations have launched efforts to encourage this activity. Such attention is only likely to intensify as nations seek to overcome the deleterious effects of the credit crunch and its recessionary aftereffects. This book is an effort to shed light on the process by which governments can avoid heading down an avenue of false hope, making all too common mistakes in an attempt to stimulate entrepreneurship.

One limitation is that we won't be looking at all efforts to boost entrepreneurship. In recent decades, there has been an explosion in the number of efforts to provide financing and other forms of assistance to the poorest of the world's poor, in order to facilitate their entry into entrepreneurship or the success of the small ventures they already have. Typically, these are "subsistence" businesses, offering services such as snack preparation or clothing repair. Such businesses typically allow the owner and his or her family to get by, but little else. The public policy literature—and indeed academic studies of new ventures—has not always made this distinction between the types of businesses that are being studied.

Our focus here will be exclusively on high-potential new ventures and the policies that enhance them. This choice is not intended to diminish the importance or relevance of efforts to boost microenterprises, but rather reflects the complexity of the field: the dynamics and issues involving micro-firms differ markedly from those associated with their high-potential counterparts. As we'll see, a substantial literature suggests that promising entrepreneurial firms can have a powerful effect in transforming industries and promoting innovation.

It might be obvious to the reader why governments would want to promote entrepreneurship, but why also the frequent emphasis on venture funds as well? The answer lies in the challenges facing many start-up firms, which often require substantial capital. A firm's founder may not have sufficient funds to finance projects alone, and therefore must seek outside financing. Entrepreneurial firms that are characterized by significant intangible assets, expect years of negative earnings, and have uncertain prospects are unlikely to receive bank loans or other debt financing. Venture capital—independently managed, dedi-

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cated pools of capital that focus on equity or equity-linked investments in privately held, high-growth companies—can help alleviate these problems.

Typically, venture capitalists do not primarily invest their own capital, but rather raise the bulk of their funds from institutions and individuals. Large institutional investors, such as pension funds and university endowments, want investments in their portfolio that have the potential to generate high yields, such as venture capital, and typically do not mind placing a substantial amount of capital in investments that cannot be liquidated for extended periods. Often, these groups have neither the staff nor the expertise to make such investments themselves. Thus, they invest in partnerships sponsored by venture capital funds, which in turn provide the funds to young firms.

In this book, we'll explore efforts to promote the growth of high-potential entrepreneurial ventures, as well as the venture funds that capitalize them. While the public sector is important in stimulating these activities, I will note that far more often than not, public programs have been failures. Many of these failures could have been avoided, however, if leaders had taken some relatively simple steps in designing and implementing their efforts.

It is also important to note that this book focuses on new ventures, rather than restructurings, leveraged buyouts, and other later-stage private equity investments. Later-stage private equity resembles venture capital in a number of respects, sharing similar legal structures, incentive schemes, and investors. Such equity funds also invest in a type of enterprise that often finds external financing difficult to raise: troubled firms that need to restructure. Like venture capitalists, buyout funds protect the value of their equity stakes by undertaking due diligence before making investments and by retaining powerful oversight rights afterward. The organizations that finance these high-risk, potentially high-reward projects in mature firms pose a different—but quite interesting—set of issues. They are thus the topic for another book!

This book also shies away from the answer to the often-asked question of what makes a good industry for a given nation to promote at a particular time. These questions have, of course, no "one size fits all"

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answer, but are very specific to the individual circumstances. While the analyses of industrial organization and strategy needed to answer these questions are fascinating, they would take us too far afield.

The Boulevard of Broken Dreams

As I suggested in the preface, our understanding of the ideal policies to promote new ventures is still at an early stage. But the desire for information on how to encourage entrepreneurial activity is very real. Particularly in an era of economic turmoil and recession, governments look to entrepreneurial ventures as economic spark plugs that will reignite growth. This book seeks to address this need, synthesizing approaches that we know work—and warning against those that don't.

The Broad Backdrop

The first three chapters explore why public intervention to boost new venture activity might make sense. If we have heard pronouncements by Silicon Valley patriarchs, we may begin with the view that the government has nothing to contribute to new ventures. Isn't this the realm of heroic entrepreneurs and investors, far removed from pointy-headed government bureaucrats?

In chapter 2, we take an initial look at this issue by reviewing the history of Silicon Valley and several of the pioneering venture capital groups. We find that reality is far more complex than our libertarian entrepreneurial friends might have us believe. In each case we look at, government was an initial catalyst in the growth of the region, sector, or firm.

This is not to minimize that miscues were made along the way. As we'll discuss, a number of challenges faced these entrepreneurs and their investors:

- Silicon Valley's pioneers labored with a "stop and start" pattern of government funding: wartimes would see a surge of funding for research and procurement, which would frequently disappear upon the cessation of hostilities.

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- The founders of pioneering venture groups, such as American Research and Development and 3i, did not clearly distinguish in their early years between social goals and financial objectives, which led to a muddled mission and confused investors.
- The Small Business Investment Company was poorly designed initially, with counterproductive requirements, and then implemented inconsistently.

Despite these caveats, it seems clear that the public sector—or in the case of American Research and Development, individuals operating with a broader social framework in mind—proved a critical catalyst to growth in Silicon Valley.

In the third and fourth chapters, we explore the same questions about the role of the public sector, but now in a more systematic manner. We look at the academic literature to explore the arguments for and against government interventions to stimulate entrepreneurship. The third chapter explores the rationales for government investment, which rest on three pillars. First, the role of technological innovation as a spur for economic growth is now widely recognized. Indeed, statements of policy by governments worldwide highlight the importance of innovation in sustaining economic growth and prosperity.

Second, academic research has highlighted the role of entrepreneurship and venture capital in stimulating innovation. Venture financiers and firms have developed tools that are very well suited to the challenging task of nurturing high-risk but promising new ideas. One study estimates that because of these tools, a single dollar of venture capital generates as much innovation as three dollars of traditional corporate research and development. Venture capital and the entrepreneurs it funds will never supplant other wellsprings of innovation, such as vibrant universities and corporate research laboratories (in an ideal world, these components of growth all feed each other). But in an innovative system, a healthy entrepreneurial sector and venture capital industry will be important contributors.

If that were the whole story, the case for public involvement would

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be pretty compelling. And we probably would not need this book! But the case for public intervention rests as well on a third leg: the argument that *governments* can effectively promote entrepreneurship and venture capital. And as we see in chapter 4, this is a much shakier assumption.

To be sure, entrepreneurial markets have features that allow us to identify a natural role for government in encouraging their evolution. Entrepreneurship is a business in which there are increasing returns. To put the point another way, it is far easier to found a start-up if there are ten other entrepreneurs nearby. In many respects, founders and venture capitalists benefit from their peers. For instance, if entrepreneurs are already active in the market, investors, employees, intermediaries such as lawyers and data providers, and the wider capital markets are likely to be knowledgeable about the venturing process and what strategies, financing, support, and exit mechanisms it requires. In the activities associated with entrepreneurship and venture capital, the actions of any one group are likely to have positive spillovers—or, in the language of economics, "externalities"—for their peers. It is in these types of settings that the government can often play a very positive role as a catalyst.

This observation is supported by numerous examples of government intervention that has triggered the growth of a venture capital sector. For instance, the Small Business Investment Company (SBIC) program in the United States led to the formation of the infrastructure for much of the modern venture capital industry. Many of the early venture capital funds and leading intermediaries in the industry—such as law firms and data providers—began as organizations oriented to the SBIC funds, and then gradually shifted their focus to independent venture capitalists. Similarly, public programs played an important role in triggering the explosive growth of virtually every other major venture market around the globe.

But I also consider in the fourth chapter why there are reasons to be cautious about the efficacy of government intervention. In particular, I highlight two well-documented problems that can derail government programs. First, they can simply get it wrong: allocating funds and support in an inept or, even worse, a counterproductive manner. An ex-

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tensive literature has examined the factors that affect the quality of governmental efforts in general, and suggests that more competent programs are likelier in nations that are wealthier, with more homogeneous populations, and an English legal tradition.

Economists have also focused on a second problem, delineated in the theory of regulatory capture. These writings suggest that private and public sector entities will organize to capture direct and indirect subsidies that the public sector hands out. For instance, programs geared toward going to nascent entrepreneurs may instead end up boosting cronies of the nation's rulers or legislators. The annals of government venturing programs abound with examples of efforts that have been hijacked in such a manner.

I will discuss examples of both problems in the history of public venturing programs. A few instances are as follows:

- In its haste to roll out the Small Business Investment Company program in the early 1960s, the U.S. Small Business Administration chartered—and funded—hundreds of funds whose managers were incompetent or crooked (chapter 2).
- The incubators taking part in Australia's 1999 BITS (Building on Information Technology Strengths) program frequently captured the lion's share of the subsidies aimed toward entrepreneurs, by forcing the young firms to purchase their own overpriced services (chapter 4).
- Malaysia opened a massive BioValley complex in 2005 with little forethought about whether there would be demand for the facility. The facility soon became known as the "Valley of the Bio-Ghosts" (chapter 6).
- Britain's Labor and Conservative governments subsidized and gave exclusive rights in the 1980s to the biotechnology firm Celltech, whose management team was manifestly incapable of exploiting those resources (chapter 7).
- Norway squandered much of its oil wealth in the 1970s and 1980s propping up failing ventures and funding ill-conceived new busi-

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nesses begun by relatives of parliamentarians and bureaucrats (chapter 8).

Strategies and Their Limitations

In the fifth through seventh chapters, I look across the policies that governments employ to encourage venture capital and entrepreneurial activity. These take two forms: those that ensure that the economic environment is conducive to entrepreneurial activity and venture capital investments and those that directly invest in companies and funds.

First, it is necessary to ensure that entrepreneurship itself is an attractive option. Often, in their eagerness to get to the "fun stuff" of handing out money, public leaders neglect the importance of setting the table, or creating a favorable environment.

Such efforts to create the right climate for entrepreneurship are likely to have several dimensions. Ensuring that creative ideas can move easily from universities and government laboratories is critically important. However, many entrepreneurs come not from academia, but rather from corporate positions, and studies have documented that, for these individuals, the attractiveness of entrepreneurial activity is very sensitive to tax policy. Also important is ensuring that the law allows firms to enter into the needed contracts—for instance, with a potential financier or a source of technology—and that these contracts can be enforced. Finally, education is likely to be critical. Ensuring that business and technology students are exposed to entrepreneurship classes will allow them to make more informed decisions; and creating training opportunities in entrepreneurship for midcareer professionals is also likely to pay dividends.

Second, it is important to ensure that international investors find the nation or province an attractive one in which to invest. In most of the successful entrepreneurial hubs established in the past two decades, the critical early investments have not been made by domestic institutions, but rather by sophisticated international investors. These investors are likely to have the depth of knowledge and experience that enables them to make substantial bets on the most promising organizations. But these players are likely to be very reluctant to take part if

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local regulatory conditions are not up to global standards, or if there are substantial doubts about the ability of investors to exit investments. Reaching out to interested and skilled individuals overseas—most often, expatriate entrepreneurs—can also provide a source of capital and expertise.

A final important—though very challenging—role for government is to intervene directly in the entrepreneurial process. As noted above, these programs must be designed thoughtfully, so as to be sensitive to the private sector's needs and to the market's dictates. Because entrepreneurship brings "increasing returns," efforts by governments can play an important role in the industry's early days.

At the same time, governments must avoid the common pitfalls that threaten publicly supported ventures. In the sixth and seventh chapters, I highlight what can go wrong. I divide these pitfalls into two categories: conceptual failings, which doom a program from its very start, and implementation failures, which create problems as the programs enter operation.

One common conceptual failing is to ignore the realities of the entrepreneurial process. For instance, many public venture capital initiatives have been abandoned after a few years: the programs' authors have apparently not understood that these initiatives take many years to bear fruit. Other programs have added requirements—such as the stipulation that portfolio companies focus only on "precommercial" research—that may seem reasonable as public policy but run counter to the nature of the entrepreneurial process. In other cases, reasonable programs have been too tiny to have an impact, or so large that they swamp the already-existing funds.

A second frequently encountered conceptual problem is the creation of programs that ignore the market's dictates. Far too often, government officials have encouraged funding in industries or geographic regions where private interest simply did not exist. Whether these choices have been driven by political considerations or hubris, the result has been wasted resources. Effective programs avoid this problem by demanding that credible private sector players provide matching funds.

If ignored, these broad problems of design can doom a program even before it is started. But plenty of pitfalls remain once programs

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begin. One common implementation problem is a failure to build in incentives. Far too often, participants in public schemes to promote entrepreneurship do well financially whether or not the program meets objectives. In fact, in many instances, they do well even if the companies go belly-up! The contrast with the best practices among private investors, where scrupulous attention to incentives is commonplace, could not be more striking. Managers of public initiatives must pay attention to various possible scenarios, and avoid incentives, or a lack of incentives, that can lead to problematic behavior.

Another danger in implementation is the failure to design appropriate evaluative mechanisms. Ideally, programs will undergo careful scrutiny at two levels. First, the program itself will be carefully analyzed. While designers should recognize that any initiative will take time to bear fruit, it is important to periodically take stock of which of its aspects appear to work well and which do not. Second, fund managers and firms participating should be scrutinized. It is important to ensure that the groups benefiting from government programs are the most promising in the industry in terms of market performance and can most benefit from public investment, rather than being those most adept at currying favor with the people who are handing out public funds.

A final frequent failing is to ignore the international nature of the entrepreneurial process. Today's venture industry is a global one on many levels. Limited partners' capital commitments, venture capitalists' investments, and entrepreneurial firms' spending increasingly flow across borders and continents. To attempt to build a local entrepreneurial sector and venture capital industry without strong global ties is a recipe for an irrelevant and unsuccessful sector. Yet in many instances, international participation is actively *discouraged*.

A Special Case

In the eighth chapter, we turn to considering a special, but highly visible, manifestation of the government as entrepreneur: the sovereign wealth fund. These institutions have been experiencing remarkable growth, and an even greater increase in scrutiny from business and political leaders worldwide.

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A sovereign fund can be defined as a state-owned fund that invests in various financial assets. The visibility, diverse goals, and (in many cases) substantial size of these funds mean that managing them is not a simple task.

To be sure, many of the challenges facing sovereign wealth funds are similar to those encountered in the other public venture capital and entrepreneurial promotion schemes that I consider elsewhere in this volume and have already summarized. But these organizations must struggle as well with added issues, which make the effective leadership of sovereign funds especially challenging.

First, these organizations face political scrutiny, particularly in Europe and the United States. One might assume that sovereign funds, which have been part of the economic landscape for more than half a century, are too familiar to cause worry. But the rapid growth of these funds in recent years and their role in a few high-profile transactions have called attention to them and inflamed public anxieties.

Careful scrutiny suggests that many of the criticisms of sovereign funds have been misleading. For instance, many critics have depicted them as concentrating their investments in the most developed nations, while in fact the bulk of their activities have focused on domestic deals and developing nations. At the same time, the sovereign funds—by surrounding themselves with a veil of secrecy, in many cases—have not assuaged anxiety about their role. In this book I argue that greater visibility in funds' objectives and activities could allay some—though probably not all—of this anxiety, but would also impose real costs.

The second major challenge relates to the need to generate good returns on investments. Groups—particularly the larger ones—must struggle with the cruel mathematics of investment management: strategies that may be attractive for a small capital pool become much more difficult to implement with more capital under management. This problem is most acute in alternative investments, such as private equity and real estate, on which many sovereign funds have increasingly focused.

I highlight three responses to this second challenge. First, funds must be creative in choosing their investment classes. Categories that

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have been successful for previous generations of investors are unlikely to remain lucrative, and it is critical to creatively scan the investment horizon, identifying areas where one can gain a comparative advantage. Second, it is important to realize that building a successful investment program is a major, long-run investment. Identifying and implementing a strategy, and fine-tuning one's approach, cannot be done effectively unless key managers are recruited and retained. Finally, breaking the fund into smaller pieces may yield better returns.

Final Thoughts

This book, then, ends with a nuanced message. To be sure, government has a role in stimulating a vibrant entrepreneurial sector, given the early stage of maturity of entrepreneurial activities in most nations. But at the same time, it is easy for the government to overstep its bounds and squander its investments. Only by designing a program that reflects an understanding of, and a willingness to learn from, the entrepreneurial process can governments be effective.

In particular, I highlight in the final chapter several guidelines for policymakers who want to facilitate entrepreneurship:

- Remember that entrepreneurial activity does not exist in a vacuum: building an environment where new ventures can thrive is a critical first step.
- Leverage the local academic, scientific, and research base effectively.
- Respect the need for conformity to global standards: adopting rules that resemble those found in leading nations will help attract critically important overseas investors.
- Be sure to let the market provide direction when providing subsidies.
- Resist the temptation to "overengineer" public venture initiatives.
- Recognize the long lead times these initiatives require.

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- Avoid programs that are too small to make a noticeable difference or too big for the market.
- Understand the need for, and actively encourage, strong interconnections with entrepreneurs and investors overseas, rather than focus only on domestic activity.
- Institutionalize careful evaluations of initiatives.
- Realize that the programs to promote entrepreneurship need creativity and flexibility; sometimes they must be refined or killed off.
- Recognize that "agency problems"—when individuals and organizations act to benefit themselves, rather than the broader social good—are universal, and take steps to minimize their danger.
- Make education part of the initiative, including that of overseas investors, local entrepreneurs, and the public sector.

At the same time, there are prescriptions for creating new entrepreneurs that may be seductive, but are best avoided:

- Mandates to local institutional investors to make larger allocations to venture capital, regardless of the nature of the opportunities
- Substantial up-front tax incentives for investments, which can introduce distorted incentives
- A reliance on financial intermediaries to manage these programs, since they are likely to have different incentives
- Matching ill-considered incentives offered by other governments

A Critical Challenge for All of Us

Programs to boost new ventures might seem like an esoteric corner of public policy, far less important than the big issues of war and peace

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and health benefits, not to mention the rescue of giant firms that are on the ropes. But this perception can be misleading because of the magnitude of changes that can occur when venture programs are done well.

To understand their importance, we can contrast Jamaica and Singapore.[6] Both are relatively tiny states, with under five million residents apiece. Upon Singapore's independence in 1965—three years after Jamaica's own establishment as a nation—the two nations were about equal in wealth: the gross domestic product (in 2006 U.S. dollars) was $2,850 per person in Jamaica, slightly higher than Singapore's $2,650. Both nations had a centrally located port, a tradition of British colonial rule, and governments with a strong capitalist orientation. (Jamaica, in addition, had plentiful natural resources and a robust tourist industry.) But four decades later, their standing was dramatically different: Singapore had climbed to a per capita GDP of $31,400 (2006 data, in current dollars), while Jamaica's figure was only $4,800.[7]

What accounts for the amazing difference in growth rates? There are many explanations: soon after independence, Singapore aggressively invested in infrastructure such as its port, subsidized its system of education, maintained an open and corruption-free economy, and established sovereign wealth funds that made a wide variety of investments. It has also benefited from a strategic position on the key sea lanes heading to and from East Asia. Jamaica, meanwhile, spent many years mired in political instability, particularly the disastrous administration of Michael Manley during the 1970s. Dramatic shifts from a market economy to a socialist orientation and back again, with the attendant inflation, economic instability, crippling public debt, and violence, made the development and implementation of a consistent long-run economic policy difficult.

In explaining Singapore's economic growth, it is hard not to give considerable credit to its policies toward entrepreneurship. As we'll discuss in more detail below, the government has experimented with a wide variety of efforts to develop an entrepreneurial sector:

- The provision of public funds for venture investors seeking to locate in the city-state
- Subsidies for firms in targeted technologies

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- Encouragement of potential entrepreneurs and mentoring for fledgling ventures
- Subsidies for leading biotechnology researchers to move their laboratories to Singapore
- Awards for failed entrepreneurs (with a hope of encouraging risk-taking)

While much of the initial growth in Singapore can be attributed to sound macroeconomic policies, political stability, and various other factors, the nation's entrepreneurship initiatives have played an increasingly important role in stimulating growth.

The contrast with Jamaica is striking. Jamaica has long had a high rate of subsistence entrepreneurship: for instance, the 2006 Global Entrepreneurship Monitor survey placed it among the highest of the forty-two nations it examined in various rates of entrepreneurial activity.[8] Yet other data collected by the Monitor—and corroborated in anecdotal accounts—suggests that early-stage entrepreneurship is translated into full-fledged business activity at a very low rate. On this measure, the island nation ranked among the lowest nations (twenty-eighth among the thirty-five countries ranked by GEM in 2005).[9]

Some of the reasons for the inability of Jamaican entrepreneurs to grow can be seen in the World Bank's reports on the barriers to entrepreneurs. The "Doing Business" series assesses, across 178 countries, the obstacles faced by an entrepreneur in performing various standardized tasks (thereby avoiding some of the subjectivity associated with other attempts to rank entrepreneurship).

In several critical indicators, Jamaica ranked extremely low in the World Bank's 2008 analysis.[10] These suggest some of the barriers that hold back the growth of entrepreneurial enterprises:

- Of the 178 countries studied, Jamaica ranked 170th in the burden of complying with tax regulations. The ranking reflects not just the cost of the taxes themselves, but also the administrative burdens associated with complying with the tax code. The World Bank's analysis suggests that the total cost of complying with all

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tax laws in Jamaica amounts to just over one-half of gross profits for the typical entrepreneur. Numerous studies have suggested that one of the most important sources of financing for the typical entrepreneur is cash flow generated by the business itself, which is plowed back into the business. If so much of entrepreneurs' income is going to meet tax obligations, business owners are unlikely to have the resources to invest in their enterprises. By way of contrast, Singapore ranked second worldwide, with a burden of just 23 percent.[11]

- Similarly, when the cost of registering property is compared, Jamaica ranked 108th out of 178: the cost of registering property was equal to 13.5 percent of the value of the property. (By comparison, the ratio in the United States is 0.5 percent of the value.)[12] The high cost of registering property means that fewer people register their holdings, which in turn leads to less secure property rights. Most critically, entrepreneurs who do not hold a firm legal title to property are unlikely to be able to borrow against this holding from a bank. Once again, this comparison suggests that entrepreneurs have fewer resources for growing their enterprises.

One of the most visible manifestations of this lack of activity may be in Jamaica's productivity: from 1973 to 2007, the nation actually experienced *negative* productivity growth.[13] Making this poor performance even more striking is the fact that during this period the developed nations experienced substantial growth through the implementation of information technology, and many developing markets experienced even faster growth as they caught up with technologies adopted earlier in the West.

This disparity may change in future years: Jamaica enjoyed a surge in income with the rise of energy and commodity prices, and the most recent prime ministers have shown a greater awareness of, and willingness to lower, barriers to entrepreneurship. But the disparate experiences of Singapore and Jamaica over the past four decades demonstrate why all of us should care about entrepreneurship.

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The promotion of business ventures is of critical importance to all of us. While the challenges facing government initiatives may seem arcane and technical, well-considered policies are likely to profoundly influence our opportunities, as well as those of our children and grandchildren. Misguided policies, unfortunately, will also help determine the future. However challenging the encouragement of entrepreneurship may seem, it is truly too important to be left to the policy specialists!

Panel 1

Theme: How is the global venture capital industry evolving in response to recent capital market dynamics resulting from the financial industry crisis?

Moderator: **Mr. Mike Grandinetti**
Managing Director, Southboro Capital
Serial Venture-Capital Backed Entrepreneur (USA)

Panellists:

Mr. Yigal Erlich
Founder, Chairman and Managing Partner
The Yozma Group (Israel)
Chair, Public Policy Forum on Venture Capital

Mr. Ernie Richardson
Managing Partner
MTI Partners (UK)

Mr. Mark G. Heesen
President
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Dr. Helmut Schühsler
Managing Partner, TVM Capital (Germany)
Former Chairman of EVCA, the European Association of Private Equity and Venture Capital

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Panel 1

5.1 Introduction[1]

Never waste an opportunity to put a crisis to good use. Does that truism apply to the global VC markets?

How is the global venture capital industry evolving in response to recent capital market dynamics resulting from the financial industry crisis? What are the most appropriate and effective public policy responses to ensure the industry's continued health and vitality?

Of equal or greater importance, what are the most appropriate and effective public policy responses to ensure the overall innovation ecosystem's continued health and vitality? Are they consistent or at cross purposes?

The venture capital industry has played a vital role in the formation and on-going growth of the major innovation ecosystems in North America, the UK and Western Europe. Iconic technology companies including Google (US), RIM (Canada), Skype (Europe) and Checkpoint Systems (Israel) were funded by local venture capitalists during each company's most formative stages. For example, as one measure of the impact of the VC industry, a recent study by the US NVCA estimates that in 2008, US VC –backed companies employed over 12 million people and generated $USD 3 trillion in annual revenues, representing 11 per cent of private sector employment and twenty one per cent of US GDP during that same year.

Yet, today the global venture capital industry is facing its most challenging period in many years. The industry's problems have been brought about by both long-term structural issues as well as acute cyclical economic issues. In this panel, we will examine specific challenges faced by the venture capital industries and their respective innovation ecosystems in North America, the UK, the EU and Israel.

In the US, venture-backed companies experienced only six IPOs in total 2008. Five year industry horizon returns have fallen to 6.4% through December 31, 008 (while ten year returns average a healthy 15.5%). In this context, the VC asset class is being re-examined by long standing LPs, including prestigious universities who have seen dramatic declines in their endowments. As a result, numerous VC firms have fallen short of their fund raising goals, and others have taken a hiatus from raising new funds, resulting in professional investment staff attrition rates approaching 17% this year.

In Canada, the three, five and ten year VC horizon returns are all negative, with ten year returns at a negative 2.8%. As a result, the number of active Canadian VC funds has declined, and the amount of invested foreign capital has declined as well. Accordingly, the number of new investments in Canadian technology companies has declined steadily since 2004.

In Israel, technology companies are finding it harder to attract seed capital. Despite past success, there has been a significant decline in Israeli IT and other tech companies going public on the US NASDAQ exchange over the past few years (although several Israeli biotech companies have had access to public equity capital on the Tel Aviv Exchange). As a result, both Israeli technology companies and the Israeli venture capital industry have experienced a reduction in foreign investment.

