BDC
Entrepreneurs first

VENTURE CAPITAL INDUSTRY REVIEW

Released February 2011

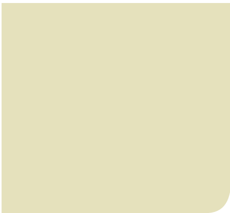
Canada

BDC Venture Capital's mission is to help Canadian entrepreneurs create and grow successful, innovative technology businesses through patient investment and value-added support. In acting as a strategic partner in the development and commercialization of technology, as well as a catalyst for the Canadian venture capital industry, we strive to earn a positive return on our investments in order to:

i) highlight the success of underlying businesses;

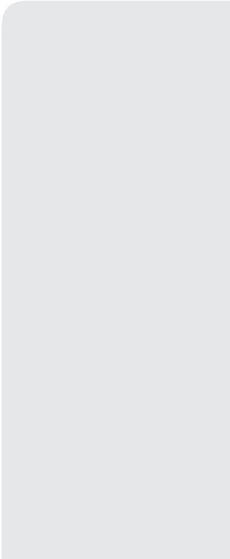
ii) enable and attract future investment and value-added support for these businesses; and

iii) demonstrate the viability of the Canadian venture capital industry and attract further capital into this asset class.



INTRODUCTION

This report summarizes the key findings and recommendations resulting from BDC's 2010 review of the Canadian venture capital industry and BDC Venture Capital. It includes:



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I. CONTEXT, OBJECTIVES AND SCOPE OF THE REVIEW

Although the venture capital industry is only one element of the innovation ecosystem, examples from countries such as the United States and Israel show the potential impact this industry can have in creating technology champions. Unfortunately, Canada is "hitting below its weight" in this respect. In fact, long-term returns in the Canadian venture capital industry are such that capital has fled the market. Recovery will be a lengthy process.

The Business Development Bank of Canada's venture capital group (BDC VC) has invested over $1.2 billion to support 465 different Canadian technology companies over the past 25 years. Its aim has been, per the *BDC Act*, to play a complementary role by helping to fill gaps in the industry, while demonstrating the potential of Canada's technology entrepreneurs.

BDC has delivered on public policy objectives and Canadian technology entrepreneurs recognize the key role BDC plays in venture capital investing. However, BDC VC experiences many of the same pressures and performance issues as other market participants, and BDC VC's financial results are largely comparable.

Given this, a strategic review of BDC VC's activities was launched in the spring of 2010 to:

- understand the state of the venture capital industry in Canada;
- assess BDC VC's impact; and
- develop a strategy for BDC VC to increase its effectiveness as an industry catalyst.

To build an appropriate fact base for this review, 68 interviews were completed with market participants and internal stakeholders, including Canadian and foreign Limited Partners (LPs), Canadian and foreign General Partners (GPs), portfolio companies, venture capital professionals, BDC management and investment professionals, advisors and experts. A detailed survey of all BDC VC investment professionals was also conducted *(Appendix 1)*.

The project involved McKinsey & Company professionals who provided independent research and