[1] Note: All VC horizon returns are through 31 December, 2008

In Europe, the ten year VC horizon return is a negative 0.2%. To date in 2008, only seven total VC funds have closed across all of Europe. The EASDAQ, which closed down several years ago, has not been effectively replaced. In the UK, many pioneering VC firms, including 3i and APAX have exited this asset class in the wake of the financial crisis. The UK also has a very limited number of large early stage funds, especially when compared to the US. For companies that do reach scale, the AIM has struggled and has become a less attractive source of growth capital than it has in year's past.

Historically, government intervention has played a positive role in the building of world class innovation clusters in Silicon Valley, Boston, Tel Aviv, Haifa and Cambridge UK as well as Singapore, Bangalore, and more recently a number of Chinese provinces, most notably Zhejiang and Guangdong. Far more frequently, however, government involvement in an innovation cluster or the venture capital industry does not result in a successful outcome.

Given this state of affairs and what is at stake, what public policy responses – or corrective actions – on both the supply and the demand side - are Public Policy Makers taking to address these issues? Are they the right ones? We will address many of the following questions:

Questions

1. Was the Venture Capital industry fundamentally unsound prior to the current economic crisis? If so, what underlying structural issues contributed to this and what PP actions, if any, were being taken – both on the supply and the demand side? What lessons have we learned and what results were being achieved prior to the onset of the present economic crisis?

2. In hindsight, will the recent financial crisis serve as a net positive for the global VC industry? Is Darwinian consolidation a necessary and desired outcome?

3. Having reviewed the recent policy measures recommended or taken in various countries (see addendum below), in the current environment, what are the most effective supply side PP interventions to address structural issues? Cyclical issues?

    a. Exit Conditions-stock markets and trade sales

    b. Regulations concerning pension funds

    c. Fund of Funds to act as catalyst to attract risk capital

    d. Etc.

    And In general, does Government involvement:

    e. Encourage special interest investing – by stage, by region, by sector and is this to the detriment of returns?

    f. Encourage sub optimal venture groups?

4. In the current environment, what are the most effective demand side PP interventions to address structural issues? Cyclical issues?

   a. Entrepreneurial Activity / Training / Ambition

   b. R&D Expenditure

   c. Favorable Cap Gains Tax Treatment

   d. Employee Share ownership Schemes

   e. Other

   And should taxation policy be used to influence venture investing activities? When and how?

5. Where do they interests of early stage technology ventures and VCs align and where do they diverge from a public policy perspective? How do Policymakers strike the proper balance?

Panel 1

5.2 Addendum – Summary of recent measures in various countries

UK BVCA / NESTA

The BVCA recently issued a report recommending two (2) initial conclusions for both UK and EU that appear to take a supply side approach:

- Government investment in a Fund of Funds to boost innovative companies, where the intent is to attract more private capital from Inst Investors into early stage VC funds
- Review feasibility of pan EU stock exchange to finance high growth companies

Other UK BVCA / NESTA recommendations include demand side factors such as:

- Reform PP toward procurement towards innovative SMEs
- Allow non-exec directors and academics to participate in EMI (Enterprise Mgmt incentive schemes
- Increase R&D expenditure to meet minimum EU criteria or match US
- Strengthen links between academic and commercial world

US NVCA

The US NVCA recently issued a 4 Pillar plan:

- Ecosystem Partners
- Enhanced Liquidity Paths
- Tax Incentives
- Regulatory Review

ISRAEL IVCA

The IVCA Has not yet responded formally to the current crisis in terms of policy recommendations as of 8 October 2009, although they have been actively considering it. In the interim, the Israeli government continues to provide support to early stage ventures for R&D and export, and recently has been encouraging policies to ensure access to growth capital for its technology companies so that they do not prematurely 'exit' through trade sales.

GERMANY

New public financing system since 2004/2005:

- EIF/ERP-Dachfonds (1/2004): Fund of Funds, investing in Early Stage VCs; 500 Mio. € (EIF, ERP-SV) for 5 years, managed by EIF; *pari-passu* approach
- ERP-Startfonds (11/2004): Coinvestment Fund, investing in young innovative companies together with early stage VC or BA; 250 Mio. € (ERP-SV, KfW) for 5 years, managed by KfW; pari-passu approach; → 200 Mio. € volume increase considering the financial market crisis as part of the economic stimulus package (Konjunkturpaket II)
- High-Tech Gründerfonds (9/2005): Seed-Fund as single/main investor; investing in High-Tech Start-Ups

CANADA

Measures taken recently by governments to fund the VC industry:

- Allocations to privately managed funds of funds : Ontario (OVCF: $ 90 M + $ 105 M from private sector), Quebec (Teralys: $ 700 M + $ 125? from private sector)
- Internally managed funds of funds: British Columbia (Renaissance Fund $ 90 M), Alberta (AEC, $ 100 M), Quebec (Seed funds $ 100 M + $ 25 M from private sector), Federal government (BDC: Allocation to Tandem Expansion Fund and increase in the allocation for investing in funds, $ 165M)
- Co-investment funds: Ontario Emerging Technologies Fund ($ 250 M)
- Direct investment: Federal Government (BDC: increase in the allocation for direct investment in companies, $ 260 M)

Panel 1

Moderator

Mr. Mike Grandinetti

Managing Director, Southboro Capital
Serial Venture-Capital Backed Entrepreneur

Mike Grandinetti brings a unique cross-disciplinary background to his work. As a serial entrepreneur, Mike has helped lead four venture-backed companies to high multiple exits for his investors, generating over $1Billion in realized value. He has directly contibuted to 2 NASDAQ IPO listings, where he co-led an international IPO roadshow, and 1 secondary offering, raising over $120M, and has been actively involved in raising over 12 rounds of venture financing, yielding over $100M He currently serves as Managing Director of Southboro Capital and is senior advisor to numerous global start-ups and VC firms across the IT, med tech and clean tech sectors. He has held long-standing faculty appointments as Senior Lecturer at the MIT Sloan School and the Technical University of Denmark, where he teaches in an intensive, on-going Executive Education program on Corporate Entrepreneurial Leadership. Early in his career, he was a strategy consultant with McKinsey. He served for almost 10 years as judge in the MIT $100K Global Entreprenrushiip Competition and also as a Judge in the MIT Global Sales competition. He is a Charter member of TiE, the world's largest entrepreneurship organisation, where he provides leadership on several initiatives, including a new program connecting early stage tech companies with lighthouse customers. He is an active mentor in TechStars Boston, SEED Camp Europe and is a member of the MIT Venture Mentoring Service. He has served as a returning guest lecturer and coach in Highland Capital's Summer @Highland program. He is a frequent speaker and panel moderator, most recently leading a panel at the MIT Sloan Sales Conference on Lean Sales and Marketing Models and with TiE on building successful SaaS businesses, on Successfully Making the Transition from Start Up CEO to VC, and on Health Care and the Cloud, among many others.

For the past five years, he has also been engaged in regional, provincial and national economic development, with a focus on defining and delivering demand – side programs including entrepreneurial coaching and enablement in the US, Canada and Europe . He is a member of the Organizing Committee of the Quebec City Summit Public Policy Forum where he will moderate a panel on appropriate Public Policy responses to address the current challenges in the global venture capital industry. He has served as an on-going coach in the Quebec Croissance 10X20 Program since its inception, and is a faculty member / coach in similar programs in countries in western Europe. He has served as a senior advisor to POLE in the development of their inaugural Devtech 50 entrepreneurship competition, where he will also deliver the keynote address during the Final Awards ceremony. He recently gave a plenum address on Building World Class Science – Based Clusters in Europe, and moderated panels on attracting investors to regional science clusters and on Best Practices in technology transfer and commercialization. He serves as an Advisory board member to SEED Capital in and was recently appointed an Academic Fellow by Sitekit Labs in the UK.

He is a long serving member of the Corporate Executive Board of WGBH, the flagship Public TV and Radio operation within the US Public Broadcasting System where he formerly co-chaired the business development committee and currently co-chairs the nominating committee.

He received his BS in Engineering, magna cum laude, from Rutgers, where he was unanimously elected to the National Engineering Honour Society. He also received his MBA from Yale, where he was named the annual Jess Morrow Johns Memorial Scholar & was the recipient of the prestigious Procter & Gamble's Annual Marketing Leadership Award and a Yale Teaching Fellowship.

Panellists

Mr. Yigal Erlich

Founder, Chairman and Managing Partner, The Yozma Group (Israel)
Chair, Public Policy Forum on Venture Capital

Mr. Yigal Erlich is the founding father of the Israeli venture capital industry and one of the most prominent figures in the Israeli high-tech arena in the past 15 years.

At the beginning of the 1990s, Mr. Erlich identified a market failure and a huge need in to establish for the first time a professionally-managed venture capital industry that will fund the exponential growth of high tech ventures coming out of Israel.

In late 1992, Mr. Erlich convinced the Israeli government to allocate $100 million for his venture capital vision. Within a period of three years, Erlich, along with the other members of the core team at Yozma, established ten venture funds. These ten funds, which include Gemini, JPV, Nitzanim (Concord), Polaris, STAR and Walden, are the backbone of the vibrant and sophisticated venture capital market that has today.

Mr. Yigal Erlich is the founder of the Israel Venture Association and currently serves as its Chairman. Between 1984 and 1992, Mr. Erlich served as the Chief Scientist of Israel's Ministry of Industry and Trade. During his eight-year tenure as Chief Scientist, Mr. Erlich commanded an annual budget of $200 million, primarily directed at research and development projects of high-technology companies. In addition, Mr. Erlich initiated the Generic Technology program which fostered cooperation on long-term R&D activities through the creation of consortia of companies with research institutes and universities worldwide.

Mr. Erlich also started the Technology Incubator Program that led to the creation of 24 Incubation Centers throughout Israel. Mr. Erlich was instrumental in the establishment of several bi-national industrial and technology R&D cooperation agreements with Canada, France, the Netherlands, Singapore and Spain. Mr. Erlich was the Chairman of the Executive Committee of the US-Israel Bi-national Industrial Research and Development Foundation (BIRD), and a Director of the Dead Sea Works, Israel Chemicals, Israel Oil Refineries, Hadassah's commercialization company - Hadassit, and the Technion Research and Development Co. Ltd.Mr. Erlich holds B.Sc. and M.Sc. in Chemistry and an MBA from the Hebrew University of Jerusalem.

Mr. Mark G. Heesen

President
National Venture Capital Association (USA)

As President of the National Venture Capital Association, Mark Heesen is responsible for setting the strategic direction for all Association activities, including public policy efforts, research initiatives, educational programs, and member services. In this capacity, Mark works closely with the NVCA professional staff and Board of Directors to demonstrate the positive impact of venture capital investment on the United States economy. Under his direction, the NVCA has created numerous value-added sub-groups including the CFO Task Force, Strategic Communications Group, Corporate Venture Capital Group, Medical Industry Group and Human Capital forum, all of which are dedicated to supporting NVCA membership in uniquely critical areas.As a spokesperson for the venture capital industry, Mark is often called upon by the financial media, NVCA members, limited partners, and regional associations to present the overarching venture capital perspective to a wider audience. He is a frequent presenter at industry conferences, appears regularly on CNBC, and is consistently quoted in the press in stories concerning venture capital trends.Since 1991, Mark has worked on behalf of the NVCA to enact a wide range of policies that benefit the venture capital and entrepreneurial communities, including a significant capital gains differential, securities litigation reform, numerous SEC and FASB accounting issues, immigration reform, and a streamlining of the FDA and CMS approval processes, among other issues.

Prior to coming to the NVCA, Mark was an aide to a former Governor of Pennsylvania and was Deputy Director for Federal Funds reporting to the Texas Legislature. Mark received a law degree with an emphasis in taxation from the Dickinson School of Law in 1984.

Panellists

Mr. Ernie Richardson

Managing Partner
MTI Partners (UK)

Ernie Richardson, Managing Partner of MTI, is a graduate Chemical Engineer and Chartered Management Accountant with a long career in engineering, finance and general management roles in various process industries. In addition he worked in international banking with the Royal Bank of Canada, before joining MTI in 1985.

As an Investment Partner at MTI he has been responsible for many of MTI's investee companies with a general focus on software and communications. He became Managing Partner of MTI in 2003.

He is active in a number of industry bodies including membership of the Council of the BVCA (British Venture Capital Association), with particular responsibility for public policy activities and is also on the investment committee of NESTA.

Dr. Helmut Schühsler

Managing Partner, TVM Capital(Germany)
Former Chairman of EVCA, the European Association of Private Equity and Venture Capital

Dr. Helmut M. Schühsler is a Managing Partner of TVM Capital, where he has been responsible for more than 20 TVM Capital investments in life sciences companies in Europe and the U.S. He has also served on various committees since 1990, including as a member of the senate of the Hermann von Helmholtz-Gemeinschaft Deutscher Forschungszentren (HGF).

Dr. Schühsler currently serves on the Board of Directors of Curacyte AG (Munich and Jena, Germany, and Durham, NC), Develogen AG (Göttingen, Germany), Ingenium Pharmaceuticals AG (Martinsried, Germany) and SelectX, Inc. (Worcester, MA). He is also a member of the Supervisory Board of Max-Planck Innovation GmbH; the technology transfer institution of the Max Planck Society; and he is the Chairman of the Professional Standards Committee as well as a member of the Executive Committee of the European Private Equity and Venture Capital Association (EVCA). He was recently appointed Chairman-Elect of EVCA.

Prior to TVM Capital, he was an Investment Manager at Horizonte Venture Management in Vienna. Dr. Schühsler wrote his doctoral thesis at the Vienna University of Economics.

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NATIONAL VENTURE CAPITAL ASSOCIATION RELEASES RECOMMENDATIONS TO RESTORE LIQUIDITY IN THE U.S. VENTURE CAPITAL INDUSTRY

Four Pillar Plan Balances Public Policy Proposals with Market Recommendations for the Venture Capital Industry and Capital Markets Ecosystem

April 29, 2009, Boston, MA -- The National Venture Capital Association (NVCA) kicked off its 2009 Annual Meeting today by unveiling a set of recommendations aimed at addressing the capital markets crisis for venture-backed companies in the United States. During the last decade, the number of initial public offerings (IPOs) by venture-backed companies has declined to alarmingly low levels, culminating in the 2008 drought when only six companies entered the public markets. Given the proven contribution of venture-backed companies to America's economic growth, the NVCA sought analysis and recommendations from leaders throughout the capital markets ecosystem over the last several months. The resulting set of proposals looks to the venture capital industry, investment banking, accounting professions, law firms, stock exchanges and the government to enact measures to restore a vibrant IPO environment once the overall economy stabilizes.

The initiative was spearheaded by NVCA chairman and co-founder and general partner at DCM, Dixon Doll, who articulated the important work that has both been completed and has yet to be done:

"On behalf of the NVCA, I want to commend the group of thought leaders who continue to support us in our efforts to assess and address a situation that has become untenable for venture-backed companies and the U.S. economy. The consensus is that the most significant improvement to our capital markets will only be achieved if *both* the private sector and the government address the breakdowns that have occurred within their respective systems. While there are regulatory and legislative avenues to explore, the venture capital industry recognizes that we can affect positive change by adjusting the way we do business and are willing to do so to enact this change," said Doll.

Venture-Backed Public Companies Are Critical to U.S. Economic Growth

The revitalization of the venture-backed IPO market is critical to U.S. economic recovery and to the ongoing viability of America's competitiveness. In a report to be released in early May, Global Insight estimates that in 2008 public companies that were once venture-backed accounted for more than 12 million U.S. jobs and $2.9 trillion in revenues, which equates to 21 percent of U.S. GDP. Further, it is estimated that 92 percent of job growth at these companies occurs once the company enters the public markets.

"This capital markets issue is not just a venture capital industry problem; it is a U.S. economic concern," said Mark Heesen, president of the NVCA. "If America wants to maintain its economic leadership and continue to grow and innovate, we must re-invigorate the public markets and strive towards healthier IPO levels similar to that which our country enjoyed in the 1980s and 1990s. Without this activity, we can expect job growth to disappear over time."

The NVCA Four Pillar Plan to Restore the Venture-Backed IPO Market

At the core of the issue is a recognition that today's market environment is challenging with respect to the issuance of small cap IPOs. There are multiple reasons as to why this is the case including the high costs of going public, the constituents involved in the process, and the restrictions placed on potential public companies. The NVCA recommendations, which seek to address these issues, comprise four categories or pillars, two which focus on changing behavior in the venture capital market and two which involve the government exploring policies conducive to venture-backed IPOs.

Pillar I: Ecosystem Partners

Within the last decade, venture-backed companies have been faced with fewer choices as it relates to investment banks and accounting firms that will assist in the IPO process. While the major investment banks continue to operate, the "four horsemen" boutique investment banks of the 1990's (Alex Brown, Hambrecht & Quist, Montgomery Securities, and Robertson Stephens), which specialized in IPOs of venture-backed companies, no longer exist. Further, the fall of Arthur Andersen and the resulting pressure placed on the Big Four accounting firms has, in many markets**,** left a void in terms of quality auditing services available for these smaller companies.

Against this backdrop, the NVCA believes that the venture capital industry must do more to promote alternative ecosystem partners while engaging with existing members to identify ways to better serve the needs of emerging growth companies. The Association has begun to engage in talks with boutique and major investment banks as well as the Big Four and other public accounting firms about how they can also better serve the needs of small cap companies. The NVCA also intends to encourage the use of a broader array of service providers such as the "Global Six" including Deloitte LLP, Ernst & Young LLP, Grant Thornton LLP, KPMG LLP, PricewaterhouseCoopers LLP and BDO Seidman LLP.

Pillar II: Enhanced Liquidity Paths

There is consensus among many within the capital markets ecosystem that the distribution system that connects sellers and buyers of venture-backed company new issues is broken. There are many drivers behind this disconnect including mismatched expectations in terms of issue size, the lack of sell side analysts, and the propensity of hedge funds to buy and sell stock quickly. All of these factors contribute to a lack of an adequate distribution channel and considerable post-IPO market volatility.

To offer small venture-backed companies an enhanced distribution system for the sale of initial stock, the NVCA endorses concepts such as Inside Venture which is a private market platform that connects qualified companies that intend to IPO within 18 months with pre-screened cross-over investors. These buyers commit to buy and hold these stocks for the long term. Other providers with similar models include Portal Alliance (NASDAQ), SecondMarket and Xchange. Additionally, the NVCA will help raise awareness about pro-active M&A roll up strategies of smaller portfolio companies to achieve IPO critical mass and global alternatives to the U.S. public markets.

Pillar III: Tax Incentives

The NVCA has long asserted that the government must support a tax structure that fosters capital formation and rewards long term measured risk taking. To support a more vibrant IPO market, the U.S. must maintain tax policies that have been proven to encourage venture capital investment so that the pipeline of promising IPOs is as robust as possible. Further, Congress should consider adopting new tax incentives which would stimulate IPOs, at least in the short term.

The NVCA will continue to advocate strongly for a capital gains tax rate that is globally competitive and preserves a meaningful differential from the ordinary income rate. The Association asserts that venture capitalists who are successful in building new companies should continue to be taxed at a capital gains rate for any carried interest that is earned over the long term. The Association also intends to explore the possibility of a one time tax incentive for buyers and holders of IPOs as well as increasing the holding rate for capital gains status to two or more years.

Pillar IV: Regulatory Review

From a regulatory perspective, the last decade has been characterized by a series of broad sweeping regulations aimed at curbing serious abuses within the financial system but fraught with unintended consequences for small pre-public and public companies. From Sarbanes Oxley (SOX) to the Global Settlement to Reg FD, small venture-backed companies have been faced with costly compliance and increasing obstacles to enter the public markets as a result of regulations intended for larger multi-national corporations. The NVCA strongly supports regulation and protecting investors where necessary but does not support a “one-size-fits-all” regulatory approach.

To wit, the NVCA will advocate for a full systematic review by the Securities and Exchange Commission of recent regulations which impact small cap companies. This review would include interpretations of SOX, pre-IPO financial reporting requirements, the separation of analyst and investment banking functions, and private placement requirements. There are opportunities within existing regulations to tier compliance so as not to overburden emerging growth pre-public and public companies at a time when they need support from the government, their auditors, and the markets.

"We are optimistic that the recommendations included in the Four Pillar Plan will contribute to a more vibrant IPO market for venture-backed companies over the long term," concluded Doll. "The NVCA remains committed to fostering an environment that fuels significant economic growth and job creation. The adoption of our recommendations is a critical element of our country's continued global leadership and ability to bring high growth, innovative public companies to market."

Press conferences to discuss the Four Pillar Plan will be today, April 29, 2009 at 9:00 a.m. and 3:00 p.m. eastern time. Journalists may access either event with the following information:

NVCA Press Conference 1
Wednesday April 29, 2009
9:00 -- 10:00 a.m. eastern time
Phone line: 800 920 0677
No password is required. You may refer to the NVCA Press Roundtable call
URL to follow slide presentation: https://www2.gotomeeting.com/join/996633050
Meeting ID: 996-633-050

NVCA Press Conference 2
Wednesday April 29, 2009
3:00 p.m. - 4:00 p.m. eastern time
Phone line: 800 926 4951
No password is required. You may refer to the NVCA Press Roundtable call
URL to follow slide presentation: https://www2.gotomeeting.com/join/497540898
Meeting ID: 497-540-898

To view the NVCA Four Pillar Plan presentation, which will be available after 10:00 a.m. eastern on April 29th, please visit: http://www.slideshare.net/NVCA/nvca-4pillar-plan-to-restore-liquidity-in-the-us-venture-capital-industry-1360905.

About National Venture Capital Association

The National Venture Capital Association (NVCA) represents approximately 460 venture capital firms in the United States. NVCA's mission is to foster greater understanding of the importance of venture capital to the U.S. economy and support entrepreneurial activity and innovation. According to a 2009 Global Insight study, venture-backed companies accounted for 12.1 million jobs and $2.9 trillion in revenue in the United States in 2008.

The NVCA represents the public policy interests of the venture capital community, strives to maintain high professional standards, provides reliable industry data, sponsors professional development, and facilitates interaction among its members. For more information about the NVCA, please visit www.nvca.org

bvca The voice of long-term investment

NESTA Making Innovation Flourish

Research report: September 2009

From funding gaps to thin markets

UK Government support for early-stage venture capital

From funding gaps to thin markets

UK Government support for early-stage venture capital

Foreword

As we contemplate a new industrial strategy for Britain in the wake of the worst recession in over 70 years, it is clear that this must be informed by the experiences of previous policy initiatives.

In looking at the effectiveness of government-backed venture capital schemes over the past ten years, this report does exactly that and therefore comes at an opportune time for those interested in fashioning a more innovative, forward-looking Britain.

Venture capital has a central part to play in the financing of young, innovation-intensive companies with the ability to become the world leaders of tomorrow. This report demonstrates that there is a role for government-backed 'hybrid' venture capital schemes to help reach those young businesses that have difficulty accessing funds from purely private investors.

Insufficient fund size and the restrictions on the size and location of investments limit the ability of these funds to generate commercial returns. Placing geographical constraints on funds restricts them from pursuing attractive investment opportunities outside narrowly defined boundaries. Increasing the size of 'hybrid' funds to a minimum of £50 million would provide a greater number of investee companies with the resources and support to develop their businesses through to exit. It would also enable funds to invest in more high-growth companies and achieve greater diversification.

Similarly, the short-term focus on filling narrow funding gaps can stifle a company by forcing it to undertake a costly search for much-needed follow-on funding when it reaches a 'prohibited' size. The tension between regional and industrial policy is another challenge which must be met with a more flexible, bottom-up approach.

Initiatives in the UK have, in some instances, produced commendable results. The challenge now is for policy to evolve to take into account the limitations identified in this report and help the industry reach a critical mass. The establishment of a successful early-stage funding environment in the United States, via government interventions, shows what can be achieved. The opportunities in the UK are enormous and we must ensure the right framework is in place to capitalise on these opportunities if we are to produce more innovative, world-leading, high-growth companies.

Jonathan Kestenbaum
CEO, NESTA

Simon Walker
Chief Executive, BVCA

September, 2009

Executive summary

'Hybrid' venture capital schemes backed by both private and public sector funding play an increasingly important role in the risk capital funding of early-stage firms with the potential for significant growth. We analysed the impact of investment from six UK government-backed venture capital schemes on 782 funded firms over the period 1995-2008. The six schemes that are the focus of this analysis are the Enterprise Capital Funds (ECFs); Early Growth Funds (EGFs); Regional Venture Capital Funds (RVCFs); Scottish Enterprise-backed Funds; University Challenge Funds (UCFs); and Welsh Hybrid Funds. The key findings of the analysis are as follows:

These schemes have had a positive impact on firm performance, when compared to a matched control sample. There is evidence that the more recent schemes have been structured in response to lessons learnt from the earlier schemes. However, the size of their impact remains small to date.

The modest impact of these hybrid funds is open to both demand-side and supply-side interpretations. A demand-side perspective would suggest that the UK does not have a large group of high potential firms being held back by a lack of early-stage VC funding. In any economy, only a very small proportion of new firms will be capable of earning the exceptionally high returns sought by venture capital investors. An alternative, supply-side interpretation of hybrid funds' modest performance is that it reflects shortcomings in the investment decisions of some funds or the support they provide to investee firms. Venture capital is by definition 'smart money', and expertise matters as well as cash. However, such deficiencies might be attributable, at least in part, to the investment restrictions imposed on the schemes by their government sponsors. Depending on the programme, public co-investment has been conditional on funds investing in specific regions, or investing only limited amounts in any given business, all of which may compromise fund performance. The analysis could be taken to support both the supply- and the demand-side argument. What is not in question is that effective policy solutions have to address more than just the provision of a greater supply of finance: how this finance is provided and the number of venture-ready firms matter too.

The analysis finds repeated encouraging evidence of firms that have received funding engaging in growth-oriented 'equity investment' behaviour. This involves firms undergoing disruptive changes while they build future capabilities. This produces an initial negative impact on firm performance compared to the matched sample of firms that did not receive venture capital funding. Firm performance then rebounds strongly over time as a result of the investments made. The analysis suggests it takes approximately 4-5 years to turn performance around. This pattern is observed across a number of performance metrics.

The current ineffective capital market for young, high impact firms should not be seen

as exclusively a difficulty of either the supply of finance or the demand for finance. Rather, the central concern is better understood as that of a 'thin market' where limited numbers of investors and entrepreneurial growth firms within the economy have difficulty finding and contracting with each other at reasonable costs. Thick markets, characterised by high levels of repeated interaction between venture capital (VC) and high-growth firms, are needed to build human capital in the sector and provide a large enough market for an ecosystem of high quality advisors to develop specialising in supporting early-stage VC investment.

To address this thin market, government policy needs to consider the simultaneity problem that occurs during the emergence and development of an effective VC industry. Simultaneity problems emerge because a viable VC industry requires its constituent parts to be working effectively together for extended periods of time in order to build human capital and investor confidence. These inter-related parts of an established venture capital industry include:

- Informed institutional investors (including pension funds, endowments etc.) willing to accept the risks of early-stage equity investment.
- A strong deal flow of attractive, high-potential portfolio companies.
- Large professional venture capital funds of sufficient scale and managerial competence to make initial and follow-on investments and grow portfolio firms until attractive exit opportunities are identified.
- A supportive network of high quality advisors; and efficient and liquid exit markets.

American experience suggests that such an emergent system is initially very fragile and needs decades of experience and public support to function effectively. Even the well-established US venture capital system remains highly sensitive to economic shocks.

Compared to the US, the UK largely lacks large early-stage VC funds. Supporting earlier research work, the report recommends that early-stage venture capital funds should be substantially larger than they have been in the past. This would allow them to provide follow-on funding, diversify their investment portfolios and spread their high fixed costs. The viable size of an early-stage venture capital fund is a subject of intense debate. What is clearly known is that small early-stage funds (c. £20 million) are vulnerable to commercial failure. It is suggested that VC fund sizes should be at least £50 million[1] in order to realise minimum scale effects. Hybrid VC programmes supported by government funds have in the past been of insufficiently large size and as a consequence have reduced their probability of success.

Successful early-stage VC funds in the US require a strong deal flow of high potential firms in which to invest. This has allowed them to specialise by technology and build the technical and commercial knowledge required to identify, support and promote the rapid growth of world class, new technology-based young firms. Government policy should also recognise that this need for a strong deal flow creates a tension between regional and innovation policy. Outside Greater London and the South-East, VC funds constrained to invest by UK region are unlikely to have a sufficiently large enough pool of high-potential firms to be commercially viable. On the contrary, large, specialised and successful venture capital funds in the European Union focusing on innovative firms are increasingly likely to operate at a trans-continental or increasingly global scale.

Public support conditions that keep publicly funded VC funds operating strictly within the currently recognised 'funding gap' also inhibit them operating in an effective commercial manner.[2] Such conditions severely limit fund managers' freedom to make follow-on investments. As a result, a fund's ownership of an attractive growth company is heavily diluted in subsequent funding rounds, substantially reducing the original investors' capital gain opportunities. The 'drip feeding' of funding means that high potential portfolio companies have their funding restricted during their periods of early growth unless alternative private investment is available. Fund managers also have fewer opportunities to learn how to help grow firms in ways that generate exceptional returns, in a comparable manner to the most successful private venture capital funds in the US or UK. The resulting system is neither growth nor success oriented.

Separate policies and programmes that focus exclusively on filling narrow funding gaps with the assistance of public money can be counter-productive as they can create artificial barriers between successive

1. Murray, G. C. 1999. 'Early-stage, venture capital funds, scale economies and public support', Venture Capital, 1, (4) pp 351-384; Murray, G. C. and Marriott, R. 1998. 'Why has the investment performance of technology-specialist, European venture capital funds been so poor?, Research Policy, 27, pp. 947-76.
2. It should be recognised that these constraints are not necessarily exclusively imposed by domestic governments. The need to meet the strictures of EC competition policy can markedly influence the scale of public funding that can be made available.

rounds of funding. Such barriers are disruptive and costly (in time, money and managerial resources) for both venture capital investors and portfolio firms. Policy should be more systematic, focusing on improving the flow of multiple funding rounds to high potential young firms as they grow, thereby providing a 'funding escalator' from formation to IPO or trade sale. This is likely to involve both Business Angel (BA) and venture capital funding.

Improved support for Business Angel networks is encouraging, and is a good example of a 'demand side' policy that seeks to improve the flow of high-quality firms available to the VC sector. The Business Angel environment in the UK has evolved from a fragmented system of anonymous individuals to an increasingly co-ordinated network of professionally organised groups. The best Angel groups can now make sizeable initial investments and undertake appropriate follow-on investments in a manner that is as professional as equivalent venture capital investors. Improving the flow of high quality deals from such networks to venture capital funds should be a priority.

While the UK has not as yet produced a VC funding system focused on innovative and exceptional companies comparable with the best in the United States, the analysis does find encouraging evidence of change. Given that it took over 50 years of experimentation in the United States to produce the system in operation today, the speed at which the UK system is learning from policy experiments and improving should be recognised. The UK is increasingly well positioned to exploit improvements in the financing of high-potential firms and there is good reason to expect more positive outcomes in the future.

Bundesministerium für Wirtschaft und Technologie

eXIST

Venture Capital Support by the Federal Government of Germany

Bundesministerium für Wirtschaft und Technologie

eXIST

Current Support Schemes

New public financing system since 2004/2005:

- **EIF/ERP-Dachfonds (1/2004)**: Fund of Funds, investing in Early Stage VCs; 500 Mio. € (EIF, ERP-SV) for 5 years, managed by EIF; pari-passu approach
- **ERP-Startfonds (11/2004)**: Coinvestment Fund, investing in young innovative companies together with early stage VC or BA; 250 Mio. € (ERP-SV, KfW) for 5 years, managed by KfW; pari-passu approach; → **200 Mio. € volume increase considering the financial market crisis as part of the economic stimulus package (Konjunkturpaket II)**
- **High-Tech Gründerfonds (9/2005)**: Seed-Fund as single/main investor; investing in High-Tech Start-Ups.

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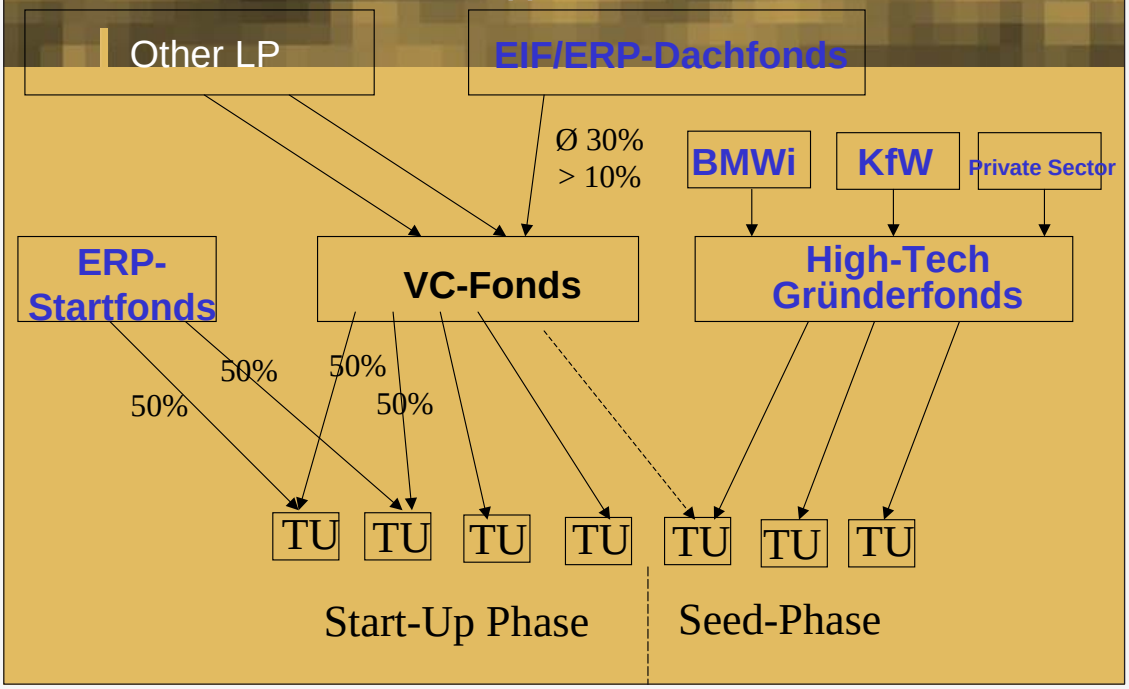
Current Support Schemes



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Current Support Schemes

ERP/EIF – Dachfonds: Focus and goals

- » Largest Pan-European VC-Investor (>200 LPs).
- » Experienced Fund of Fund Investor with elaborate transnational network; Focus on VC-technology funds for years
- » Excellent market reputation: EIF as „cornerstone“-investor.
- » Acts as commercial investor with adequate IRR.

So far: 15 investments over 400 Mio. €

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Current Support Schemes

ERP-Startfonds: Focus and goals

- Pari-passu investments: Economically identical conditions as lead-investor
- **considering the financial market crisis KfW/ERP-Startfonds will be allowed to invest up to 70%, private VC-funds 30% (still to be notified by EU-Commission!)**
- First investments, but also B, C, D rounds;
- 1,5 Mio. € per round; 3 Mio. € per company.
- Lead-Investor gets small management fee or increased carried interest for management services.

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Venture Capital Consultation
The role of venture within a new Risk Capital Action Plan

EUROPEAN PRIVATE EQUITY & VENTURE CAPITAL ASSOCIATION

Venture Capital: its place within a RCAP

- It is time to complement and refine Europe's policies for the SME funding market
- Venture capital is a part of the SME funding market for highly innovative young businesses, which is extremely selective and focused on world-beating potential
- To be effective and discerning, Europe's venture market must move faster towards self-sustainability and private sector rigour

2

Venture Capital: its place within a RCAP

> Now is the time to initiate debate at an EU level **because:**

- Opportunities offered by new Commission and a newly elected European Parliament in President Barroso's second term
- The EU is defining its policy priorities for next 5-10 years
- EU institutions are therefore seeking new approaches for innovation and competitiveness: opportunity to piggy-back on

3

Building high-potential VC into a new RCAP (Phase I)

Phase I: 2009/2010

> Take a new view on venture capital at European level

> Create momentum for a new Risk Capital Action Plan that includes specific treatment for high potential venture

> Build industry consensus around a new approach to deploying public funding in the European venture industry which enables the industry to be sustainable in the long term

> Build political consensus for such an approach

4

Building high-potential VC into a new RCAP (Phase II)

Phase II: 2011 onwards…

- Implement proposals and secure contributions for the new model

5

Public policy for SME funding: '99-09

Success in stimulating Risk Capital funds via public schemes, eg: EIF and national initiatives

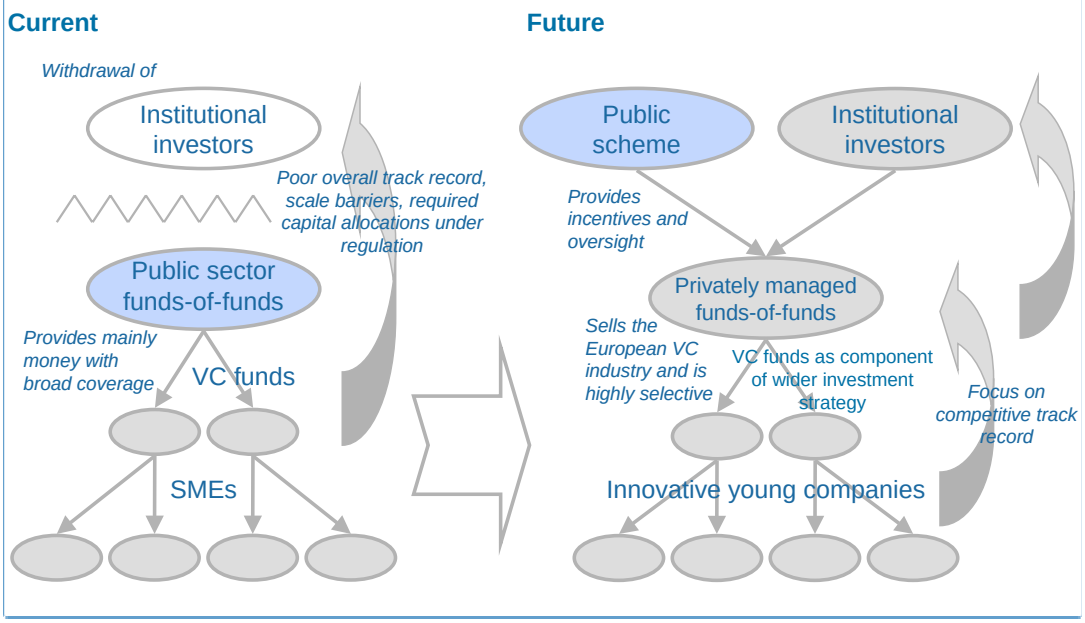
- Result: an established broad-based SME funding market

But the model now does not help to further a self-sustaining VC market:

- European venture has become dependent on public intervention intended as a broad but temporary stimulus
- In the past, a broad supply of capital invested based on a wide range of criteria weakened the performance of European innovative young businesses as an asset class
- The absence of a class of European innovation-oriented institutional investors (comparable to US university endowments and foundations) contributes to the venture market's weakness

6

Suggested policy shift from 2010 onwards



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Self-sustaining VC - a new long term model

- Create a vibrant VC market that allows free and discerning investment decisions and attracts long-term private investors
- Public money is needed to give an incentive to privately managed funds-of-funds to rebuild VC investment expertise and research capabilities related to technologies and innovation
- Public money must require private sector participation: European funds-of-funds to tap private sector first before receiving a cent from the public purse
- In so doing, private sector will market European VC globally

Endgame:

- To shift financial backing from public to private sector, by involving privately managed funds-of-funds to select the best European venture capital managers and sell their potential to investors across the world.

8

Panel 2

Theme: Public policies to support business angels investing in technology start-ups and their role in the ecosystem

Moderator: **Mr. Francis Carpenter**
Special adviser
Caisse de depôt et consignations (France)

Panellists:

Ms. Isabelle de Baillenx
CEO
Fa Diese (France)

Mr. Paul Lee
General Partner, VanEdge Capital
Active angel investor (Canada)

Ms. Liddy Karter
Executive Director, The Angel Investor Forum (USA)
Board member of ACA, The Angel Capital Association

Mr. Terry Matthews
Chairman, Wesley Clover (Canada)
Active angel investor

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Panel 2

6.1 Introduction

Themes of the panel:

- It is more and more accepted that Business Angels in most developed economies play a critical role in supporting the launch of high tech businesses; what is not clear, due to the difficulty of aggregating reliable statistics is their relative importance, and their reactions to the recent downturn; most data suggests that there is considerably more BA funds available in the US than in Canada or Europe, using comparable indicators. What is the real weight and role of Business Angel in the tech start-up financing chain?
- Most Business Angels supporters are of the opinion that like other investors BAs should benefit from some public schemes but some would disagree. What do you think?
- Public policy schemes that don't really work, and should be reformed
- Public policy schemes that work and could be exported
- Would Business Angels help themselves if they were better organised in Business Angels funds
- Getting started
- The scissor syndrome, or why high tech is critical to our future and Business Angels are critical to high tech

Panel 2

Moderator

Mr. Francis Carpenter

Special Advisor
Caisse des dépôts et consignations (France)

Since early 2008, Francis Carpenter has become an angel investor, taken up several directorships: Non executive director of IP GROUP Plc, leading European University Technology Transfer business, quoted on LSE; Supervisory Board of BULGARIAN DEVELOPMENT BANK; Chairman of the Investment Committee of IVCI an Eur 160m Turkish technology fund of funds; Supervisory Board of 17 CAPITAL, a based mezzanine debt fund.

He set up his own advisory business, AYERSROCK.LUX: Advisor to CAISSE des DEPOTS International , (CDCI) Paris; Advisor to COGENT Partners,(Houston & London) a leading secondary specialist; Advisor to NESTA London, an endowment fund financing innovation in the ; and several pro bono activities.

EUROPEN INVESTMENT FUND (EIF)

Appointed mid 2002 Chief Executive of EIF, 66% owned by European Investment Bank, 25% by European Community, 9% by 30 public and private banks, EIF is the European Union's specialist fund for venture capital, private equity and in SME portfolio guarantees, including credit enhancement and microfinance. Total assets under management were in excess of €15bn on completion of mandate in 2008.

Helped to raise substantial public and private funds, and developed EIF into one of the leading European fund of tech funds, (EIF was first round investor in Skype with an 80X exit); and attracted a dozen new shareholders to EIF; Negotiated new Credit Ratings EIF was consistently AAA rated since 2003 with Multilateral Development Bank status since 2004 with zero Basle II weighting.

EUROPEAN INVESTMENT BANK (EIB)

Secretary General of EIB, the highest career positioning one of the world's largest financial institutions operating primarily in the European Union; as EIB Secretary General oversaw the formation of the EIB Group in 2000,revising EIF statutes and negotiating two EIB capital increases.

Previously was Director of Credit Risk during one of the previous financial and banking crises, and oversaw various work outs, rescue operations.

Francis holds degrees from Oxford (UK), the New School for Social Sciences (New York City) and from the Institut d'Études Politiques in Paris. He is fluent in English, French and Italian, with working knowledge of German, Spanish, and Portuguese. He is married with four children and his hobbies include early music, books, and history.

Panellists

Ms. Isabelle de Baillenx

CEO
Fa Diese (France)

Graduate from the prestigious "Grande Ecole" HEC in France in 1976, Isabelle de Baillenx spent most of her career in banking, financial consulting and private equity.

She started in Banque Indosuez in 1977 as a financial analyst, both in France and in the United Arab Emirates. She had also an industrial experience as the Secretary General of a group of industrial companies. Between 1983 and 1990, she joined Champex, and later on Expanso, two venture capital investment firms based in France. She set up, in 1990, a financial service advisory business in Mergers and Acquisitions, advising managers in LBOs, company valuations.

In 2001, she decided to value her large and diversified experience in founding an Investment Fund, Fa Diese, gathering business angels.In 2007, she expanded in founding another Fund, Fa Diese 2, which gathered 11 M €, both from business angels and from institutional investors, as well. Today, Fa Diese 2 has already invested in 13 lines for about 1/3 of its total committed capital.

Isabelle is a board member of the French business Angels "association": France Angels.

Ms. Liddy Karter

Executive Director, The Angel Investor Forum (USA)
Board member of ACA, The Angel Capital Association

Liddy offers clients expertise in the financial services, banking, software and manufacturing sectors. Liddy is also building on the past 5 years of venture investing at www.angelinvestorforum.com by raising a clean tech fund www.industrialsymbiosiscapital.com. She has extensive background in clean tech investing and operations.

As President of Resource Recovery Systems, Inc., one of the pioneers of the municipal recycling industry, Liddy grew the company form a start up to having 13 factories in eight states in 7 years. The company was sold in 1998 and remains one of the largest parts of the successor firm's business with many of the original employees still in place. As CFO at Netkey, a leading enterprise software firm, Liddy raised $15 Million in institutional venture capital. Liddy was responsible for spearheading sales for the new enterprise technology platform to banking and retail clients. Liddy was Vice President at Morgan Stanley, focusing on financial services for the Banking Industry.

Liddy received her MBA from Yale University and a BA in both History and Engineering from Columbia University.

Panellist

Mr. Paul Lee

Managing General Partner
VanEdge Capital (Canada)

Paul Lee is the Managing General Partner of VanEdge Capital Partners Ltd., a venture capital fund established to focus on opportunities in the interactive digital media space. The market for interactive and digital entertainment and media is massive, growing, and changing at an extremely rapid pace. It affects the ways companies use the Internet to attract and engage target audiences and conduct commerce electronically.

Lee is the former President of Electronic Arts, Inc., the global leader in interactive software, and was responsible for its Worldwide Studio group. Electronic Arts had fiscal 2008 revenues of US $3.67 billion. He managed more than 6,000 employees and US$1 billion in annual capital and operating expenses in the development studios making it the largest entertainment studio in the world.

In 1987 Lee graduated from the University of British Columbia with a Bachelor of Commerce with Honours Degree and was one of six students selected to enter the prestigious Portfolio Management Fund program at the UBC Sauder School of Business. Lee is a Leslie Wong Fellow and is also a designated Chartered Financial Analyst. From 1987 – 1989 Lee worked at Chrysler Canada as an Investment Manager for the pension fund and health and welfare benefit plans. Lee invested in and joined Distinctive Software as a Principal in 1989, having been a member of its board for several years prior. Distinctive Software became a leading independent videogame developer and was acquired by Electronic Arts in 1991. Lee has been a member of the executive management team since, holding a variety of positions.

1994 saw Lee recognized as one of the "40 Under 40" business leaders by Business in Vancouver. In 1996 he was awarded the Outstanding Young Alumnus Award from the University of British Columbia. In 2002 Lee was awarded the BC Technology Industries Association Person of the Year Award for his outstanding leadership in the high technology industry. Lee has also received numerous awards for his community service including the Commemorative Medal for the Golden Jubilee of Her Majesty Queen Elizabeth II for significant contribution in the form of public service in 2003. In 2005 he was recognized as an Honorary Fellow of the University of British Columbia's Sauder School of Business. Lee has served as Chair of the BC Technology Industries Association from 1998 to 2001. Lee was an investor and member of the Board of Directors of A.L.I. Technologies until its landmark sale to McKesson Corporation in 2002. Lee was Co-Chair, along with the Premier of British Columbia, of the Premier's Technology Council from its inception in 2001 until 2005 and remains a member of the Council. Lee currently serves as a member of the Dean's Advisory Council for the Sauder School of Business at the University of British Columbia, is a member of the Minister's Steering Committee for the Vancouver International Financial Institutions Sector, and currently sits on the Board of Directors for the Vancouver Board of Trade and New Media B.C. He is Chair of the Board of Directors at D-Wave Systems, a company working to build the world's first commercial quantum computer.

Panellist

Mr. Terry Matthews

Chairman, Wesley Clover (Canada)
Active angel investor

Sir Terence Matthews is Chairman of Wesley Clover and also serves as Chairman of Mitel and March Networks, two companies active in developing Internet Protocol (IP) systems for enterprise applications.

Prior to joining March Networks, he served as CEO and Chairman of Newbridge Networks Corporation, a company he founded in 1986. Providing leadership and vision for 14 years, Terry helped Newbridge become a leader in the worldwide data networking industry. When France-based Alcatel acquired Newbridge in May 2000, the company employed more than 6,500 employees and recorded FY 1999 revenue of $1.8 billion. In 1972, before launching Newbridge, Terry co-founded Mitel Corporation. Under his leadership Mitel grew quickly to become a world leader in the design and manufacture of enterprise voice systems and products. In 1985, British Telecom bought controlling interest in Mitel.

In 2001, Terry purchased the worldwide Communications Systems division of Mitel, and the Mitel name, and is now owner and non-executive Chairman of Mitel Corporation, a company focused on providing next generation IP telephony solutions for broadband networks. Terry also serves on the board of directors and is Chairman for a number of high technology companies including Bridgewater Systems, March Networks, Solace Systems and Counterpath Corporation.

In addition Terry holds an honours degree in electronics from the University of Wales, Swansea and is a Fellow of the Institute of Electrical Engineers and of the Royal Academy of Engineering. He has been awarded honorary doctorates by several universities, including the University of Wales, Glamorgan and Swansea, and Carleton University in Ottawa. In 1994, he was appointed an Officer of the Order of the British Empire, and in the 2001 Queen's Birthday Honours, he was awarded a Knighthood.

INVESTING IN TECHNOLOGY START-UPS

1 Introduction

We are focusing on innovative start ups with a strong technological content:

- Which offer or produce complex goods or services, with high technical or scientific or market risk
- Which are in need of capital during the coming 3 to 5 years until they reach breakeven point, where they can attract a financier or strategic partner or be IPOed

This concerns a very small fraction of young companies.

Investing in technology start ups:

- Is very risky
    - The time / money invested ratio is well above VCnorms
- Implies very solid skills from angel investors in various lines of business
    - But also in financial and legal matters (valuation, relution/dilution, refinancing)

Contrary to common perception, this segment can be the most profitable, provided the investor uses the right business model.

(cf source Reuters / NVCA)

Thomson Reuters' US Private Equity Performance Index (PEPI)
Investment Horizon Performance through 12/31/2008

Fund Type	1 Yr	3 Yr	5 Yr	10 Yr	20 Yr
Early/Seed VC	**-20.6**	**1.7**	**3.7**	**36.0**	**21.8**
Balanced VC	-26.9	4.6	8.4	13.5	14.5
Later Stage VC	-6.8	9.5	8.7	7.5	14.5
All Venture	-20.9	4.2	6.4	15.5	17.0
NASDAQ	-38.1	-10.3	-4.6	-3.2	7.3
S&P 500	-36.1	-10.0	-4.0	-3.0	6.1
All Venture (through 9/30/2008)	-2.1	6.3	8.4	17.1	17.0
All Venture (through 12/31/2007)	20.1	9.5	8.6	18.1	16.7

This business model implies specific governance, especially when compared to investment funds.

Specific constraints weighing on this type of investment need to be compensated by financial, tax and/or legal incentives.

2 Proposal for a business model to finance technology start ups

The business model is based on a satisfactory answer to four issues:

- Financial risk management
- Risk valuation of the business plan and appraisal of the team
- Strategic and financial mentorship
- Limited level of investments, compared to time and cost engaged

Some basic ideas :

- The more upstream the project, the higher the risk
- The best way to understand the quality of the project and/or of the team is to be an active shareholder as early as possible and to be involved in strategic decisions
- If the project fulfill s its initial promises, it should be supported until the exit

2.1 Financial Risk Management

- Case by case : to keep the investment limited during the early high risk phase ; to follow on the investment when the most critical point is past ; to be part of the first VC fund raising in order not to be watered down
- On the whole portfolio: spread the risk over some 20 stakes. Who can be assured to bet right away on a « winner"?

2.2 Evaluation of « project » risk

- Angel investors must be able to assess the quality and the plausibility of the business plan and therefore hold the necessary skills to understand the specific line of business
- He should also be in a position to assess the capability of the management team

2.3 Strategic and financial support

- The Credibility of the angel investor is key ; his former or present management experience is capital to building up trust with the managing team
- In order to boost its development, the business can use the angel's competences and network
- The angel must be able to follow on with successive fund raising rounds, in order to show to new potential partners his confidence in the quality of the project, and therefore facilitate those transactions which require substantial time and energy from the management team

2.4 Low investment levels

- At the early stage, one should avoid to overfund a project: capital is too quickly spent ; some scarcity helps to make good decisions …
- Overfunding at the outset actually leads to higher valuations which of course reduce investor profit.
- On the contrary, time spent by an angel investor on due diligences (which he should not subcontract) and to the follow up of the target company is huge compared to the level of investment.

-

Building up of a standard winning business model for an angel investor:

Stage 1: **1st round** (very early stage) = €100.000 for angel investor, pooled with other investors to reach €300.000 and €500.000 level

Stage 2: **2nd round** (6 to 12 months later) = €300.000 for angel investor, pooled with others for a global amount of €500.000 € to €1.000.000

Stage 3: **1st VC round** (12 to 24 months later): 400.000 € for the angel investor, pooled with 1 or 2 VC for a global amount of €2.000.000 to €3.000.000

The angel investor will move to stage 2 or 3, only if he trusts the business model and the team

- Investor spreads his risk on **25 companies**
- **15** companies are refinanced at stage 2
- **7** companies are refinanced at stage 3

Invested amounts are :

- **10 investments at €100.000**
- **8 investments at €400.000**
- **7 investments at €800.000**

Global investment amounts: around €10 M.

The business model shown here requires:

- Total investment capacity of €10M
- Multi sector competences (unless all investments are in the same segment despite an increase in risk)
- Available capacity for financial and business analysis to follow the start up: it is therefore essential to enlist angels who can enhance the management team of the investment structure in order to boost its efficiency

3 An example of a current investment structure for BA: FA DIESE 2

Established in 2007, FA DIESE 2 answers the requirements of the business model presented above. It is/has:

- An investment company with a minimum equity of € 10M
- A structure which helps to maintain contact between angel investors (the shareholders of the investment company) and the management team of the target companies
- A very limited management team in the investment vehicle, only 2 staff needed, to manage the deal flow, to coordinate the shareholders responses, to bring financial and legal skills at VC standards
- An annual cost less than 2.5% of committed capital

3.1 Governance

- The investment committee makes investment and divestment decisions; it coordinates the most active shareholders who can commit time to study and follow up the investments. Each financed company is monitored by one shareholder, the « mentor »
- The management team sets up the investment company, raises funds, drives the investment committee, implements investments, and manages reporting, reinvestment and exits
- The mentors are entitled to part of the capital gains on the sale of the stake of the company they monitor

3.2 Capital

- An angel investor shareholder commits to pay in a certain amount during the investment period. For example 200.000 € in 4 installments i.e. 50.000 € per year
- Angel investors own half of the equity (5M€) ; there are 25 angels, almost the same number as the investments
- Institutional investors contribute the other half: 5M€; they have no decision making powers but they benefit from the work carried out by angel investors

4 Government incentives for angel investment companies: the French model

4.1 Assessment of the situation

The French government does not specifically support the financing of innovative start ups. Broadly speaking the government support applies to any type of investment in small businesses whatever their development stage and whether the investment is made directly by angels or through investment funds. Tax incentives take the form of income tax or wealth tax rebates (ISF).

From a legal perspective, businesses fitting the requirements for start up financing have existed for a long time: « les sociétés de capital risque » (risk capital companies). They benefit from the same tax advantages as the investment funds, which came later (no company tax, and in some cases, no capital gains tax for shareholders), but they do not suffer from the same administrative constraints.

Administrative constraints on investment funds: they must create a management company; all decisions must be made by the partners of the management company which have to be cleared by the AMF (Market Regulation Authority: the French SEC), even though there is a consultative investment committee. The profit sharing patterns are also regulated and are not appropriate to the business model described earlier. **AMF also requires a heavy reporting, taking into account a very limited management structure.**

Actually, the investment fund's legal structure was created on the Anglo-Saxon model to favor investment structures with "hands off" shareholders. The constraints which have been placed on those structures were justified by the level of legal and regulatory protection required by those "hands off" shareholders. In the specific case of the angel investment companies, almost all the shareholders are experienced investors**.**

Unfortunately, the shareholders of the risk capital companies (SCR) have been granted no tax incentives, when they initiate investing, contrary to the position for investment funds' shareholders and investors.

Concerning **capital gains taxation**, the risk capital companies (SCR), investment and individuals, benefit from almost the same treatment. In the investment structures, dividends are taxed in the same way as capital gains.

Others decisions concern technology start ups, without being specific:

- **R&D tax credit**: part of the R&D can be deducted from income tax; when this credit cannot be offset against income tax, which is often the case for start ups, it is reimbursed to companies
- **Subsidies or non interest bearing loans** can be granted by a state owned company, (**OSEO)**, to finance research and development

Investment funds and risk capital companies can both access sources of public financing: **known as France INVESTISSEMENT**, which is a fund managed by la Caisse des Dépôts et Consignations, the largest state owned investment bank in France, which invest in investment structures in general and also in angel investment companies.

OSE0 can grant a redeemable guaranty: 70% of the losses on investments in start-ups can be offset by specific funding, redeemable on the investment company future capital gains. This guarantee works like a drawing right, within a ceiling and can be considered as a kind of public funding.

4.2 A specific French scheme: how to offset investors wealth tax (ISF) ?

To take substance out of the wealth tax (ISF), the French parliament voted a tax exemption equal to 75% of tax due a capital investment in a small business. Only individuals investors, if they invest directly in the capital of a target,comany can benefit from this decision. Subsequently it was extended to specific holding companies, so called ISF holdings, where administrative constraints are such that they cannot be used by investment companies in technology start-ups. As any decision where a tax advantage is paramount, it is not sure that detrimental consequences do not outweigh financial benefits: overvaluation of start ups, multiplicity of shareholders, difficulties to manage subsequent financing rounds, slowing down the creation of new professional structures, financing of low profitability projects, unfair competition vis-à-vis existing companies.

4.3 Proposals to help and to enhance angel investing

- **To keep what works**
  - **Tax advantages for the financed company :** R&D tax credit, OSEO subsidies and loans;
  - **tax advantages for investors :** income tax exemption up to 25% when investing in, low capital gains taxation
  - **Public funding;** France Investissement and CDC equity investments in other investment structures, OSEO guarantee

- **To favor angel investment company developments**
  - **To reduce the level of administrative constraints**
  - **To let investors choose freely the most appropriate legal structure**
  - To consider angel investors knowledgeable enough to **avoid overburdensome external controls** specially those concerning the financial size of the investment company

- **To align tax treatment** :
  - **To grant same treatment to angel investors, whether they invest directly or through an investment company as described earlier, since time required is equivalent**
  - **To cancel the 75% wealth tax exemption or suppress this tax credit entirely as it is creating turmoil in the difficult job of technology start-up financing.**

Paris, le 1er octobre 2009
Isabelle de Baillenx
Présidente de FA DIESE 2

U.S. Federal Agenda and State Support for Angel Investing

October 2009

Liddy Karter, Managing Director,
Industrial Symbiosis Capital, llc
Chair ,Public Policy Committee, Angel Capital Assoc.

ANGEL CAPITAL ASSOCIATION

ACA Public Policy Assessment

- Consensus: **Support Angel Investing**
- U.S. Federal legislation: **Ineffective**
- State legislation: **Erratic and competitive**
- Prospects: **Significant**

ANGEL CAPITAL ASSOCIATION

Consensus to Support Angel Investing

Sestak introduced the American Small Business Innovation Act because more incentives for small businesses – including investing in Angel Investor and Venture Capitalist programs – are needed as **small businesses create 70 percent of all jobs in America.**

ANGEL CAPITAL ASSOCIATION

Lots of Proposed Federal Legislation

- **HR 578 – 25% tax credit**
  HR 3567 – Angel investment office at SBA
- **HR 2803 – Federal Angel Network**
- **HR 2834 – Makes Carried Interest Ordinary Income**
- **S 1662 – Increase Access to SBIC leverage**
- **S 1145 – May restrict patent protection value**

ANGEL CAPITAL ASSOCIATION

Innovation Prospects

House Proposed Legislation –

SBA Office of Angel Investing

$50MM over 3 yrs.

Administration Budget Proposal –

$2B to match Seed Funds and Angel Group investments

ANGEL CAPITAL ASSOCIATION

Stimulus Bill

"Small Business Capital Gains": **New 75% exclusion of capital gains** for individuals on the gain from the sale of certain small business stock held more than five years and purchased from 2-17-2009 through 12-31-2010.

This Bill's for you…

ANGEL CAPITAL ASSOCIATION

State Programs Support Angels

- Over 30 states support angel investing
  "Most cost effective economic development $ spent"
- Tax credits: 20% - 100%
- Co-investment funds: $1MM - $8MM
- Education and administration grants
- Technology Councils and Economic Development structures

ANGEL CAPITAL ASSOCIATION

Tax Credits Vary Widely

- Iowa: **20% credit; $10 MM cap**
- Montana: **$60 MM fund**
- North Dakota: **45% credit; $3.5 MM cap**
- Maine: **60% credit, $3MM cap**
- Hawaii: **100% credit…really**
- www.angelcapitalassociation.org

ANGEL CAPITAL ASSOCIATION

Wisconsin Angel Network: Success

Providing resources to the early stage investing community, including:

- Deal-flow Pipeline
- Network Formation
- Education
- Communications
- Other Resources

WAN - Membership

- Angel Networks
- Angel and Early Stage Funds
- Venture Funds
- Corporate Strategic Partners

-Members have access to Deal-flow Pipeline

-Currently there are 28 investor-member organizations

-Representing over 250 individual investors, funds with hundreds of millions

-Members listed at WAN website

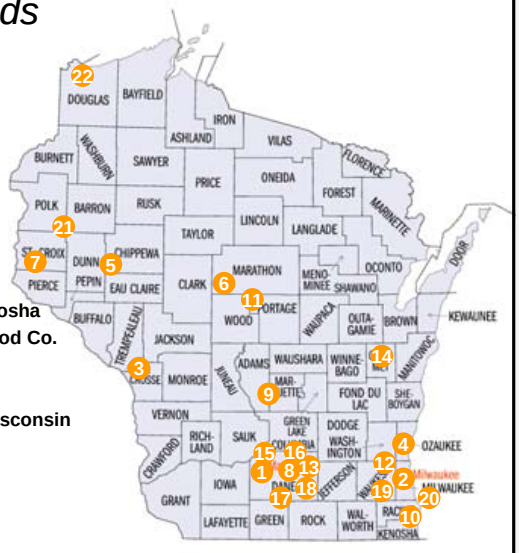
Act 255: Tax Credits

	Angel Investment	Early Stage Seed Investment Fund
Income Tax Credit:	25% (per investment) *(12.5% per year - 2 yrs)*	25% (per investment)
Effective Date:	January 1, 2005	January 1, 2005
Maximum Annual Aggregate Amount of Tax Credits Per Year:	$3.0 Million ($12M investments)	$3.5 Million ($14M investments)
Maximum Investment Per Company:	$1 Million ($500k/investor)	$3 Million
Total State Allocation:	$30 Million ($120M investments)	$35 Million ($140M investments)

ANGEL CAPITAL ASSOCIATION

Wisconsin Angel Networks and Funds

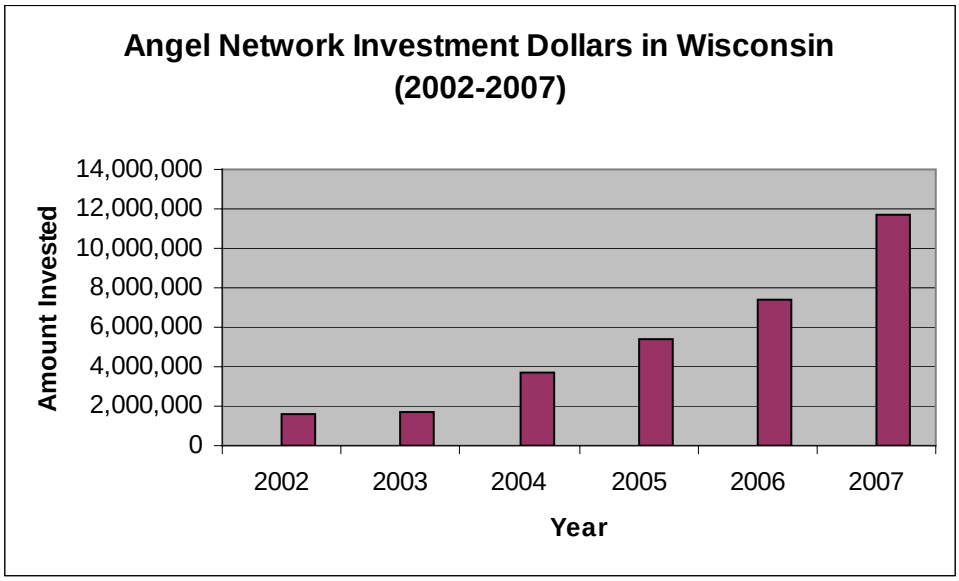
1.	**Wisconsin Investment Partners, LLC***	**Madison**
2.	**Silicon Pastures***	**Milwaukee**
3.	**Origin Investment Group, LLC***	**La Crosse**
4.	**Golden Angels Network***	**Milwaukee**
5.	**Chippewa Valley Angel Network**	**Eau Claire**
6.	**Marshfield Investment Partners, LLC***	**Marshfield**
7.	**St. Croix Valley Angel Network, Inc.***	**River Falls**
8.	**Phenomenelle Angels***	**Madison**
9.	**Badger AgVest***	**Madison**
10.	**Pennies From Heaven***	**Racine / Kenosha**
11.	**Central Wisconsin Business Angels***	**Portage / Wood Co.**
12.	**Women Angels***	**Milwaukee**
13.	**Kegonsa Capital Fund***	**Fitchburg**
14.	**NEW Capital Fund, LP***	**Northeast Wisconsin**
15.	**Badger Alumni Capital Network**	**Madison**
16.	**DaneVest Tech Fund I***	**Madison**
17.	**Continuum Investment Partners***	**Madison**
18.	**Capvest Venture Fund***	**Madison**
19.	**Capital Midwest Fund***	**Milwaukee**
20.	**Successful Entrepreneur Investors***	**Milwaukee**
21.	**New Richmond Angel Investment Network**	**New Richmond**
22.	**Lake Superior Angel Network**	**Lake Superior Region**



**Adapted from Dave Ward, NorthStar Economics www.northstareconomics.com*

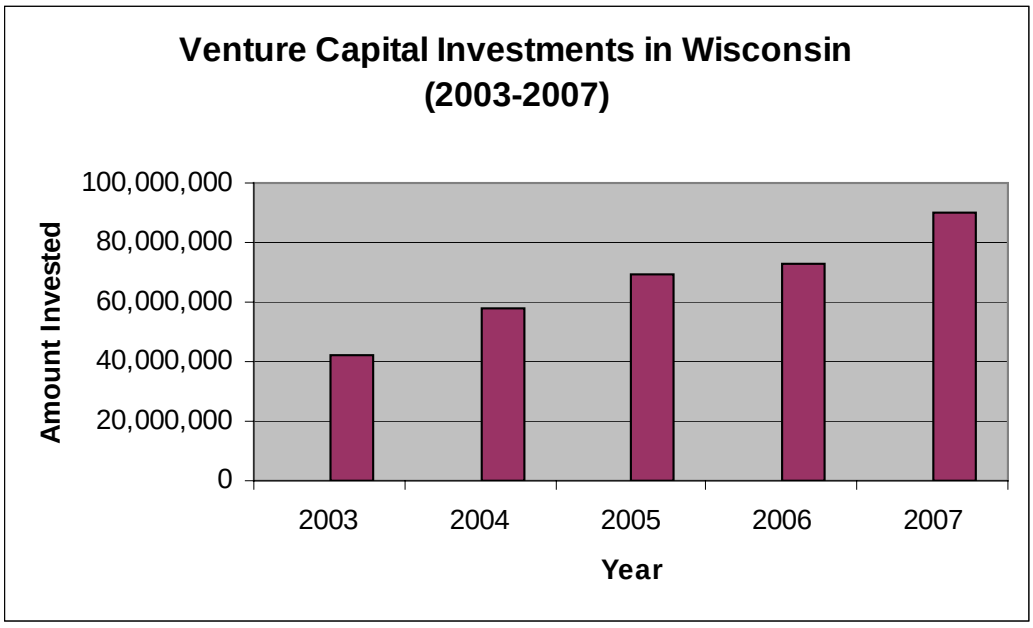
*** = WAN investor-member**

ANGEL CAPITAL ASSOCIATION



Angel networks represent about 8% of Wisconsin's early stage market.

ANGEL CAPITAL ASSOCIATION

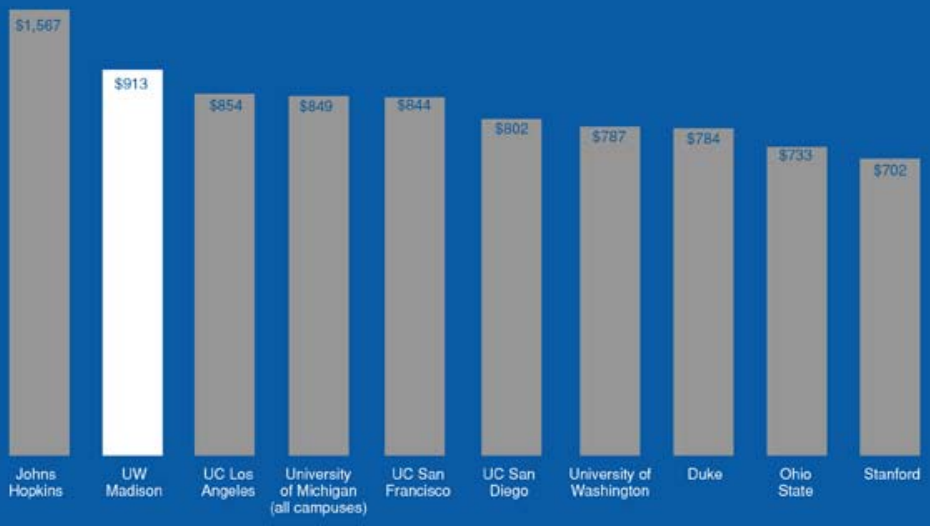


ANGEL CAPITAL ASSOCIATION

10 institutions reporting the largest FY 2007 academic R&D expenditures

(Combined science and engineering fields and non S&E fields)

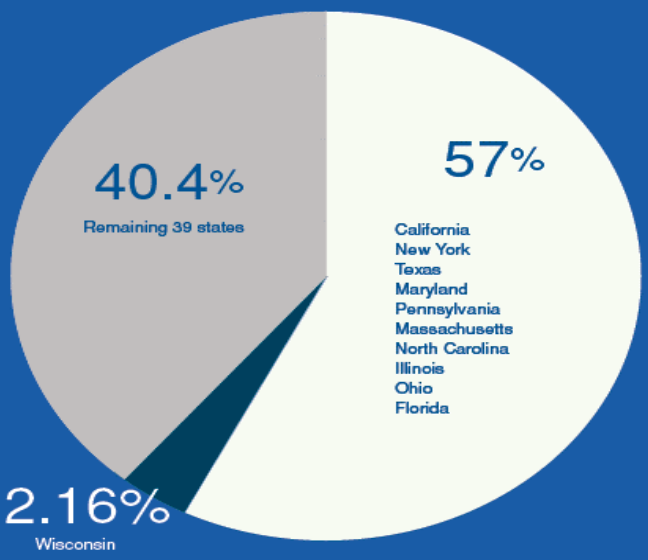
Millions of current dollars



Total Science and Engineering and Non-S&E Fields: $51.5 billion at 672 institutions

Source: National Science Foundation and Wisconsin Technology Council

Top 10 States in terms of Academic R&D Spending in the United States



Source: National Science Foundation

Angel Investing Support Works

- Federal support is following states but is potentially larger.
- States are improving their economies with tax credits and co-investment funds.
- The Angel Capital Association is tracking this information. www.angelcapitalassociation.org

Thank you

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V. Paul Lee

VANEDGE CAPITAL

BC Venture Capital Programs

The Growth and Resilience of Angel Investors

1

VANEDGE CAPITAL

Paul Lee: Managing General Partner

- Former President, Electronic Arts
  - FY2009: Revenues $4.2 Billion US, 8,900+ employees

- Active Angel Investor:

D-Wave · Pacific BioEnergy · ALI · ActiveState The Dynamic Languages Company · blast radius

- Chair of the Board of D-Wave
  - Developer of the world's first commercial quantum computer
- VANEDGE CAPITAL (Founder, Managing General Partner)
  - Premier digital and interactive media fund
  - $200MM Capital Raising Target

2

BC Venture Capital Programs: Presentation Agenda

- Program Components and respective Investor Classes
  - Rules for each Program and VCC Tax Credit Specifics
- Canada Venture Capital Investment Funds Trends
- BC Venture Capital Programs *drive* Invested Capital for Angels
- Top 2008 Financings and Angel Financings, and BC Success Stories

BC VC Programs and Investor Classes

Direct Investment:	Portfolio Investing:
Eligible Business Corporation (EBC)	Venture Capital Corporation (VCC)
Employee Share Ownership Plan (ESOP)	Employee Venture Capital Corporation (EVCC)

- Four Investor Classes and their respective Program Participation:
  - **Angel Investors:** – EBC
  - **Retail Venture Capital Funds:** – VCC
  - **Labour-Sponsored Investment Funds** (LSIF) – EVCC
  - **Traditional Venture Capital Funds –** BC Renaissance Capital Fund

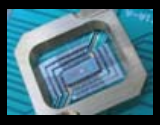
BC Venture Capital Program: Rules for Each Model

- EBC – Capital Raised is immediately invested
- ESOP – Capital Raised is immediately invested
- Retail VCC – Up to 2 years to invest 80% of their Capital after Raised
- EVCC/LSIF – Invest at least 80% of their Capital Raised within 5 years

5

Portfolio Investing: Venture Capital Corporation (VCC)

- Venture Capital Corporation (VCC)
  - Similar to holding company
  - Raises capital through private or public share offerings
  - Invests in Eligible Small Businesses



- Shares must be held for at least **5 years** to qualify

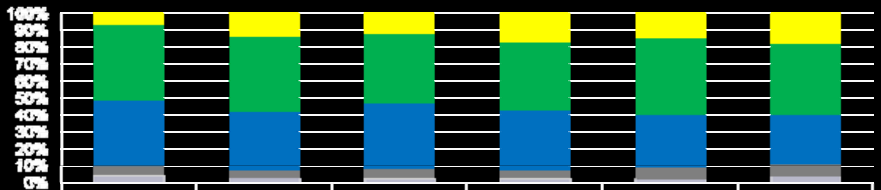
6

Portfolio Investing: Venture Capital Corporation (VCC)

- Investors purchasing VCC shares are eligible for refundable tax credit
  - Equal to 30% of their investment amount AND
  - Maximum of $60,000 in credits per taxation year
  - Investor excess tax credits may be carried forward and used in any of the 4 subsequent taxation years

7

Canada VC Investment Funds Trend: BC Regional Invested Capital Growth 2003 - 2008



	2003	2004	2005	2006	2007	2008
British Columbia	7.3%	14.1%	12.3%	17.6%	14.9%	18.8%
Ontario	44.5%	44.6%	41.1%	40.5%	45.8%	42.1%
Quebec	38.7%	36.1%	38.8%	36.5%	31.1%	26.5%
Prairies	5.0%	4.2%	5.8%	4.4%	6.9%	7.4%
Atlantic	3.7%	2.1%	2.0%	1.0%	1.3%	3.3%

- BC: 7.3% to 18.8%, up 11.5%
  - Largest increase in invested capital in Canada for all regions
  - Prairies and Atlantic regions together average under 10% of Canada

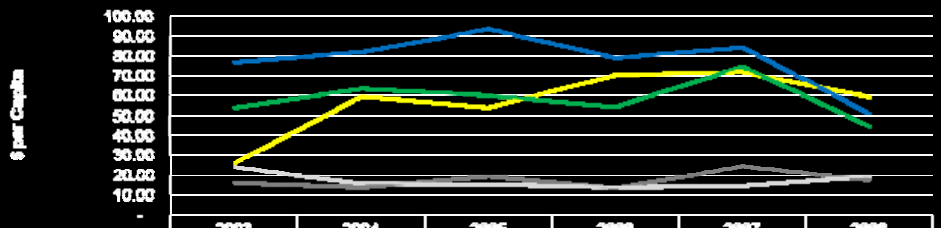
8

Canada VC Investment Funds Trend: $ Invested Capital 2003 versus 2008

Province	2003 ($ mil)	2008 ($ mil)	*Change $*	*Change %*
British Columbia	**108.0**	**259.8**	**151.765**	**140.5%**
Ontario	661.5	580.4	**-81.152**	**-12.3%**
Quebec	574.8	392.8	**-182.047**	**-31.7%**
Prairies	86.1	101.8	15.725	18.3%
Atlantic	55.5	45.0	**-10.525**	**-19.0%**

- BC invested capital grew $151.8 million or $140.5%

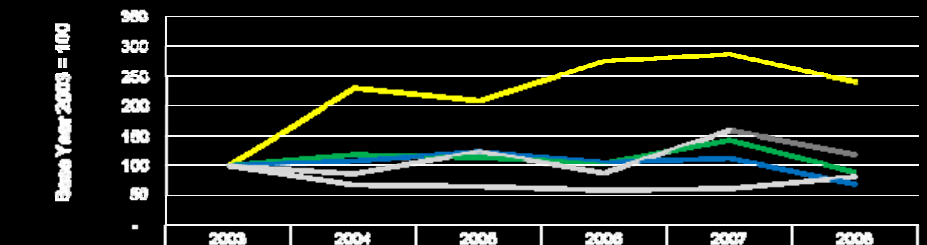
Canada VC Investment Funds Trend: $ per Capita Invested Capital



	2003	2004	2005	2006	2007	2008
British Columbia	26.20	59.70	53.60	70.20	71.81	98.20
Ontario	54.04	63.42	59.95	54.13	74.41	44.80
Quebec	76.79	82.02	93.02	79.00	84.11	80.68
Prairies	16.16	13.84	19.32	13.43	24.19	17.52
Atlantic	23.71	15.70	15.34	13.66	14.30	18.28

- BC highest $ per Capita Invested Capital in 2008

Canada VC Investment Funds Trend: Cumulative Growth (Base Year 2003 = 100)



	2003	2004	2005	2006	2007	2008
British Columbia	100	230	209	276	287	241
Ontario	100	119	114	104	144	99
Quebec	100	106	123	105	112	99
Prairies	100	99	123	87	109	118
Atlantic	100	86	85	87	99	91

- BC outperforms when factoring cumulative growth from 2003 - 2008

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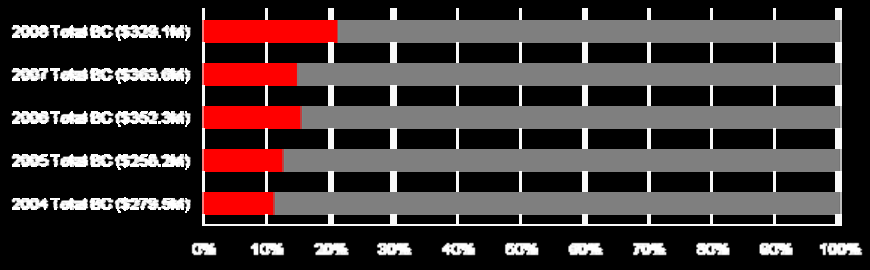
Total BC Venture Capital: Angels and Investment Funds Invested Capital



	2004 Total BC ($279.5M)	2005 Total BC ($256.2M)	2006 Total BC ($352.3M)	2007 Total BC ($363.6M)	2008 Total BC ($328.1M)
BC Angels ($mil)	$31.4	$32.5	$54.5	$54.1	$89.3
BC VC Investment Funds ($mil)	$248.1	$223.8	$297.9	$309.5	$238.8

- BC Angel Investors: Continued Strength and Persistence

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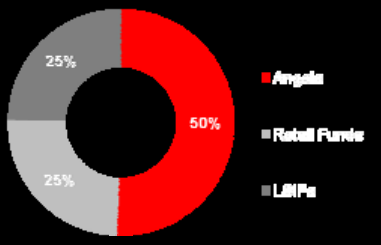
BC Venture Capital Programs: Capital Invested Proportions Trend

2008: The Growth of Angels



	2003	2004	2005	2006	2007	2008	Average
Angels ($ mil)	**39.6**	**31.4**	**32.5**	**54.5**	**54.1**	**69.3**	46.9
Retail VCF ($mil)	1.1	10.3	28.3	20.8	24.3	33.9	19.8
LSIFs ($mil)	36.3	39.8	33.1	40.9	35.4	34.0	36.6
Total	**77.1**	**81.5**	**93.8**	**116.2**	**113.7**	**137.2**	

- 2003 – 2008: BC Angels increased from $39.6M to $69.3M
- Angels continue to grow and dominate BC VC Program Invested Capital

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BC VC Top 5 Financings in 2008

	Amount Raised ($mil)	Tax Credit Supported Investment ($mil)	Key Investors
D-Wave *(Quantum Computing)*	**28.0**	**4.4**	BDC Venture Capital Group, BCIMC, Draper Fisher Jurvetson, Goldman Sachs, Harris & Harris Group Inc., International Investment and Underwriting
Inimex *(Life Sciences)*	**22.0**	**4.3**	Advantage Life Science Fund II, Astellas Venture Management LLC, BDC VC Group, BC Discovery Fund, Canadian Medical Discoveries Fund, Morningside Venture Investments Ltd., Roche Venture Fund, Working Opportunity Fund
NxtGen Emission Controls *(Emission Controls Technology)*	**18.7**	**11.9**	Altira Group LLC, Yaletown Ventures I LP
Apparent Networks *(Network Management Tools)*	**14.3**	**0**	Bain Capital Ventures, BDC Venture Capital Group, Egan-Managed Capital, JMI Equity
CELLFOR INC. *(Seedlings for Reforestation)*	**11.9**	**1.4**	Louisiana Ventures

- BC VC Top 10 Financings in 2008:
  - **$133.8M** Raised from **$16.4M Eligible** Tax Credit Supported Investments
  - **$4.9M** in Tax Credits

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BC Venture Capital Success Stories

- Technologies Inc. (McKESSON Medical Imaging Canada)
  - Founded in 1987 to develop breast cancer detection technology with 4 employees
  - Received first round VC funding in 1996, floated IPO and structured alliance with GE
  - Bought by McKesson Corp. for $536M in 2002 with company retaining operations in Richmond, B.C., employing 147 staff and boasting $30.7M revenues
- Creo Inc. (Kodak Graphic Communications)
  - Key Investors: BDC, Star Ventures, Adams Street Partners, Technology Crossover Ventures, Harbourvest Partners, and Goldman Sachs
  - Michelson found early financing from friends and family – now snowball effect has Michelson as an Angel Investor through the BC VC Programs
  - Acquired by Kodak in 2005 for $954M USD and now employs over 1300+ staff in BC

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Summary: BC VC Programs *Drive* Angel Investments

- BC Venture Programs are effective - spurs invested capital (IC)
  - BC exhibits largest regional increase in Canada for IC by Funds
  - BC is the only province of Top 3 to increase IC by Funds from 2003 – 2008
  - BC starts lowest $ per capita IC by Funds in 2003 and ends highest in 2008
  - BC outperforms when factoring cumulative growth from 2003 - 2008
- BC Angels are resilient and growing
  - In 2008, BC Angels set new unprecedented records
    - $69.3M or 21.1% of Total BC Venture Capital IC
  - Angels continue to grow and dominate BC Venture Capital Programs IC

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Summary:
BC VC Programs *Drive* Angel Investments

- Low Cost and High Payback of BC Venture Capital Programs
  - For BC's Top 10 Venture Capital financings for 2008, $133.8M was raised from $16.4M Eligible Tax Credit Supported Investments
  - 30% or $4.9M Actual Tax Credit Supported Investment



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BC Venture Capital Programs

Discussion

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Building & Sustaining a High-Technology Sector in Canada

The Need for Government Action

Public Policy Forum --- Sixth Quebec City Conference
19 October, 2009

Canada's technology based innovation companies are suffering, due to both the significant challenges they already face in today's business environment, and the challenges posed by a rapidly rising Asia, which will impact us all. The reality that most Canadian high-tech companies are highly dependent on exports to foreign markets (dominated by sales in the U.S.) has also made them particularly vulnerable to the global 'credit crunch' over the past year. In this environment, Canada's federal and provincial governments will need to urgently consider what new initiatives should be brought forward, and what additions or amendments to present policies are appropriate.

The challenges of starting and growing high-tech industries in Canada are significant, but this is also an excellent opportunity for governments to strengthen Canada's technology based industries and activities, thus generating significant new economic activity, protecting well paying knowledge based jobs, and strengthening our potential for commercialization of future innovations. While jobs in traditional industries are certainly important, the emphasis at this time should be on the policies and economic stimulus needed to ensure continued prosperity by investing for the future, with an industrial strategy focused on supporting Canada's high-tech innovation companies at various stages of their growth cycle.
(The term "High-Technology Sectors" refers in particular to the four "Priority Areas" [1] cited in the federal government's current S&T Strategy (2007) and their associated "Sub-Priority Themes" of March, 2008)

Canada's banks and other financial institutions have come through the current economic problems relatively unscathed, and Canada has been much less impacted by the global financial crunch with its associated recession than many other nations. This has have helped position us well for the future. But only if strong action is taken to create the environment needed to truly make Canada an 'Innovation Nation', focused on the generation and exploitation of intellectual property developed and commercialized right here. Canada's high technology sectors have the potential to lead economic and job growth over the coming decades if we can better harness our capabilities at home, while meeting the challenges from the rapidly developing economies of the Asian giants. Access to adequate venture capital will be an essential ingredient of the recipe if we are to succeed.

The proposals laid out below provide a set of significant steps that can be taken within a reasonable time frame to address a number of the serious challenges currently facing Canada's High-Technology Sectors. Our nation's technology base is already threatened. If we fail to act at this critical juncture, Canada will see the further loss of a large portion of our tech sector companies, across many different fields, with the associated loss of many difficult to replace jobs for our best educated citizens.

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1.) Improved support for Technology Intensive Companies requiring access to credit, securitization and insurance services:

Although the federal government, as with many other nations, has already put extensive measures in place to 'back stop' lending by commercial banks and facilitate the ability of these institutions to compete in global markets, this support is still not flowing down to Canada's high tech companies. These firms all rely on access to capital, the ability to borrow for growth or on-going operations, the capacity to monetize or securitize assets, and the ability to manage assets and transactions for their everyday business operations.

[1] The four "Priority Areas" of the federal S&T Strategy being Environment, Natural Resources and Energy, Health and Life Sciences, and Information & Communications Technologies.

Fortunately, not a single Canadian financial institution has required a dollar of taxpayers money to ensure their survival or to prop up their balance sheets, though significant government programs have been put in place to temporarily expand the ability of these institutions to sell onwards their high quality mortgage or lease pools, supplementing the normal markets which seized up quite dramatically late last year. However, rather than passing on this additional financial capacity, banks and non-bank commercial lenders appear to be focusing on strengthening their own balance sheets and reducing their risk exposure, rather than extending needed support to Canadian businesses. Despite having these new government programs available to them to ensure a continuing flow of credit in the markets, many banks here appear to have altered their internal practices to now require loan guarantees, Letters of Credit, or other collateral before they will continue to do business with long standing customers. And regrettably, the terms and conditions of some of the government's market supplementing programs mentioned above have been so onerous and risk adverse as to make them of little interest to our banks, and unavailable to the commercial sector. While this certainly demonstrates the bona fides of Canadian banks as amongst the worlds most conservative and risk adverse, these practices are placing inordinate pressure on scarce operating capital for many high-tech companies, and particularly for those active in foreign markets.

Although the Canadian government has already significantly expanded the capacity and programs of both the Business Development Bank (BDC) and the Export Development Corporation (EDC), more needs to be done to ensure that these programs are strengthened and extended to cover a greater portion of our technology intensive companies. While there will no doubt be considerable temptation to quickly scale back on these recent program enhancements out of fear of getting into competition with the private sector, it would be disastrous if extended credit and insurance programs, as well as enhanced venture funding programs, were wrapped up prematurely.

In the case of the $12 Billion 'Canadian Secured Credit Facility' (CSCF) put in place to provide an replacement for the frozen lease pool market, a complete 'rethink' would appear to be necessary. As implemented, this program is really only available to assist the major banks and big auto makers, who's ability to lease new vehicles had been destroyed by the 'global credit crunch'. The intent was to give the Canadian banks an alternative buyer into which they can sell securitized lease pools, but many smaller companies leasing technology equipment, office systems or other assets to their clients have been unable to take advantage of the program, due to the many restrictions on it's application combined with the reality that Canadian banks are not currently interested in taking on new lease pool customers.

Furthermore, with the partial recovery of major credit markets and having survived their near-death experience, the big three North American car companies don't appear to using the CSCF either. Recent financial press reports suggest that there has been little, if any, drawn down on this program, operated through BDC, the Canadian government owned commercial bank managing the CSCF.

2.) Increased Support for Corporate R&D in Canada Through Modernization of the SR&ED Program:

Research and Development is the heart that powers innovation, and the availability of funding support through a combination of venture capital and various tax incentives each modern nation provides is the lifeblood that keeps the system functioning. However, events of the past year have significantly impacted the ability of many companies to continue funding an appropriate level of R&D, and the larger firms, seeking ways to reduce costs, are turning to smaller, more flexible companies to carry out more of the needed R&D and develop new commercial products for them. Other nations are injecting significant amounts of money into corporate and government R&D programs, and adjusting their R&D tax treatment to better support technology intensive innovative companies in this role. However, Canada's tax credit system hasn't kept pace with the needs of its tech sectors, nor with the tax treatment of R&D expenses in other, competitor, nations.

To address the broader need to better stimulate and encourage corporate expenditures on R&D in Canada, reforms are required to the current Scientific Research and Experimental Development (SR&ED) program to increase the availability of refundable tax credits for high-tech SMEs and remove artificial impediments to access to the program. Changes announced in the 2008 Budget dealt only with adjustments to ceiling amounts first established back in 1985. Additional reforms are needed so as to ensure the program remains effective within the current fiscal context, and for the coming years. Provincial governments should also be

encouraged to adjust their own programs to be largely in line with any revisions at the federal level, while allowing for local circumstances. The following changes are therefore suggested, to address both the immediate and longer term issues:

a) Beginning as soon as possible, but for a limited time of perhaps two years, companies which have already earned SR&ED R&D Investment Tax Credits which they have been unable to use due to lack of profitability should be permitted to claim immediate refundability for up to 50% of the balance not used to date. In most cases, this is simply an acceleration of relief that would otherwise have been claimed at a later date, so no additional obligation is created. The remaining 50% would be still be useable in the normal manner in subsequent (profitable) years. Such a temporary program would be of enormous benefit to a number of significant Canadian R&D intensive companies currently 'sitting on' ITCs they are unable to benefit from, even though the R&D work has been done, claimed for, and accepted.

b) Alternatively, the Government of Canada could immediately amend the rules to allow companies not qualifying for refundable tax credits to sell unused R&D ITCs to other entities who can make use of them, in a manner similar to what was previously done for oil and gas exploration incentives.

The present distinction between Canadian Controlled Private Corporations (CCPCs) and others, including publicly traded companies, inhibits new tech companies from accessing significant new investment funding from either foreign investors or through the public markets by IPO. To do so means that they would lose the benefits of the SR&ED refundable tax credits just when most needed, at the very time when private venture capital is extremely limited in Canada. Therefore;

c) The distinction between refundable tax credits available to many CCPCs, but not to otherwise similar but publicly traded corporations, needs to be removed so that all companies, to a defined size by income and defined annual maximum qualifying R&D limit, should be eligible for refundable tax credits at the current rates. Beyond these limits, companies, whether publicly or privately held, would qualify for standard (non-refundable) Investment Tax Credits at the prevailing rates.

The present "associated companies" rules within the SR&ED system date back to an earlier time when classic company / subsidiary business models were common. But these days, they interfere with the effectiveness of the "Ecosystem Model" where independent firms, whether or not with similar management or ownership, work together in a loose coalition to support the products of the dominant company or dominant technology platform in the group, thus benefiting the smaller companies as well. This flexible model is attracting global attention and is widely seen as a way of enabling larger companies to more quickly bring innovative products to market, building on and incorporating the efforts (both shared and individual) of other "associated" companies in the ecosystem. The Ecosystem model may also provide the means by which young technology intensive companies can establish collaborative arrangements with counterparts they support or even establish in the rapidly developing economies of India and China, allowing them to retain intellectual property in Canada, while partnering to carry out product development and manufacturing in lower cost jurisdictions. Accordingly;

d) The artificial practice of prohibiting firms which are part of a group of "associated" companies from participating in the SR&ED program if the total capital value of the group is $15M (to be increased to $50M under the Budget 2008 proposals,) should be removed, if the associated companies received no unearned benefits or subsidy from one another.

These steps should be taken quickly, given the present economic environment. But the unfortunate reality is that Canada must now be considered a high-cost locale for the conduct of company R&D. Experienced people with high quality scientific, engineering, software and project management skills are now available in places like India and China at literally a fraction of the cost of those in Canada of similar caliber. The average salary cost of a young electronics engineering graduate from China's best universities, with 2 to 5 years experience in the industry, is less than 15% of the cost in Canada, or 12% of the cost in the United States. And the world's best engineering and software universities now include not only the Massachusetts Institute of Technology (MIT), but the Indian Institute of Technology (IIT), turning out thousands of bright, very well educated and industrious graduates each year.

Many European and North American companies and associations are now pointing out that the global competitive environment in which we must all operate is forcing them to relocate their R&D work offshore. Yet these are the very jobs that Canadians expected would help protect us from the downsides of globalization, by ensuring continuing high technology, high education, high value work would remain here, even if manufacturing increasingly moved offshore to lower cost environments. This is no longer the case, and Canadian jobs are directly at risk as companies react to the changing environment. Other nations, such as France, are already taking action to try and stem the outflow of such R&D and related innovation jobs, and are stressing the importance of corporations maintaining control of the intellectual property developed, as well as maintaining the 'mind and management' of the company within their country. Improved government support for corporate R&D programs is one of the most effective tools available to us to adjust to this new reality. Accordingly;

e) The federal government, and provinces with matching SR&ED programs, need to carefully examine the proposals already put to them by numerous large technology based companies and associations, and consider making a much higher proportion of SR&ED tax credits fully refundable. This could be done in stages, over two or three years, thereby offering greater opportunities for larger companies, public companies, and those not currently profitable to reduce their R&D costs, if the work is done in Canada.

3.) Increasing the Availability of Venture Funding for New and Growing Companies:

One of the most important areas where improvements in government policy and tax regimes can better support the creation and growth of new technology based Canadian companies is to quickly address the growing crisis of the lack of venture capital for start-up, and especially later stage expansion, of Canadian technology companies. This can most effectively be done by use of the tax system to leverage private investment in new tech start-ups and early stage companies.

a) The federal government should introduce a "Venture Capital Investment Tax Credit" of 15% that would be fully refundable for individuals investing in an eligible business corporation (EBC), up to a limit of $60,000 in tax credits per year, whether their investment was made with the EBC directly, or through a recognized commercial venture capital company, including captive sole-shareholder "Venture Capital Corporations" established by Angel investors, alone or in groups. Corporations investing in an EBC, whether directly or through a commercial venture capital company, would then be allowed to invest without annual limit, but would earn 15% non-refundable tax credits which could be used only to offset taxes owed.
This program should be established as a federal / provincial / territorial initiative with each government providing 15% tax credits under the same rules, and would apply first in provinces offering matching provincial investment tax credits so as to achieve an immediate total tax credit of 30% between the provincial / territorial and federal tax systems.

This program would be modeled on the very successful British Columbia Investment Capital Program currently in operation and has worked very well there for companies that are "pre-commercial" in their development. This has included successfully introducing investors who help mentor the progress of the eligible business they've invested in. In the B.C. case, there is also provision for employee share ownership plans for an Eligible Business Corporation, where employee investors qualify for a 20% non-refundable tax credit to a maximum of $2000 annually. B.C. also provides a 15% provincial tax credit, up to $2000/yr, for investments through an Employee Venture Capital Corporation. Equivalent to Labour Sponsored Funds elsewhere in Canada, such investments also attract the existing federal tax credit of 15% to a max $750/yr. In this variety of ways, private investors are encouraged to directly participate in the founding and funding of innovative technology start-ups.

The willingness of provinces to partner with the federal government on this program and the mechanics of its administration would be established through Fed-Prov negotiations. Across the country, some provinces are adopting or at least studying such an approach, though Ontario has apparently discontinued a similar incentive, in favour of direct provincial government investment in VC funds. For provinces such as B.C. already offering such ITCs themselves, a joint program offers the potential for the province to reduce it's present tax credits by half to match an incoming federal program, allowing the program to go twice as far within the allocated funds. In the case of provinces already running such investment tax credit programs, the program could be administered entirely by the provincial staff should the federal government agree, or (conversely) administered by CRA for both federal and provincial levels, should a province so request.

In the case of a province not prepared to launch a similar program, only the federal tax credits would be available initially, up to the share of funding calculated for that province. Having an annual ceiling in each province and nationally ensures that the costs are understood and predictable. The Province of British Columbia currently has an annual $30 million tax credit budget for its program, which last year succeeded in raising $83 Million for investment in qualified small businesses. With matching programs by each province and full take up by private sector innovation companies and investors, a similar success rate would attract annual private sector investments of up to $2.7 Billion, with only $500 Million in federal tax expenditures. The program could be phased in over two or more years if necessary, depending on the state of Canada's finances and other priorities, but should be launched as quickly as possible.

Alternatively, some argue that the federal government should examine the possibility of eliminating capital gains tax for Canadians on investments in leading edge technology companies, by exempting such capital gains from the lifetime limit for individuals, or in the case of investing companies, exempting such capital gains entirely. SR&ED and NRC-IRAP records could be used to differentiate companies so as to identify those qualifying as being sufficiently engaged in technology research and related product development, in Canada.

However, this option is not recommended. Consultations with the high tech community and venture capital investors indicate that a capital gains exemption would have significantly less investment incentive value, while an up-front tax credit has considerable leverage, at exactly the time small innovation companies need it. Since only a small proportion of early-stage companies make it to a 'liquidity event' whereby an investor may actually realize taxable profits, and this can take from seven to ten years, a capital gains tax benefit is significantly discounted by early-stage investors. The objective must be to significantly increase the pool of individuals and companies prepared to invest today in new Canadian innovation companies. As has been shown by the SR&ED Program, for all its present shortcomings, a tax credit system at the 'front end' is much more likely to be effective and better encourages investment. Moreover, identifying qualifying companies would become as challenging (and controversial) as current SR&ED administration practices.

Early adoption of the proposed VC Investment Tax Credit system by all provinces and the federal government as proposed above will attract Canadians to invest in our new and early growth high-tech companies. However, it will do little to attract foreign venture capital investment funds unless other steps are taken quickly to address this aspect.

> b) In addition to the Venture Capital Investment Tax Credit system outlined at a) above, which is designed to make investing in Canadian technology companies more attractive to Canadian taxpayers and venture funds, it is important that the government complete the steps that were announced in Budget Plans 2007 and 2008 intended to address the issues inhibiting venture investment from foreign (largely U.S. based) sources.

This includes the urgent need to amend the 'Section 116 Certificate' requirements, both as promised in Budget Plan 2008, and beyond. The Budget proposals endeavour to simplify the procedures for foreign investors eligible for avoidance of dual taxation under Canada's tax treaties, which is important, but does not go far enough. Present procedures for foreign investors wishing to invest in Canadian technology start-ups as Limited Partners in venture capital funds find themselves having to register individually as Canadian taxpayers, and then apply for recognition (granted under Section 116 of Canada's tax code) that indeed they are protected by reciprocal tax treaty from being taxed both here as well as at home. Pooled equity and 'Fund of Funds' structures, plus the mixing of funds from different sources in such VC pools, make it impractical in today's world to require that foreign investors individually register as Canadian taxpayers, just so as to then be certified exempt from taxation in Canada under existing treaties.

As a result, even with the Federal Budget provisions already adopted, many investors will still not invest in Canada and thus risk being subject to the 25% withholding tax. Instead, recently created (not yet public) companies, including Canada's technology based innovation start-ups, should simply be deemed NOT to be Taxable Canadian Property for purposes of the Income Tax Act (whether the investors are covered by treaty or not), as is already the case with publicly listed companies. We expect that this would leave the Section 116 Certificate process in place for real property and natural resource investments only.

It should be noted that no tax revenues would be lost through these proposals, as many foreign VC investors today simply refuse to invest in Canadian technology companies anyway. Instead, additional investment would create additional jobs and tax revenues. A concerted communications campaign will also be needed to ensure that foreign VC firms are made aware of this significant reduction in the hurdles they face to invest in Canadian tech companies. Without these changes, Canada will be condemned to the ranks of third world nations that are considered 'Off Limits' for investors in countries such as the U.S., Japan and Britain, and Canadian companies will be unable to raise the money they need to grow and create well paying jobs here.

While the steps outlined above are important to establishing a more supportive environment for individuals and companies prepared to invest in Canadian technology companies, traditional Canadian and U.S. sources have virtually dried up during the current 'credit crunch'. New start-ups still need to be encouraged, as they generate new jobs and prepare us for a better future as the global economy improves.

Action was therefore taken by the federal government in the last budget to ensure that there is at least some funding available during this difficult period to sustain existing tech companies still relying on venture investment, since there is little prospect of raising needed capital by 'going public' at this time. The federal Business Development Bank (BDC) has traditionally played a significant role in supporting Canada's tech sectors through it's own venture capital investment program. Moreover, their participation is often the encouragement that private sector venture capital companies or individual investors need in order to join-in themselves, so there is a considerable 'leverage effect' to BDC's participation. Accordingly, the government authorized both BDC and EDC to increase their participation in venture capital investments to help deal with the current paucity of venture funding. This is apparently intended to be a temporary program to address the current global economic situation, but needs to be continued.

c) Canada's Business Development Bank and Export Development Corporation should be permitted and capitalized to continue playing a larger role as a venture capital funding source, providing ongoing support to their existing portfolio of investments through bridging capital investments, as well as carrying out new investment activity in promising technology companies. As in the past, BDC and EDC should encourage other VC investors to participate in order to multiply the effectiveness of their own investments and help ensure a future pipeline of technology based innovation companies.

4.) Government Investments in, and Support for, Technology Commercialization:

To improve the capacity of companies to carry out applied research and commercialize such work through development of new products and services, there is a need for a shared-risk repayable investment program similar to the present Strategic Aerospace & Defence Initiative (SADI), for those of Canada's High-Technology Sectors that do not currently qualify under that program. This could be achieved either by;

a) Amending the definition of the sectors and companies qualifying under SADI so that those in the S&T "Priority Areas" and the related S&T "Sub-Priority Themes" approved by the government in 2008 would also qualify to access SADI.

Or alternatively;

b) Establishing a separate, parallel fund accessible by Canada's other High-Technology Sectors as identified in the federal 2007 S&T Strategy, and the 2008 Sub-Priority Themes, whereby qualifying companies would have access to 50/50 cost sharing funds for salaries of personnel directly involved in applied research and new product development, on a risk shared future refundable basis. (Any such program would, of course, need to be broadly compliant with our trade agreements.)

These measures need to be implemented as quickly as possible, in light of the current challenging environment in which Canada's tech companies find themselves. At the same time, a program such as outlined above must take into account that it can take as much as ten years for a company to become profitable, no matter it's size and sales, whether privately held or publicly traded, so the benefits must be available to all. In either case, it is essential that any such program also be flexible and quick to respond, so as to be an effective partner for today's fast moving technology industries. Most companies within Canada's technology communities have neither the scale nor 'staying power' of major firms involved in the defence and aerospace industries. They cannot take advantage of programs that take dedicated company staff working over many months simply to develop and follow through an application under programs like the former TPC.

One of the most widely respected and accessed program for support of new technology companies in Canada has been the Industrial Research & Assistance Program (IRAP) run through the National Research Council (NRC). However, IRAP has traditionally focused on the R&D aspects of technology development, through the provision of modest grants and loans, and advice from IRAP field staff. Recognizing that the small scale of present IRAP grants has not kept pace with today's requirements, the government allocated within its last budget an additional $200 Million over two years to IRAP funding, and increased the size of annual maximum contribution agreements. This was a good start, but needs to be continued.

Significant improvements are required to the IRAP program, as follows;

a) Present funding levels are woefully inadequate, with the program over subscribed within the first few months each year, bringing the entire IRAP program into question in the view of Canada's high tech business sectors. While the government is to be congratulated for its commitment of another $200M over two years, this increase is being treated as a one-time 'economic stimulus' measure, expiring after the funds are dispersed. Instead, the government should be urged to continue IRAP funding at least at this increased level, and preferably ramping up the additional funding to an ongoing $200M annually, on top of it's very modest $70M current regular budget.

b) The IRAP mandate should be expanded to more specifically include helping companies adopt and adapt technologies, moving them into the commercial marketplace in both Canada and abroad. However, companies should have the option of taking advantage of IRAP advisory staff (as is the present practice) or accessing equivalent funding to retain private expertise, or even to support company internal staff activities in these areas, as some other nations do.

c) Furthermore, given the effectiveness of the IRAP program, and its knowledgeable network of private sector experienced advisory and support staff, IRAP could also be tasked with working with Canada's universities to develop more effective methods of commercializing the discoveries of our very capable university researchers. Canada now has the world's second highest level of R&D funding for university research, as a percentage of GDP, after Sweden. Almost twice that of the U.S. Yet our record of value and job creation from the commercialization of our considerable research output has been nothing short of abysmal. A new approach is needed, preferably without creating a new government organization in the process. With IRAP's credibility and track record, assigning this additional role to the IRAP program within the NRC may be the best and quickest way of tackling this long standing problem.

In addition to these important changes, greater support is needed for Canadian tech companies selling into foreign markets. Through its legislation and recent additional funding from the federal government, EDC has been mandated and funded to provide a wider range of guarantees and insurance cover in support of Canadian tech companies selling overseas, expanding on what they already do for Canadian exporters and their foreign customers. To build on these improvements;

a) Both EDC and IRAP should be encouraged to broaden the support already provided Canadian exporters through closer collaboration with the Trade Commissioner Service of the federal Department of Foreign Affairs and International Trade, including the positioning of expert personnel in selected foreign capitals with DFAIT TCS staff.

b) Support and funding should be provided for the efforts of DFAIT's Trade Commissioner Service to better support Canadian companies in foreign markets, through that department's more proactive program of seeking out opportunities for Canadian technology exporters. Support should also be provided for their proposed "Global Innovation Strategy", which also targets research and development partnerships for commercialization of new technologies through collaboration with foreign companies and labs.

5.) Improving Government Procurement Practices:

Canada's participation in major trade agreements (and specifically NAFTA, WTO-AGP, and the AIT,) severely limits the extent to which governments can directly support Canada's high tech companies in their internal procurement. Nonetheless, with the federal government alone purchasing $20 Billion of goods and services annually, and all other levels of government (including schools, hospitals & universities) spending a further $130 Billion a year, there is significant potential to use public procurement to support and encourage innovative solutions developed by Canadian tech companies, while remaining faithful to our international commitments.

Canadian federal and provincial procurement practices need to be reformed to ensure that departments are required to consider the impacts of their requirements and processes on potential Canadian suppliers, with a view to ensuring equal opportunities for existing Canadian products able to meet their operational needs. In particular;

a.) Conscious and continuing monitoring of governments' own procurement activities is necessary, simply to ensure a 'level playing field', of which a major component must be to ensure that procurement decisions are not dominated by a narrow focus on only price and supplier strength. In addition, there needs to be more careful consideration of the ability of small Canadian companies to meet their requirements, tailoring procurement activities to better match the capabilities of local (Canadian) SMEs. Even though doing so may not always ensure the most efficient procurement activity from the government's internal management perspective, the added value to Canada's tech sectors would be well worth the small additional internal cost to governments.

b.) More careful and strategic planning of future technology requirements by governments at all levels and their agencies is essential to optimizing future government technology acquisitions. This could then be complemented by the introduction of funded programs to competitively contract with Canadian technology companies for the R&D work required to develop solutions for these future needs.

It should be noted that restricting government R&D procurement to Canadian companies only is in keeping with our trade agreement obligations. Though later procurement of equipment or services to address the requirements would normally be done through competitive processes open to both domestic and foreign companies, the original developer of the technology will usually have a substantial advantage in the marketplace. This is not an uncommon practice, and indeed some national governments have used such proactive practices for many years, without trade complaints.

The federal government in particular should be taking a much broader approach to the definition of national defence and national security requirements, along the lines more consistently followed in the United States. For example, it has recently been suggested by U.S. President Elect Obama's team that a major 'Technologies stimulus package' aimed at reducing dependency on foreign energy sources could be considered "---a matter of national security". Canada should take a similar approach, making better use of the defence and security provisions within NAFTA. For example;

c) An innovation set-aside program, as permitted under the trade agreements, should be established whereby departments and agencies with responsibilities in national security (broadly defined), would ensure that a portion of their budgets would be dedicated to support of procurement of innovation focused goods and services from Canadian SMEs.

In each proposal outlined, care will need to be taken to ensure that such programs are based on defined and foreseeable requirements, that department and agency use of such programs continue to be generally carried out in a competitive manner while allowing for unsolicited proposals from industry, and that the programs are designed so as to ensure compliance with trade agreements. (Or at least to ensure consistency with the interpretations applied by our major partners to their own programs.)

6.) Creating a More Supportive Investment Environment for Development of High Technology Companies in Canada:

While industry can do much on its own, targeted government support is still appropriate to help ensure that national policy priorities are being addressed. For example, Canada already has a number of innovative tech companies focused on 'Green technologies', including clean energy systems and more sophisticated control of energy utilizing equipment, other nations (mainly in Europe) are far outstripping Canada's small efforts in this area. If Canada does not act soon to provide more concrete support in the development and commercialization of 'green technologies' across the broad spectrum of opportunities in this area, we will permanently lose out on the potential for Canadian companies to become significant players in this important area. Accordingly;

a) Beyond the stimulus package brought forward by the federal government which focuses largely on investments in basic hard infrastructure renewal, (the usual bridges, roads, etc,) governments should provide for significant investments in the applied research, development and commercialization of a broad range of 'green technologies'. This would have a multiplier effect and increase significantly the private monies that would then be invested, thereby improving the overall investment climate for technology intensive start-ups.

b) Such a program should include support for the development and deployment of more energy efficient systems to replace existing equipment in a wide range of areas, rather than focusing on new 'leading edge' energy self sufficiency solutions as appears to be the expectation in the United States. Such a program should also include support for more advanced telecommunications capabilities that would encourage; more use of 'Telework' (thereby reducing commuter travel), greater use of remote medical diagnostic and treatment systems in our health care environment, improved monitoring and management of energy consuming systems, and the development of new technologies to allow aging Canadians to remain in their homes longer, thereby reducing the pressure on long-term care facilities.

In addition to these steps and the other recommendations contained within this paper, there is also a need to consider how best to deal with the increasing regulatory burden being placed on private sector corporations. And many of these do not originate within Canada. Unfortunately however, Canadian companies are heavily impacted by the increasingly risk adverse regulatory regimes within the United States, some of which are being replicated here. Whether the Sarbanes-Oxley legislation, (often referred to as "SOX",) or new accounting requirements around software liabilities embodied in standards such as SOP97-2, or the worrisome news that the SEC may soon be given the power to examine and regulate the workings of private investment funds, including venture capital funds, all of these regimes have the effect of increasing the regulatory and financial burden placed on struggling young technology companies, making it even more difficult to compete with the new Asian giants India and China.

The challenges facing Canada's high-tech sectors in today's environment are complex and significant. Only through a combination of appropriate policy and fiscal actions by government will Canada be able to ensure that it remains an "Innovation Nation", generating well paying knowledge based jobs, and greater wealth for the entire country. Immediate action is required to ensure the survival of some companies in today's environment, but the steps outlined herein are vitally needed by the entire Canadian tech community to significantly improve the longer term prospects for our S&T based companies, and thus our economy.

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Wesley Clover

October, 2009

Panel 3

Theme: Public/Private Venture Capital Partnerships: Fund Managers' Perspective - One Year Later

Moderator: **Dr. Robin Louis**
Former Chairman, Ventures West (Canada)
Former President, CVCA, Canada's Venture Capital & Private Equity Association

Panellists:

Ms. Franceska Banga
CEO
The New Zealand Venture Investment Fund (New Zealand)

Mr. Christian Motzfeldt
CEO
Vaektsfonden, The Danish Investment Fund (Denmark)

Mr. Jacques Bernier
CEO
Teralys Capital (Canada)

Mr. Stuart Waugh
Managing Partner
TD Capital Private Equity Investors (Canada)

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Panel 3

7.1 Introduction

During the past 10 years several funds of funds have been established which are intended to stimulate the venture capital industry in their host countries. These funds of funds use government money to catalyze the formation of venture capital funds which then also receive investment from private sector sources. As there is now some experience with these, the purpose of this panel is to discuss this model--how well it works, what are the pitfalls and what are the ingredients of success. Topics which will be discussed include:

1. Government sponsored funds of funds are structured to be catalysts to work with private sector investors, in several ways: a) at the fund of funds level, by attracting other private sector LPs to the funds of funds; b) at the funds' level by being lead investor, certifying fund managers, setting terms, attracting other private sector LPs; and c) at the company level by helping to attract co-investments. How can government sponsored funds most effectively play this catalyst role?

2. Some Funds of Funds have an objective of helping to develop a sustainable VC industry by establishing standard investment structures, standard reporting, reporting industry data and the like. How successful has this been and what are the success factors?

3. Will government sponsored funds of funds play a catalyst role that will allow development of funds which will be self sustaining in the future or will government participation be permanently required?

4. What other market conditions are required to support a VC industry: a) to get the industry started; b) for it to be permanently sustainable?

5. How does each country adapt models to their own market conditions?

Panel 3

Moderator

Dr. Robin Louis

Former Chairman, Ventures West (Canada)
Former President, CVCA, Canada's Venture Capital & Private Equity Association

Robin Louis is a private investor, having recently retired from the venture capital industry. He currently is an active "angel" investor, backing and advising several emerging companies.

He is a member of the Board of Governors of Science World British Columbia where he also serves on the Chair's Advisory Committee, is Chair of the Capital Campaign, and sits on several other committees. He also is a member of the Organizing Committee of the Public Policy Forum, a part of the Quebec City Conference (formerly the North American Venture Capital Summit).

Dr. Louis was President of the Canadian Venture Capital & Private Equity Association 2003—2005 and Chairman 2006—2008. The CVCA represents over 1,100 member organizations, with over $50 billion in capital, that invest in venture capital, mezzanine, buyout and other forms of private equity. He has served as a director of the CVCA, the Vancouver Enterprise Forum and the AceTech Academy for Technology CEOs.

He was a partner at Ventures West Capital Ltd. 1991-2008 and served as President 1999-2005 and Chairman 2006-2008. Ventures West invests in technology companies across and was one of Canada's largest private venture capital firms. Dr. Louis was instrumental in raising approximately $700 million of Ventures West's investment capital from institutional investors in Canada and the US. His investment activities focused on software—including several private and public (TSE & NASDAQ) companies.

Prior to joining Ventures West, Dr. Louis was President of Columbia Computing Services—a software company that became the dominant supplier of school administration software to school districts and state boards of education throughout Canada and the US. Columbia was listed on The TSE and subsequently was acquired by a British company.

Dr. Louis earned B.Sc. (Honours) and M.Sc. degrees from the University of Victoria and a Ph.D. in physics from the University of British Columbia.

Panellists

Ms. Franceska Banga

CEO
The New Zealand Venture Investment Fund (New Zealand)

Background

Franceska Banga is the founding Chief Executive of the New Zealand Venture Investment Fund. NZVIF is a $200 million venture capital fund of funds established in 2002, by the New Zealand Government, to catalyse investment and grow the venture capital market. Franceska is responsible for managing all NZVIF investment activity including fund manager due diligence, contract negotiation and ongoing monitoring and management of fund investments. NZVIF has made investments in 7 venture capital funds and formed 10 angel investment partnerships. Seventy nine individual investments have been made so far.

Franceska has deep knowledge of Australasian venture capital and private equity markets, through her involvement in the industry over the last nine years and is currently the Chair of the New Zealand Venture Capital Association.

Prior to the establishment of NZVIF, Franceska was responsible for advising the New Zealand Government on a range of strategic investment issues. Previous roles include Chief Strategist for the Ministry of Research, Science and Technology; Director for the New Zealand Treasury, responsible for hospital infrastructure investment; Senior Advisor, Reserve Bank of New Zealand.

Franceska has an Honours degree in Economics and Finance from the University of Auckland, New Zealand.

Other Appointments

Chair of the New Zealand Private Equity and Venture Capital Association NZVCA; Member of the New Zealand capital Market Development Taskforce.

Mr.Jacques Bernier

Managing Partner
Teralys Capital (Canada)

Jacques Bernier, Managing Partner and Founder, Teralys Capital Since July 1st 2009, Mr. Bernier is Managing Partner and Founder of Teralys Capital, a fund of funds whose limited partners are Quebec Governement, Caisse de Dépôt et de Placement and Solidarity Fund QFL. With the Solidarity Fund QFL since 2004, Jacques Bernier has been Senior Vice-President, Information Technologies, Telecommunications and Industrial Innovations until May 31st 2008 and has act as the gatekeeper for the fund of funds activity. An engineering graduate from École polytechnique in 1979, Mr. Bernier is behind the creation of the Industrial Innovation Center of Montréal. He was also co-founder and CEO of BGH Planning, a software developer, and co-founder and Vice-President of OMVPE Technologies, a manufacturer of semi-conductors. Mr. Bernier helped found Téléport de Montréal, a Quebec beacon in the telecommunications sector, and served as its President from 1987 to 2002. Before joining the Solidarity Fund QFL, he was President of Mégapoint, a holding company in the high-tech sector, and Chairman of the Board of LxSix Photonics, a leader in new production processes in fibre-optic communications and optical sensors. Over the past 29 years, Mr. Bernier has demonstrated his expertise both in Canada and the U.S. in launching businesses, financial engineering, business development, growing investments, scouting for new markets and defining innovative business strategies. Mr. Bernier is also a member of the Board of Director and executive committee of the CVCA

Panellists

Mr. Christian Motzfeldt

CEO
Vaektsfonden, The Danish Investment Fund (Denmark)

In 2001, Christian Motzfeldt was appointed CEO of Vækstfonden where he implemented a new market based strategy promoting technology based start-ups primarily by way of investing in private venture funds. With a total invested and commercial capital of some 800 million $, this government backed company is one of the largest fund-of-funds and venture capital players in Scandinavia (www.vf.dk).

From 1994-2001, Christian Motzfeld t worked in the Ministry of Economic and Business Affairs where his last position was Deputy Permanent Secretary in charge of business economics. Prior to 1994, he worked in Danske Bank, the largest commercial bank in Denmark, the National Bank of as well at the European Commission.

Mr. Stuart Waugh

Managing Partner
TD Capital Private Equity Investors (Canada)

Mr. Waugh serves as the managing partner of TD Capital, responsible for the direction and development of the firm's private equity investment strategies and fund management capabilities. He is a member of the Investment Committee, oversees the origination, evaluation and monitoring of primary and secondary Fund Investments and Direct Co-Investments and is involved in TD Capital's investor relations and business development activities. Mr. Waugh serves on the advisory boards of several private equity partnerships within TD Capital's portfolio.

Prior to joining TD Capital in 2002, Mr. Waugh was a management consultant with McKinsey & Company and an Executive Vice President with BPI Financial Corporation, a publicly traded asset management firm. Mr. Waugh began his professional career as a corporate/securities lawyer with McCarthy Tétrault where he advised clients, including TD Capital, on private equity, capital markets and mergers and acquisitions transactions.

Mr. Waugh received a B.A. (Chancellor's Medal) from Trinity College, University of Toronto and an LL.B. (Dean's Honours List) from the Faculty of Law, University of Toronto.

The Quebec City Conference – Public Policy Forum

Public/Private Venture Capital Partnerships: Fund Managers' Perspectives One Year Later

	VEKSTFONDEN	TeralysCapital	OVCF ONTARIO VENTURE CAPITAL FUND	New Zealand venture Investment Fund
	Christian Motzfeldt CEO	Jacques Bernier CEO	Stuart Waugh Managing Director, TD Capital	Franceska Banga CEO
Location	Denmark	Canada (Quebec)	Canada (Ontario)	New Zealand
Date started	2001	July 2009	June 2008	2002
Fund of Fund size	$900 million	$700 million (target of $825 million)	$205 million	$200 million
Amount of the Fund of Fund which is government money	$900 million	$200 million	$90 million	$200 million
Mandate--for investment in funds	Funds investing in small and medium sized growth companies	Funds	At least 80% in funds	$160 million for funds
Mandate--for direct investment	Yes, various programs	None	Up to 20% in Ontario-based companies	$40 million for seed investments
Mandate--for other investment	Loan guarantees	10% in secondary funds	None	None
Mandate--geographic location	Denmark	At least 50% in Québec, maximum of 25% in rest of Canada, up to 25% internationally	At least 80% of fund commitments in Ontario-based and Ontario-focused funds	New Zealand
Mandate--industry sector focus	All industry sectors	Venture capital and growth-oriented funds in IT, biotech, cleantech	Venture capital and growth-oriented funds and direct co-investments in innovative Ontario-based companies	Early-stage technology, venture capital, high growth companies. Excluded industries: property, retail, banking, mining
The following information is for investment in funds only				
Incentives for non-government investors	No			No tax for offshore LPs
Number of funds invested in to date	19	0	6	6
Total commitment to fund investments	$800 million	0	Approx. $75 million	$109 million
Target size of investments in funds	$10 to $40 million	$20 to $75 million	$10 to $20 million	$10 to $25 million
Maximum share of a fund that the Fund of Funds will take	66%	49%	Approx. 20-25%	50% but generally $2 of private investment required for each $1 of government money
Total size of the funds (including capital from others)	$40 to $300 million per fund	$100 to $500 million per fund	Minimum $50 million per fund	$30 to $100 million per fund

Business Case
To be read before the session

Bridging the SME early-stage finance gap: A case study on capital for Enterprise UK

Case Researchers:

Dr. Eli Talmor
Professor at London Business School
Chairman, Coller Institute of Private Equity (UK)

Mr. Ananth Vyas Bhimavarapu
London Business School MBA 2010 (UK)

Mr. Thibaud Simphal
London Business School MBA 2010 (UK)

Moderator and collaborator:

Dr. Josh Lerner
Jacob H. Schiff Professor of Investment Banking
Harvard Business School (USA)

Special guest:

Mr. Rory Earley
CEO
Capital for Enterprise Ltd. (UK)

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Business Case

8.1 Introduction

The objective of the case study is to put the reader in the position of the protagonist, who must make a decision while considering the various problems, pressures and choices facing him or her.

In order to get the maximum benefit from this case study, we suggest that the case be read in advance to understand the overall scenario, and the following questions be answered to facilitate an active case discussion:

1. What is your opinion about the suitability and sustainability of the Enterprise Capital Funds (ECF) programme for the UK and its monitoring authority Capital for Enterprise Limited (CfEL)?

2. Should CfEL change the structure, terms and methods of the ECF programme based on the result of the assessment and taking into account the current VC 'crisis' or funding drought?

Case Researchers

Dr. Eli Talmor

Professor at London Business School
Chairman, Coller Institute of Private Equity

Eli Talmor is a professor at London Business School and founding Academic Director of its Private Equity Institute. He was previously a professor of finance at the University of California (Irvine and UCLA), the Wharton School (University of Pennsylvania), Tel Aviv University and the University of Wisconsin at Madison.

Professor Talmor has extensively consulted to corporations internationally, and has been a director of European, and American publicly traded corporations. From 1994 to 1999 he was a director with executive duties of New Dimension Software (a NASDAQ corporation) and was instrumental in the company's major turnaround, which resulted in the largest sale of an Israeli company to a foreign entity to that date. He has since co-founded a holding that owns and operates two technological incubators with over 40 start ups. Professor Talmor serves on the advisory boards of the African Venture Capital Association, and ETV – a leading European venture lender. He is currently on the International Scientific Board of the Asset Management Research Programme at the University of Vienna and was on the Board of Governors of London Business School. He has been frequently invited to deliver keynote speeches to business executives worldwide. In 1998, Business Week listed him among the Outstanding Professors in its "Guide to the Best Business Schools."

Professor Talmor holds a Ph.D. from the University of North Carolina at Chapel Hill and a B.Sc. (Cum Laude) from the Technion – Israel Institute of Technology.

Mr. Ananth Vyas Bhimavarapu

London Business School

Ananth is an MBA student at London Business School. Prior to the MBA, Ananth was the Co-founder and Chief Financial Officer for PennyWise Solutions, an IT and digital media consulting company. Under Ananth's leadership, PennyWise received the Dun & Bradstreet-Fullerton SME Award for Best Small Company in IT & ITES for 2008 and was also identified as one of the 50 hottest start-ups by National Entrepreneurship Network in India.

During the MBA, Ananth worked on a consulting assignment for BBC Worldwide and interned with Advaita Capital, an alternative asset management house focussed on making public and private equity investments in the energy value chain.

Before founding PennyWise, Ananth worked as an Analyst at J.P.Morgan Chase Bank where he served the investment management arms of Morgan Stanley, Deutsche Bank and HSBC.

Ananth is a Chartered Financial Analyst (CFA) and has a Masters in Finance from BITS, Pilani in India.

Case Researcher

Mr. Thibaud Simphal

London Business School MBA 2010

Prior to his MBA at London Business School, Thibaud was an analyst in the International Trade division of the European Commission where he was in charge of EU-US trade negotiations and disputes on aeronautics and military equipment procurement. During his MBA, Thibaud has worked as a consultant for BBC Worldwide, the commercial subsidiary of the BBC, and interned with Clean World Capital, a renewables and cleantech investment firm where he was working on investments in renewable energy projects and in companies developing clean technologies. He earlier founded En-Droit.com (e-services to lawyers) and Wakefield (custom-built software solutions for agri-food SMEs), both first movers in their markets in Western Europe, and is currently involved in a portfolio of wind and solar energy investments.

Moderator and collaborator

Dr. Josh Lerner

Jacob H. Schiff Professor of Investment Banking
Harvard Business School

Josh Lerner is the Jacob H. Schiff Professor of Investment Banking at Harvard Business School, with a joint appointment in the Finance and Entrepreneurial Management Units. He graduated from Yale College with a Special Divisional Major that combined physics with the history of technology. He worked for several years on issues concerning technological innovation and public policy, at the Brookings Institution, for a public-private task force in Chicago, and on Capitol Hill. He then obtained a Ph.D. from Harvard's Economics Department.

Much of his research focuses on the structure and role of venture capital and private equity organizations. (This research is collected in two books, The Venture Capital Cycle and The Money of Invention.) He also examines technological innovation and how firms are responding to changing public policies. (The research is discussed in the book, Innovation and Its Discontents.) He founded, raised funding for, and organizes two groups at the National Bureau of Economic Research: Entrepreneurship and Innovation Policy and the Economy. He is a member of a number of other NBER groups and serves as co-editor of their publication, Innovation Policy and the Economy. His work has been published in a variety of top academic journals.

In the 1993-94 academic year, he introduced an elective course for second-year MBAs on private equity finance. In recent years, “Venture Capital and Private Equity” has consistently been one of the largest elective courses at Harvard Business School. (The course materials are collected in Venture Capital and Private Equity: A Casebook, whose fourth edition is forthcoming.) He also teaches a doctoral course on entrepreneurship and in the Owners-Presidents-Managers Program, and organizes an annual executive course on private equity in Boston and Beijing. He recently led an international team of scholars in a study of the economic impact of private equity for the World Economic Forum.

Special guest

Mr. Rory Earley

Chief Executive Officer
Capital for Enterprise Fund Ltd.

Rory Earley was appointed CEO and Chief Investment Officer of Capital for Enterprise in April 2008 following 4 years of advising the UK Government on the development and implementation of its venture capital programmes.

Prior to that, he was Senior Investment Manager at Westport Private Equity Ltd, Europe's oldest fund-of-funds manager, where he was responsible for designing and investing in venture capital funds around the world.

Rory was previously responsible for developing and implementing the UK Government's first interventions in venture capital funds in the 1990s. He has been Chair of a successful University spinout company, chair of an EU expert group on risk capital, member of the Investment TaskForce advising UK Government and was until recently also a Director of Greece's first venture capital investment company (TANEO).

Rory holds an MBA from Sheffield University and, after his family and his work, is passionate about rugby (watching and coaching), classic British sports cars, walking and fine food and wine.

Coller Institute
of Private Equity

Bridging the SME early-stage finance gap: A case study on Capital for Enterprise UK

The Quebec City Conference, Public Policy Forum on Venture Capital
Quebec City, 19-20 October 2009

Prepared by Ananth Vyas Bhimavarapu, MBA, London Business School and Thibaud Simphal, MBA, London Business School under the supervision of Josh Lerner, Jacob H. Schiff Professor of Investment Banking at Harvard Business School, and of Eli Talmor, Chairman, Coller Institute of Private Equity at London Business School.

The authors thank Josh Lerner and Eli Talmor as well as Gilles Duruflé, President, Quebec City Conference Public Policy Forum and Rory Earley, CEO, Capital For Enterprise Limited for their support and the information they have provided for preparing this case study.

This paper was prepared with the support of the Coller Institute of Private Equity at London Business School and the Quebec City Conference Public Policy Forum. It does not however reflect in any way the official opinions of Capital for Enterprise Limited and the UK Government.

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How to read this document?

The document that follows is a case study prepared in the traditional business school methodology. The objective of the case study is to put the reader in the position of the protagonist, who must make a decision while considering the various problems, pressures and choices facing him or her. In order to get the maximum benefit from this case study, we suggest that the case be read in advance to understand the overall scenario, and the following questions be answered to facilitate an active case discussion.

1. What is your opinion about the suitability and sustainability of the Enterprise Capital Funds (ECF) programme for the UK and its monitoring authority Capital for Enterprise Limited (CfEL)?

2. Should CfEL change the structure, terms and methods of the ECF programme based on the result of the assessment and taking into account the current VC 'crisis' or funding drought?

While getting to the office one winter morning of 2009, Pete Johnson, CEO of Capital for Enterprise UK, the organisation set up to manage the Enterprise Capital Funds (ECF) programme, thought about the report he had just started preparing on the programme's first 4 years of operations. That morning he wondered what changes, if any, could be made to the programme to address current changes in the private equity (PE) industry, and what changes if any were necessary to address the issues that his team's research had highlighted in the current ECF scheme.

An 'equity gap'?

He recalled the origins of the programme. In their role as advisers to the UK Government on venture capital funding, Johnson and his colleagues had promoted the ECF programme based on the following diagnosis: Despite having a very developed buyout industry, the UK entrepreneurial and investor community was still facing significant hurdles regarding investments in the £250,000 to £2m (1 UK pound = 1.6 US dollars approx.) range. The constraints were both supply-side constraints (the lack of existing funds willing to invest £250,000 to £1.5m in all types of early-stage businesses) and demand-side constraints (the lack of awareness of entrepreneurs of such funds and of skills to structure proposals attractive to external investors).

A number of facts in earlier studies from 2003-2004[i] to which Johnson had contributed had struck key people in the sector as well as in the Government. One chart (Appendix 1) showed that very few small and medium sized enterprises (SMEs) had recourse to equity financing from VC funds and other equity financing sources. In fact this represented only 3% of total SME financing in the UK in 2002, which grew to 8% in 2007. A table (Appendix 2) highlighted the fact that business angel investment was constrained in size to under 250,000 pounds. Another chart (Appendix 3) showed that the early-stage investment space was not covered by VC funds as UK VC funds seemed to focus heavily and increasingly on expansion and management buy-in and buy-out investments.

This evidence was corroborated in particular by a number of British Venture Capital Association (BVCA) documents that argued that there was a strong need for equity investment among SMEs and a stark difference between an estimated number of start-ups requiring equity financing and the number of start-ups effectively receiving financing (Appendix 4).

Previous attempts by the UK Government to tackle the 'equity gap'

Later that morning, while beginning work on the report, Johnson looked back at the existing financing instruments that the UK Government had put in place, a number of them under his supervision.

Indeed, during the 1990s, the inability of start-up businesses and SMEs with high growth potential to raise finance required to meet their growth potential was increasingly perceived in several departments of the UK Government as being caused by structural market failures resulting in 'finance gaps'. In fact, the finance gap had been noted as long ago as 1931, and the UK Government setup the Industrial and Commercial Finance Corporation ("ICFC"), which later became 3i, which for many years provided a source of long term funding for SMEs. Despite the dynamic business angel and private investment community on one side and of the structured PE industry on the other, these gaps remained, which showed that the markets themselves were failing to allocate capital efficiently across all ranges of required PE investments. Unlike the US, these gaps were perceived across Europe as endemic to the continent due to lack of entrepreneurial culture.

The government therefore gradually introduced measures which played an important role in addressing different parts of the finance gap (Appendix 5). The measures covered a broad range of incentives. The Enterprise Investment Scheme (EIS) and Venture Capital Trusts (VCTs), put in place in 1994 and 1995 respectively, were tax incentives whose objective was to attract private

capital investments in new ventures. A number of other initiatives had been put in place, albeit with a much more limited scope. For example, the UK High Technology Fund, a fund of funds launched in 2000, was a fund to invest in technology VC funds. A number of very early stage funds had been started as well, such as the Early Growth Funds to co-invest alongside business angels. Other measures focused on providing debt finance to SMEs, incentives for university spin-outs, and developing regional development funds.

Each of these schemes had demonstrated some success in their target segment and the Government was examining ways in which these measures could be enhanced to further improve their effectiveness. However, despite their number and range and the fact that these schemes seemed to have had an important impact in their target segments, they had limited success in tackling the £250,000 to £1m-£2m equity gap for start-up and early-stage businesses that seek risk capital: Fund managers were finding it difficult to start funds focusing on such investments, while witnessing a clear difficulty of entrepreneurs in attracting capital for exactly the same types of investments[ii]. In addition, there was a constant drift of VC funds and private investments toward later stage and buyouts, the typical deal size had steadily been increasing and the number of deals up to £1m were on the other hand steadily decreasing[iii,iv,v].

Limits of previous schemes

Various factors seemed to contribute to the limited effectiveness of these measures in addressing the equity gap. Since returns on investment are not expected for some time, equity finance is more suitable for higher-risk SMEs than debt finance provided under the loan guarantee programme. Investments in early-stage and start-up companies through early-growth funding programme average around £50,000, which is significantly below £250,000 to £1m. Regional VC funds were targeted towards smaller investments and were time limited. Initial investments were restricted to amounts of up to £250,000, with an opportunity for a follow-on investment of up to £250,000 after six months. Investments in EIS by business angels are generally below £250,000, and often less than £100,000. Finally, VCTs tended to invest in more mature companies with an established track record and positive cash-flows, and can syndicate to invest in amounts in excess of £1m. Almost a third of VCT investee companies were later quoted on the Alternative Investment Market (AIM) or 'off exchange' (OFEX), and around a fifth used the scheme primarily to finance management buy-outs/buy-ins.

For financing not constrained by the limitations of the above incentives, SMEs needed to look to formal VC providers to meet their risk capital needs. However many commercial venture capitalists were and still are reluctant to invest in these small amounts for a variety of reasons:

- High transaction costs: To overcome information asymmetries associated with early-stage companies, investments are made only after due diligence processes involving costly employment of accountants, lawyers and industry specialists, especially if a new technology is involved. Also, the costs involved in seeking out these opportunities are significant. For a smaller value deal, such costs represent a larger proportion, thus making them uneconomical.
- Largely fixed ongoing running costs: Investors in early-stage companies with less experienced management teams will often contribute significant time and effort to mentoring and providing management support, adding significantly to the investor's costs.
- Perceived risk is higher: Risk is perceived to be higher when the management team or the SMEs' product and market tend to be unproven.
- Lack of exit options: Cyclical trade sales and illiquid markets for trading in smaller-firm shares decrease the exit options for investors.

Launching the Enterprise Capital Funds

The Government therefore believed that a more wide-reaching and flexible structure was needed to address this equity gap. Research and anecdotal evidence showed that the companies concerned by the gap were a small but important source of innovative, growth-oriented businesses and that they continued to face difficulties in attracting funding. This provided a case for additional but targeted government intervention[vi,vii,viii].

Alongside existing initiatives, it seemed to several managers in the Government that a suitably designed variant of the United States' Small Business Investment Company (SBIC) scheme may be appropriate to attract investors with an appetite for smaller-scale early-stage investment. Under this scheme, SBICs can borrow money at low rates from the capital markets, which they invest along with privately raised capital in US small companies. The US Government provides guarantee for the borrowed money. The SBIC scheme was a major success in the US, with SBICs representing 58 percent of venture capital investments in SMEs by 2002.

An adapted SBIC scheme would increase the commercial viability of small investments by offering investors enhanced returns through the use of leverage to invest alongside private capital. The programme would reduce the minimum amount of private capital required for setting up a commercially viable fund thereby attracting risk capital managers who specialise in smaller investments. It would enhance the impact of business angels on a demand-led, market-driven basis and offer a flexible framework within which local and regional networks can match public and private capital with their investment expertise in a cost-effective manner.

In order to design a SBIC programme tailored for the UK, the Government needed to consider various issues as well as UK-specific parameters. Mainly, the programme should minimise impact on existing sources of finance, safeguard public funds and complement existing schemes.

This posed a number of questions, and to as many decisions to be made for each key feature of a new UK scheme. A team was set up to develop the concept in detail and to run the first phases of the programme, which was to be called the Enterprise Capital Funds (ECF) programme.

Appointed to manage this team was Johnson. Johnson was a former senior investment manager in a large fund of funds with investments in a wide range of venture, buyout and mezzanine funds across the world where he designed and invested in several significant VC funds. Johnson had previously been in charge of developing and implementing the UK Government's first interventions in venture capital funds in the 1990s. He also had experience as a Chair of, and investor in a successful university spinout company, as a chair of a European Union (EU) expert group on risk capital, and as a member of the Investment Task Force advising the UK Government. The team was created within the Department for Business Innovation and Skills and to be based in Sheffield.

Key questions and options for the ECF programme design

Johnson and his team were aware of the many challenges in setting up the ECF programme. The team defined the ECF programme and its funds' objectives as being "to increase the availability of growth capital for SMEs affected by the equity gap by:

- Encouraging an increased flow of private capital into the equity gap, by adjusting the risk-reward profile for private investors making such investment, and
- Lowering the barriers to entry for entrepreneurial risk capital managers by reducing the amount of private capital needed to establish a viable venture fund."

In addition to articulating clear objectives and mandates, they identified six key design criteria in which important choices had to be made.

1. Private capital requirements

Before a fund manager can apply for the ECF programme, it was believed important that she would need to have raised or secured commitments for a minimum amount of private capital. The related questions in the design of the ECF programme were as follows.

Source of private capital: While there are many possible sources of private capital (pension funds and other institutional investors, corporate finance boutiques, retail banks, corporate investors, the European Investment Fund, non-bank financial institutions and 'high net-worth' or 'sophisticated' individual investors), the ECF programme team needed to ensure that ECFs would be funded only by appropriate investors, those that could continue to meet draw-down requests throughout the lives of the funds and not just divert private investors away from other Government sponsored schemes and reduce their effectiveness.

Size: Two factors would need to be considered when deciding the right size for an ECF. The total size of the fund including private capital and leverage should be large enough to allow for diversification in the portfolio and for follow-on investments to ensure viability. At the same time, the fund size should not be set at a level which increases the barriers to entry for setting up new funds and reduces its attractiveness for new fund managers.

The team organising the ECF programme faced several dilemmas: what minimum commitments should the ECF programme set, and should there be a minimum fund size? For scale reasons, the minimum size of a viable fund was at least £10m, which would require at least £3.3m of private capital assuming leverage available was up to twice the private capital offered. In the US, the minimum amount of private capital was set at $10m, thus implying a total fund size of $30 million. Considering the novelty of the scheme, the programme team decided not to set a minimum fund size in the first round of applications, called the Pathfinder round, thus allowing prospective ECF managers to choose a size that complemented their business model.

2. Government borrowing conditions

Government borrowing was seen as being key to the success of the ECF programme because it would offer investors enhanced returns, thereby helping offset the transaction costs and other factors that reduce the attractiveness of small investments. The related issues were as follows.

Source of leverage: In the US SBIC model, the Government does not finance the leverage directly. Instead, it provides guarantee for debentures (bonds) that SBICs issue to raise their leverage on the open capital markets.

Leverage ratios: In determining how much leverage can be provided on the back of private capital, the following three factors need to be considered. A higher leverage ratio would offer a higher risk-return profile to private investors. The risk to the leverage, and therefore to taxpayer funds would also increase unless it was compensated for by a tougher capital impairment regime. The amount invested would be larger, so the potential upside would be higher; but since private capital would still take first loss, a lower percentage loss would lead to the private investors losing everything. Secondly, a higher risk-return profile could lead to a more conservative investment strategy (e.g. favouring enterprises with a track record and/or cash-flow) if investors sought greater downside protection. Finally, a larger total fund size could encourage larger investments.

It might be appropriate to adopt a tiered approach, thereby targeting more generous assistance on the smallest funds – a similar approach was adopted in the US. As a quid pro quo for the additional risk associated with higher leverage ratios, it might be appropriate to increase its profit participation rate in line with the leveraged capital ratio actually drawn down.

Maximum leverage amount: The limit on the total leverage that can be raised by one SBIC in the US is $115m, irrespective of the number of individual funds managed by the SBIC. The ECF programme team believed that such a cap would probably be necessary in the UK ECF model as well to encourage experienced managers to 'graduate' to non-leveraged funds.

For the Pathfinder round, the ECF programme team decided to apply a maximum leverage ratio of 2:1, subject to a maximum leverage amount of £25 million provided directly by the Government. This implied fund sizes of £37.5 million if private investors sought to maximise the leverage available.

3. Investment restrictions

In the US SBIC scheme, investment restrictions were put in place to ensure that investments by SBICs were targeted towards SMEs that fall in the equity gap. The design of the investment restrictions in the ECF programme involved the following choices.

Investment size: While it is not possible to precisely quantify the equity gap, research (see the citations above) suggested that firms seeking between £250,000 and £1m (and up to £2m depending on the nature of the company and the stage of its development) of equity capital are most likely to encounter difficulties in raising capital. An upper limit is also necessary to limit any 'crowding out' effect of ECF on commercial sources of risk capital, but should not act as a significant disincentive.

Fit with existing schemes: The ECF programme team believed that ECFs would complement the existing schemes by addressing the remaining affected area of the gap. There would be minimal overlap with the SFLG as it supports debt lending. ECF could provide follow-on finance for RVCFs and it would complement EIS/VCTs by stimulating investment in companies in different stages.

Investment target: The ECF programme team wished to restrict ECF investments to enterprises that fall within the EU definition of SMEs and those which have a material part of their business established in the UK, and where the purpose of the relevant investment was predominantly related to, or for the benefit of, the UK. The team's discretion was limited here by rules imposed by the European Union which, although designed to prevent governments propping up failing companies, impacted on all support that governments could provide to SMEs. ECFs might be further obliged to hold a proportion of their investments in very early-stage SMEs, where evidence of the equity gap is strongest. This would prevent ECFs from adopting a risk-averse strategy.

Investment type: Mezzanine financing or quasi-equity debt instruments are more suitable for businesses that require finance with equity features but cannot offer the kinds of returns required for venture capital investments. This market is poorly served by existing lenders and may involve complex deal structures[ix]. Equity finance is more appropriate for seed and early stage investments where there is little or no cash flow available to service borrowing. The team had to decide whether to limit ECFs to equity investments only.

Contracts: Contracts governing the operation of funds and the relationships between investors and fund managers are complex and expensive to negotiate. While it is not practical to design a uniform contract that suits all kinds of deals and professional legal advice cannot be done away with, a model contract would act as a starting point for variations and negotiations and may reduce transaction costs.

In the Pathfinder round, the ECF programme team decided not to implement the specific requirement related holding a proportion of investments in very early-stage SMEs. Instead, the ECF programme team restricted the total investment in one entity to £2m irrespective of the number of funding rounds. ECFs may participate in further funding rounds only to protect their investments from dilution. But even in such cases, the total investment would be constrained by

an upper limit on the proportion of its total fund size that may be invested in any single portfolio company. Pathfinder ECFs were allowed to structure their investments in the most appropriate manner, subject to an overarching requirement that each investment must include some equity or equity-related instruments. This would not preclude the use of debt instruments with options to convert to equity (mezzanine).

4. Distribution of returns and liquidation conditions

The distribution of returns in the ECF programme was a key question, and even though broadly it was agreed that the conditions should be similar to that of the US SBIC scheme, a number of specific points needed to be addressed.

Returns and prioritisation: Like a conventional venture capital fund, the ECF would make money by investing in SMEs, helping them grow rapidly, and then realising a capital gain on exit. As a shareholder, it might take a dividend from retained earnings before exiting its investments. After deduction of expenses and liabilities, these returns could be distributed, with first priority being given to the interest payable on the leverage to the Government. Interest would be charged on the leverage at, or close to, the gilt rate i.e. the interest rate on bonds issued by the UK Government. Following the interest, the leverage finance and the private capital would then be repaid to the Government and private investors respectively. Finally, any remaining profit would be shared between the private investors, the Government and (where appropriate) as carried interest to the fund managers.

Profit sharing: The Government would take a share of ECFs' profits so as to cover losses from those ECFs that made a loss. There could be three possible ways to determine the government's profit share. It could be a function of the leverage ratio. Alternatively, profit share could be determined at the time of licensing according to an assessment of the risk profile of the investment strategy the ECF sets out in its business plan. This would require each ECF to negotiate terms for its leverage with the licensing authority, which could add to the complexity of the licensing process. Finally, the Government could take a fixed equity stake in all ECFs, with a corresponding proportion of the profits. Though administratively simple, that meant that a more exposed ECF would pay a similar proportion of eventual profits as that paid by a 'safer' ECF, which could lead to investment strategies being adopted which could distort the programme's objectives.

Loss sharing: Previous government-backed venture capital interventions had relied on government offering to bear any losses in funds as a way of attracting private investors. However, the ECF programme intended to offer investors much greater leverage and a considerably greater potential upside than previous schemes. The ECF programme team believed that the principle of the private sector taking first loss, was central to the potential viability of an SBIC model since it meant that private investors' natural protection of their own interests would safeguard the interests of the taxpayer, and private sector investors would have all the incentives to ensure the fund managers are performing, so protecting taxpayers' interests.

Liquidation: Liquidation following capital impairment could be necessary to counter the risk of fund managers taking unacceptable risks with the leverage, in order to try to recoup the original investment.

For the Pathfinder round, the ECF programme team allowed flexibility for prospective fund managers to specify the proportion of profits to be offered to government. This could be used to ensure competition between those bidding for ECFs and therefore maximise the value for money for government.

5. Fund managers' selection and due diligence processes

The long term success of the ECF programme was seen as also hinging on increasing the availability of fund managers who specialise in smaller investments. This would ensure competition for deals, thereby driving down the cost of risk capital for SMEs. Also, if successful, first time fund managers would find it easier to a larger second fund without government support.

Source of fund managers: The ECF programme team believed there were several possible sources of future ECF managers who might possess the right skills, including business angels and managers of early-stage investment funds. The ECF programme team decided to encourage proposals from: business angels, particularly those already operating on a quasi-professional basis, managing serial investments, or in a semi-structured syndicate; managers of early-stage investment funds overseas who might be looking for new opportunities in the UK, as well as existing UK fund managers seeking new opportunities (junior partners and employees in VC); Corporate finance boutiques focusing on SMEs; entrepreneurs keen to set up new early-stage funds but not possessing the track record to raise sufficient funds; business incubators with experienced management and an SME track record.

Due diligence: The due diligence process for selection of fund managers would be based on an assessment of the quality of the prospective ECF management team and the quality of their business plan. The business plan would be required to present proposed types and stages of investments, any proposed sector/geographic focus, and other factors relevant to proposed investment activities.

When selecting fund managers, the ECF programme team decided to focus on proven track record of generating a good deal-flow, capability to perform a due diligence and analysis and transaction execution of small private companies of the type that the ECF intends to support. Also, fund managers would have to possess evidence that they are able to mentor and support early-stage businesses in their sectors, to oversee investments over a few years, to turn around failing companies or liquidate positions when necessary, and, finally, to effectively exit an investment.

Since new entrepreneurial fund managers may not be able to satisfy all of the above criteria, the licensing body would need to take a judgement on the other aspects based on the programme's objectives. The burden of proof was placed on the applicants: they would have to demonstrate the viability of their proposition. This was an important counterpart to the flexibility on selection criteria and meant that deep and robust due diligence would need to be carried out on prospective management teams.

6. Legal structure of ECFs and Monitoring and licensing

Legal structure: Which legal structure would best suit an ECF? An ECF could be formed as a corporate body such as a company or limited liability partnership, or it could be founded on a limited partnership agreement.

The ECF programme team believed that certain constraints would be necessary across all structures to ensure consistency with wider regulatory policies. For example, the ECF would need to be closed-ended with no secondary market in the instruments of ownership. Each structure would have its own set of implications, especially with regards to a Financial Services Authority (FSA) authorisation. Nevertheless, for the Pathfinder round, ECFs were given the freedom to choose the legal structure that suited them best, as long as the Government's overall economic interests as lenders remain protected. The ECF programme team believed this flexibility is essential to attracting new entrants to the ECF market.

The team also believed that the UK regulatory framework may have been too restrictive for individuals forming syndicates to invest their own money. Legislative relaxations were therefore introduced to allow such syndicates to operate ECFs outside of the regulatory framework

Monitoring: Since private capital would be the first to absorb any losses generated by the fund, the ECF programme team believed that private investors' natural protection of their own economic interests would safeguard the interests of the taxpayer. Therefore, ongoing regulation and monitoring should be light, focusing on compliance and incentives to ensure an appropriate investment strategy.

And, since government would likely be the largest investor in each ECF, the team felt that delegation of all monitoring to private investors would raise the risk to government funds. The team therefore provided for active monitoring by them of government funds but in a way that would only allow government to exercise any remedies available to investors under the contract with fund managers with the agreement of a majority of private investors.

Licensing authority: Since the Government would be exposing public money to risk and needed to ensure that the programme's objectives were attained, a licensing authority would need to be set up and given significant supervisory and executive power to ensure that the programme would be adequately run and that appropriate controls would be exercised over the ECFs, yet without imposing an involvement in its day-to-day operations.

There were several candidates for the role of licensing body: the Financial Services Authority (FSA), which is experienced at authorising investment managers; a government agency in order to preserve the taxpayer interest, such as the Small Business Service (SBS); or a private contractor who could be appointed to act as licensing body**.** All these candidates were found to fall short in some respect, in particular as the new role did not seem to fit with either their core objectives or their capabilities. The ECF programme team therefore decided that a long-term ECF programme would be most effectively delivered through an organisation that operated at arm's length from the Government itself. This organisation would operate within an agreed budget and risk management framework. Otherwise, the organisation would have operational freedom to determine how best to achieve the programme objectives.

This structure was set up after two years of operations of the ECF programme within the Department of Business Innovation and Skills. It was named Capital for Enterprise Limited (CfEL) and became operational in April 2008. It operates at arm's length from the Government and has operational freedom to implement the ECF programme. Its board has extensive SME and VC experience. The objective in the medium term is to move CfEL out of Government ownership.

The first years of operation of the ECF programme

Since the launch of the Pathfinder round in 2005, the ECF programme had committed over £277m to ten ECFs (Appendix 6) over three rounds, of which £174-m was contributed by the Government in the form of leverage. A further £60m from Government remains available for future allocations. The CfEL team expected that two or three ECFs will be started each year in the coming years.

Following feedback from the Pathfinder round, some requirements were later relaxed, giving greater leeway in the application process. The Pathfinder round required a detailed business plan containing all information required for due diligence. This was later simplified to a five page summary proposal.

Also, applicants had to provide hard evidence of private investor commitment in the Pathfinder round. Now, applicants only need to demonstrate their ability to achieve first closing at the target fund level within six months of being awarded an ECF.

The ECF programme was successful in meeting its objective of attracting new talent to the early-stage investment market. Applicants for the ECF programme came from diverse backgrounds: experienced venture fund managers, management consultants, business angels, individuals working with VCs among others.

Cambridge's Mark Stanton was a stereotypic case. Stanton was a fund manager looking to become a General Partner in Cambridge Capital Fund (CCF). CCF was a new fund for early-stage investments in technology and life sciences he was starting with two other fund managers. Stanton was finding it difficult to attract investors for the fund despite having a strong team with an impeccable track record and managerial qualifications.

Stanton and his colleagues had a target of £30m to £60m for the fund, as from experience they thought that £25m to £35m was a minimum to do business in their space. What they quickly realised, however, was that this target was in what Stanton called a 'dead spot' between relatively small investors (individuals and family offices) and large institutional investors (e.g. pension funds). Some institutions, for example the regional pension funds, were more flexible than the typical large pension fund, but still, in that bracket, it proved hard for them to secure funding as the size of individual contributions and of the total pool did not seem right for anyone.

Stanton had heard about several other funds or fund managers being in the same situation. He also remembered from his VC finance course at London Business School that some European governments had put investment schemes in place to address what was referred to as a finance or equity gap in SME financing. However, as a true entrepreneur and free-market advocate, Stanton was reluctant to approach any government or public body for financing.

Stanton nevertheless decided to dig deeper and after some research landed on a well-documented section of the UK Department for Business Innovation and Skills[x] website dedicated to the 'equity gap'. In the end and after more research, Stanton and his team overcame the psychological obstacle of having recourse to Government finance with all the operational constraints and bureaucracy it may impose. This was helped according to Stanton by the professionalism of the CfEL team and their deep experience in VC and PE, which meant they truly understood the objectives of VC funds and the constraints that fund managers faced. Cambridge Capital Fund had applied to become an ECF, and had successfully started the fund in 2007.

A few years on: a first assessment

Johnson recalled his phone call with Stanton two weeks earlier. Stanton was overall very satisfied with the ECF programme. On the whole and as far as Cambridge Capital Fund's experience was concerned, it seemed to him that the objective of the programme was clearly being attained.

Stanton explained how thorough the **due diligence** process had been and a highly competitive one., He understood the CfEL team probably needed more information to select the right fund managers and the right funds, in particular in these early stages of the programme. He thought that the selection and due diligence criteria on which the procedure was based were quite flexible however, and that he was able to provide a lot of information which CfEL was willing to consider in the process. Nevertheless he thought the due diligence phase could be made faster or less procedural in the future.

On the **distribution of returns,** he seemed very satisfied with the conditions, and said this had had a very limited impact on their investment strategy so far – which was a good thing. In fact they thought they were operating like a 'normal' VC fund. Even though this might lead to a slight distortion of the early-stage investment market, as ECFs were able to offer investment conditions that other funds were probably not always able to offer, he believed this was a positive distortion: it increased visibility of the early-stage space and ultimately would drive fund managers to the ECF scheme, so this increase in the pie was definitely in line with the objectives of

the programme. In addition Johnson remembered Stanton saying that: "it had a selection effect which increases quality, transparency, and it's a door opener for young fund managers who like me want to move from manager roles to GP roles in funds".

On the **investment restrictions**, Stanton thought that, overall, they made sense, also given the constraints that he knew CfEL had. He nevertheless pointed out that a number of the restrictions were ill-conceived or not necessarily implemented in the best way. He mentioned the £2m cap for investments in a single entity, which according to him wrongly assumed that any first investment beyond £2m was not early-stage. He also mentioned the £4m accumulated investment from all Government instruments, saying that often the team would not realise they were very close to this maximum and upon discovery this would place a significant limit on the investment relationship. He mentioned that the CfEL had some flexibility from the strict government regulatory code, but that exceptions took very long to negotiate. Another comment Stanton had to make on investment restrictions was the relationship between ECFs and the available tax incentives through the Enterprise Investment Scheme (EIS): there were so many rules involved in the application of EISs that it constrained significantly the ability to use this incentive alongside ECF investment for what he called 'rather bureaucratic reasons'.

When Johnson questioned Stanton on the **day-to-day operations and economics** of running the fund, overall Stanton seemed quite happy with Cambridge Capital Fund's situation under the ECF programme. He said the fundraising and then running of the fund was largely the same as in his previous funds, also in terms of attracting and monitoring the investee companies. They received around 1,500 to 3,000 proposals annually through different sources, mainly their network and their website. They invested in around five to ten companies per year. He said one potential impact of being under the ECF scheme was that the Fund probably asked the management of the investee companies to be even leaner than usual, keeping overhead to a minimum and not appointing any C-level executives or financial staff until the company was about to generate revenue. On the related efficiency issue, Stanton believed that the fund was perhaps managed in an even leaner way than other VC funds – definitely leaner than traditional, later stage VC funds, and perhaps leaner than other early-stage funds. Indeed, he said the economics of an ECF fund were not necessarily the easiest, and the management fee was hardly enough to run the fund in a traditional way.

Stanton gave as an example of their investments their deal with an advanced medical devices company. Cambridge Capital Fund had invested £300,000 after a 10-week due diligence process and subsequently invested another £500,000.

Like for Stanton's fund, the results of research conducted by Johnson and his team for their report on a sample of fund managers selected for the ECF programme showed very positive results in some respects, and more mixed results in others[xi].

While some aspects of the ECF programme were found positive by the fund managers especially with regards to raising private investment and distribution of returns, the interviews also threw up some points of contention about certain restrictions and the economics of running an ECF.

Fund managers found the **due diligence** process used by CfEL rather long and time consuming even though given that the programme was funded by public funds, a high level of scrutiny and accountability was expected and even appreciated.

A change in processing **applications** in batches to a rolling basis was effective in cutting down the timeframe. Also, the long process helped to identify the motivated applications with real interest in early-stage investing. Applicants who fell just short of the ECF criteria, but had the potential to succeed in future rounds were encouraged to apply again and received detailed feedback and mentoring.

All the fund managers found it easy to **raise private investment** once they received ECF approval. Although ECF approval does not imply any Government guarantee, private investors seem to view this as a positive attribute. Moreover, since funds are drawn down only when they are required, the actual commitment at any point of time is relatively small.

The **distribution of returns** was generally accepted by fund managers, although a few found the priority interest on leverage risky. These fund managers would work around the risk by using a mixture of convertible loan notes or preferred shares, whereby the coupon or dividend directly pays the priority interest.

Most fund managers found the **investment restrictions** potentially contentious and, as far as a number of specific restrictions were concerned, sometimes unnecessary or with an ill-conceived implementation. The limit of £2m was cited as being too restrictive because, as Stanton pointed out, it assumes that investments beyond £2m are not early-stage. This tended to go against the rather unproven conjecture that the equity gap for early-stage investments is only pervasive up to around £1m to £2m, and not a higher figure.

In addition, even though it indirectly proceeded from the EU state aid regulatory regime, the accumulated state aid investment limit of £4m was found to be problematic, especially if the companies previously received investment from public funds listed in Exhibit 5, such as RCVFs, VCTs or EIS. For certain companies, state aid financing is the only form available, but could not attract investment as the limit was reached.

Dilution of interest was another issue related to the investment limit. ECFs typically use anti-dilution clauses in their term sheets to protect their investments from dilution beyond the investment limits stipulated by the ECF programme. Anti-dilution clauses require that, during further funding rounds when new shares are issues to investors, shares be issued to the ECF as well at a minimal or no cost so as to offset the dilutive effect of the newer shares. Some say that such clauses make them less competitive as compared to other investors who do not require this clause.

No significant difference was found in the way ECFs **source deals** as compared to traditional VCs. Also, SMEs do not view ECFs differently from traditional VCs. All the fund managers felt that the returns were achievable, but were unable to quantify their performance to date given the short time frame they have been in operation.

The **economics** of fund operations was another area where fund managers had concerns. For a fund size of £37.5m, the typical 2% fund management fee is insufficient to cover all expenses involved in running the fund and therefore, most fund managers are leaner compared to other funds and maintain a small operational staff. This shortfall is sometimes met by charging investee companies arrangement fees. Compared to traditional venture funds, which are larger in size, the arrangement costs for ECFs seem larger, which places them at a disadvantage when competing with VCs for investments. Overall, ECFs do not make significant profits in the initial stages, but the carry and monitoring fees during later stages of the fund makes them worthwhile.

Where next?

2008 had been a very busy year for Johnson and the CfEL team: not only had CfEL just recently been put in place, it was also running the ongoing ECF programme in the midst of the financial crisis and in what many observers around the world called a 'VC crisis' or 'funding drought'. In addition, the BVCA's recent Performance Measurement data on venture investment returns for the 10-years to December 2007 was not very positive[xii], remaining marginally negative so, regardless of the current economic climate, it seemed that institutional investors would be reluctant to commit to the sector if they look principally at the headline performance data.

The first three rounds of ECFs had provided the team and the Government with very encouraging signs that the ECF programme was a valid concept and that it was tackling a real issue – overall it was clearly having some success. However other signs tended to be more mixed. In particular, scale was going to be difficult to reach, the economics of ECFs was to some extent put into question, some ECF managers were, even after a few changes to the scheme, disputing a number of investment restrictions which were perceived as detrimental, and overall it seemed that the drift of venture funds towards later stage and buyouts was still taking place.

On the latter point, Johnson thought that the financial crisis and the resulting later stage/buyout crisis might well be an opportunity as differential in returns to earlier stage would not be as large as before and risks would increase in the later-stage investment space. In fact, Johnson had noticed a few examples in the financial press, in fund applications, and from anecdotal evidence brought to his attention by the ECF programme community. He was wondering, however, whether this would merely be a temporary shift caused by investors looking for the best instruments and spaces in a time of crisis or whether this would become a real trend in the medium/long-term. Whether or not this would become a trend was, obviously, also closely linked to the future of the PE industry, in particular to the large later stage/buyout space and particularly to the availability of bank leverage to those deals.

On a related issue, Johnson wondered if the traditional VC 'crisis' that was much commented about could, if real, not be a threat but also an opportunity for the ECF programme to develop into a vital instrument in the UK VC community, helping sustain investment overall and in the equity gap specifically. Indeed, as VC investments dried up, a scheme like the ECF programme would be needed even more as the VC funds remaining would very unlikely start to make earlier stage investments in times of uncertainty.

Given the overall picture, Johnson wondered what changes, if any, should be made to the ECF programme to address changes in the sector, and what changes if any were necessary to address the issues that his team's research had highlighted in the current ECF scheme.

He had as an objective not only the success of the ECF programme but even more fundamentally the success of his team's and the Government's programmes to address the financing gap that prevented future growth-driven companies to emerge and develop a sector strongly needed in times of an increasingly rapid change towards a truly knowledge-based and high valued-added economy.

Johnson remembered the phone call from Stanton two weeks before, and the findings of his team research into the first years of operation – he wondered what strategic direction CfEL should adopt at this time, four years into the project life.

It was almost late afternoon when Johnson finalised what he viewed as the key questions:

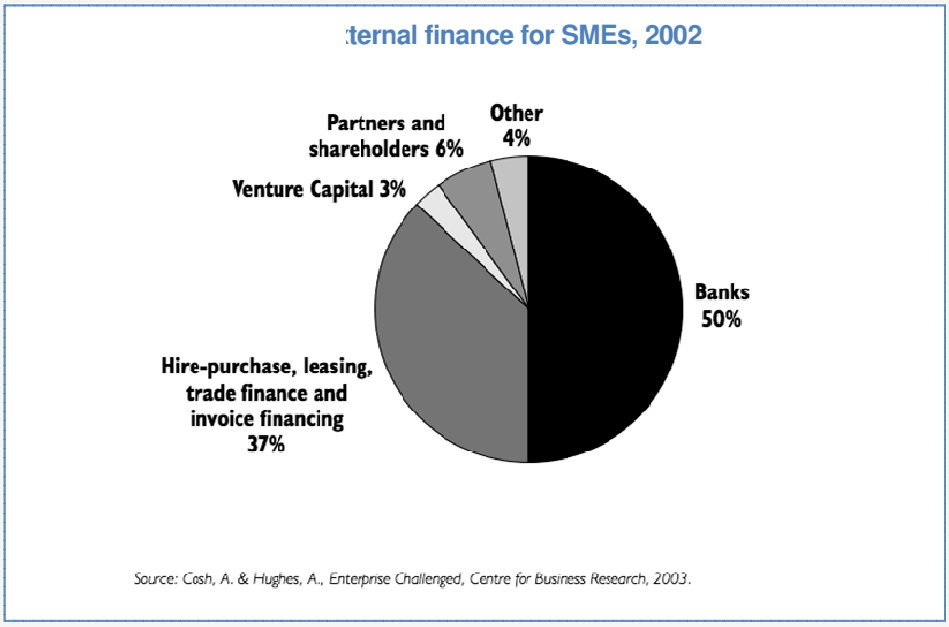
1. What should he include in his report and how critical should he be about the first few years of operations of the ECF programme and CfEL? Was it too early to draw conclusions and make significant changes besides the amendments that had been made to the programme following the first two rounds, or were some additional changes to the structure, terms and methods required already now?
2. With very limited data on the returns achieved by the ECFs allocated to date, should CfEL change the structure, terms and methods of the ECF scheme based on that assessment and taking into account the current VC 'crisis' or funding drought? Especially, should the investment restrictions be studied again given that this was a common criticism across most fund managers? Increasing the investment limit beyond £2m would give fund managers more flexibility in their investments. But, at the same time, it would result in less diversification as would mean fewer investments for the same fund size. Also, the higher limit may shift the at-

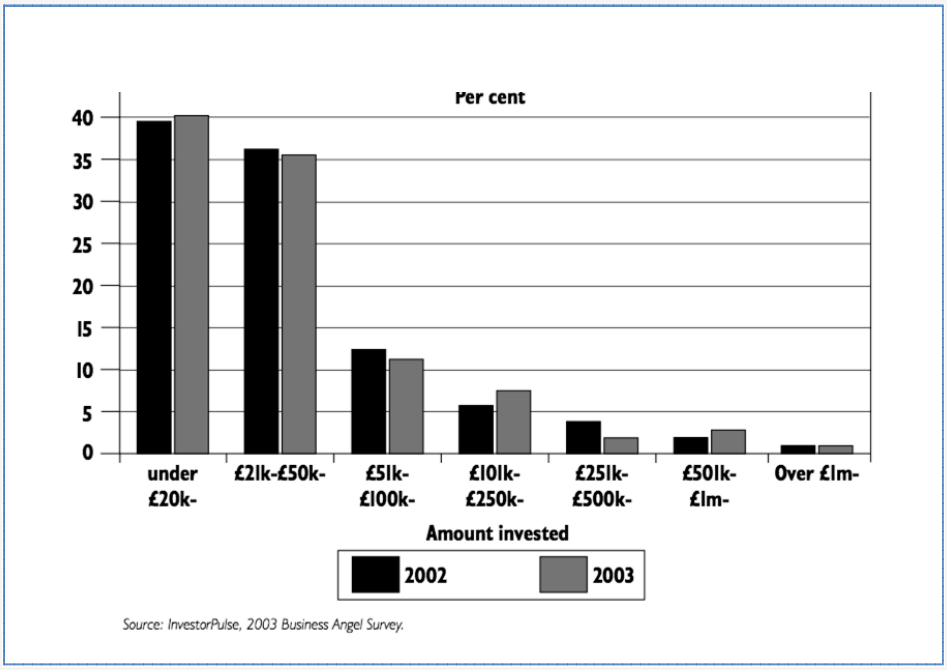
tention of fund managers away from the equity gap. How could this fine balance be tained?

3. The limit of £4m on the accumulated state aid in a single entity was another issue cited by many fund managers. This limit hampered the commercial interests of the fund managers especially when investing in SMEs that have previously received some form of state aid. Would increasing the limit or removing these restrictions make these companies overly dependent on government funding? Also, this might result in the Government holding a larger stake in these companies, thereby putting taxpayer funds at greater risk.
4. The concerns about the operational economics of a fund could be addressed by increasing the fund size, and, in proportion, of the government leverage. But, would increasing the government leverage beyond £25m fit in with the overall design of the ECF? Another possible solution could be to combine two ECFs into one, i.e., allowing a total fund size of £75m with a government leverage of £50m. While this would be beneficial to the economics of the fund, the number of SMEs that would receive funding would probably double, thereby increasing the effort required to monitor these investments. From the Government's point of view, one large fund in place of two small funds would mean a greater risk due to lower diversification. Another solution could be to give fund managers more leeway in the arrangement costs and fees that are charged to SMEs. CfEL currently required that fund managers set out in detail these fees in the application and takes a strict stand concerning these costs.
5. CfEL currently took a strict view about a fund manager's adherence to the business plan and proposal submitted during the application process. However, with market conditions changing rapidly, would it not be advisable to allow fund managers to amend their plans accordingly with permission from CfEL, with CfEL displaying as much flexibility as possible in this respect? This would ensure that the commercial interests of the fund are safeguarded while meeting the ECF programme's objectives.
6. Given the difference in size of the US and UK SME segment, was the choice to model the ECF programme after the US SBIC scheme correct? Or, would such differences warrant a closer look at successful implementations of similar schemes in other countries having similarly sized SME segments?
7. What impact would the later stage PE industry have on the equity gap and on venture capital financing overall? Especially, given the current credit crisis, would private investors channel their funds to traditional venture capital and early stage investments?

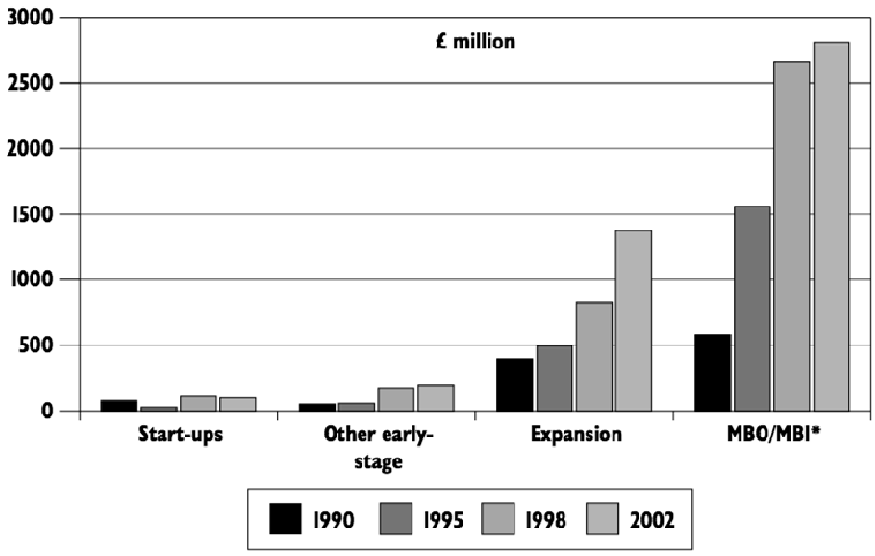
These were all heavy matters, and Johnson now headed to the local pub where a pint of beer could be very useful.

Appendices


ternal finance for SMEs, 2002
Partners and shareholders 6%
Other 4%
Venture Capital 3%
Banks 50%
Hire-purchase, leasing, trade finance and invoice financing 37%
Source: Cosh, A. & Hughes, A., Enterprise Challenged, Centre for Business Research, 2003.


Per cent
40
35
30
25
20
15
10
5
0
under £20k-
£21k-£50k-
£51k-£100k-
£101k-£250k-
£251k-£500k-
£501k-£1m-
Over £1m-
Amount invested
2002
2003
Source: InvestorPulse, 2003 Business Angel Survey.

Appendix 3: Total venture capital investment by investment stage, 1990-2002



Source: BVCA & PricewaterhouseCoopers: Report on investment activity 2002.
**Management buy-out and management buy-in.*

Appendix 4: Estimating demand for equity finance for start-ups, 1998-2002

		Average (1998–2002)
Number of start-ups[1]		180,668
Estimated number of firms requiring equity finance[2]	Low	9,033
	High	18,067
Number of start-up companies that received equity funding[3]		135

Sources:

[1] *Business start-ups and closures: VAT registrations and deregistrations in 2002 - News Release, SBS, October 2003.*
[2] *Assuming that 5-10 per cent of start-ups will require equity funding.*
[3] *BVCA Investment Activity Surveys conducted by PricewaterhouseCoopers, 2003.*

Appendix 5: History of UK Government measures put in place to tackle the gap

The Small Firms Loan Guarantee (SFLG) was put in place to provide support for debt finance where businesses lack the necessary collateral or track record to obtain a loan.

Regional Venture Capital Funds (RVCFs) and other specialist venture capital funds were put in place in 2000 to provide support for smaller-scale equity investments. To date, they have allocated over £250m in funds.

The Early-Growth Funding Programme (EGFP) was launched in 2000 to complement the regional funds by providing smaller amounts of risk capital. They totalled over £63m for under £100k equity funding.

The UK High-Technology Fund (HTF) is a fund of funds supporting early-stage high-technology businesses across the UK. The Government acts as 'cornerstone' investor, leveraging over £125m of additional private sector investment for technology VC funds.

The University Challenge Fund (UCF) was started in 1999 to provide capital for early-stage financing to enable universities to develop business proposals and spin-off companies. It aims to strengthen public-private partnerships by supporting the transfer of science, engineering and technology research to commercial application. To date this scheme has translated into £40m of available funds for University spin-outs.

The Bridges Community Development Venture Fund (CDVF), a £40m fund, was set up in 2002 to drive investment in businesses in the 25% most deprived areas across England.

Realising the importance of business angels in promoting start-ups and SMEs, the Government also introduced the Enterprise Investment Scheme and Venture Capital Trusts in 1994 and 1995 respectively.

The Enterprise Investment Scheme (EIS) provides tax incentives for individuals, including business angels, to invest directly in higher-risk small trading companies. It has attracted £6.1bn in funding for 14,000 companies to date.

The Venture Capital Trust (VCT) scheme offers tax incentives to individuals investing in professionally-managed portfolios, known as VCTs, which can invest sums of up to £1m a year in qualifying businesses. It has attracted over £3.5bn in investments to date, which like for the EIS scheme was a significant figure.

Appendix 6: The first three rounds of the Enterprise Capital Funds programme

Fund	Size (£m)	Sector focus	Regional focus	Stage focus
Seraphim (Angel-led unregulated structure)	30	Generalist	UK	Early stage; Development
IQ Capital Fund (N W Brown)	25	50% ICT 35% Life sciences 15% Cleantech	UK	Seed; Early stage
E-Synergy	30	Sustainable technology	UK	Early stage
Amadeus Capital Partners	10	General Technology	UK	Seed
Catapult Venture Managers	30	Generalist	Midlands	Development
Dawn Capital	30	Technology	UK	33% Seed 33% Early stage 33% Development
Oxford Technology Partners	30	Technology	Oxford and SE	Start-up; Early stage
MMC	30	Healthcare; Financial services; Technology and business support services	UK	Development
Panoramic Growth Equity	32.5	Generalist	UK	Later stage
Beringea Digital Ventures	30	Digital media	UK	Development

Appendix 7: Key features of the ECF scheme

Basic features and structure

- Up to £25m of Government investment per fund
- Up to 2/3rds of total fund
- Objective is to plug gaps in the equity market for companies needing to raise up to £2m
- ECF managers must:
  - propose a sound, clearly articulated investment strategy
  - have a strong investment team and track record (though not necessarily with this team)
  - offer value for money to investors
- There is a standard LP Agreement to which few changes will be negotiable

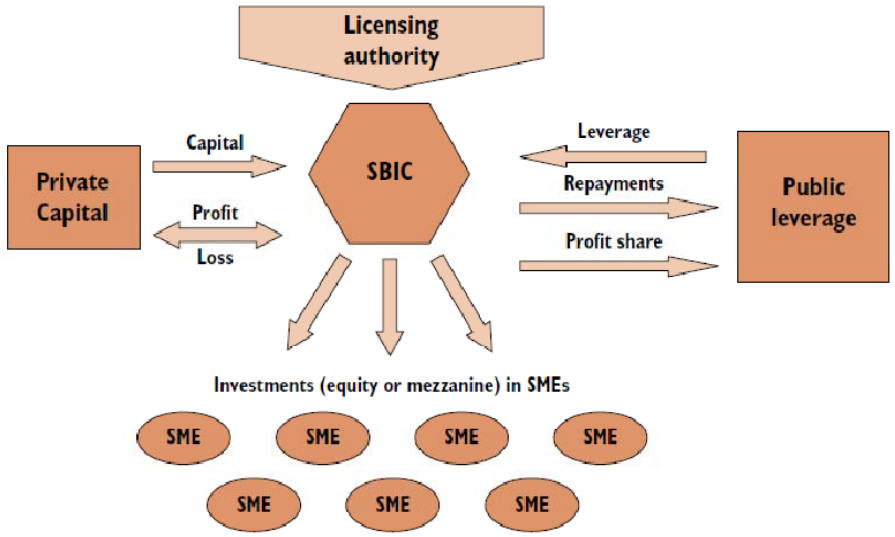
Returns – ECFs are structured to provide:

- A fixed, prioritised return to Government on its subscribed capital (4.5%)
- The subsequent pari passu repayment of capital
- Thereafter, distribution of profits is as follows:
  - to Government at a fixed percentage rate negotiated at the outset, and to private investors, out of which they pay
  - any carried interest to the Manager as negotiated and agreed at the outset

Overall vision

- Asymmetric profit share and private sector first loss
- Leverage
- Scope for innovation
- New approach to delivery and management

Appendix 8: Flow of funds in an ECF



Appendix 9 – Timeline of key events

1945	ICFC and FCI which later became the 3i Group
1964 – 79	Central Planning. Government as VC
1980s	Independent VCs. BVCA
1983 -93	Business Expansion Scheme (Replaced by EIS)
1994	Enterprise Investment Scheme (£6.1bn for 14,000 companies)
1995	Venture Capital Trusts (£3.5bn raised to date)
1999	University Challenge Scheme (£40m for University spin-outs)
2000	High Technology Fund (Fund of Funds) (£124m for Technology VC Funds)
2000	Regional Venture Capital Funds (£250m for equity gap investment)
2000	Early Growth Funds (£63m for small sub £100k equity funding)
2002	Community Development Venture Fund (£40m to invest in the 25% most disadvantaged areas)
2003	Consultation for Bridging the Finance Gap
2006	Round 1 (Pathfinder round) of the ECF programme (£125m for equity gap investment)
2007	Round 2 of the ECF programme (£90m for equity gap investment)
2008	Formation of Capital for Enterprise Limited (CfEL)
2009	Round 3 of the ECF programme (£62m for equity gap investment)

Notes

i. Including: HM Treasury & Small Business Service, *Bridging the finance gap: next steps in improving access to growth capital for small businesses*, December 2003.

ii. Interviews conducted with General Partners of funds operating under the ECF programme, in particular Interviews 4 and 5.

iii. Ibid, i.

iv. HM Treasury, *Budget 2009,* April 2009, Para. 4.33.

v. Quysner, D., *Closing the Equity Gap – The UK Approach,* North American Venture Capital Summit, Public Policy Forum, 27 October 2008

vi. Quysner, D., *Enterprise Capital Funds,* Presentation, NAVCS Public Policy Forum, October 2008.

vii. HM Treasury & Small Business Service, *Bridging the finance gap: a consultation on improving access to growth capital for small businesses*, April 2003.

viii. Ibid, iv.

ix. Ibid, i, vi.

x. Resulting from the merger of the Department for Business, Enterprise, and Regulatory Reform, 'BERR' –formerly the Department for Trade and Industry, 'DTI'– and of the Department for Innovation, Universities and Skills, 'DIUS'

xi. Sources: above sources and interviews conducted with General Partners of funds operating under the ECF programme, with executives of companies financed by ECFs, and with the CFEL team.

xii. BVCA, PriceWaterhouseCoopers and Capital Dynamics, *BVCA Private Equity and Venture Capital Performance Measurement Survey 2008. A survey of independent UK-based funds which raise capital from third party investors,* 2009. Available at: http://admin.bvca.co.uk/library/ documents/Performance_Measurement_Survey_2008.pdf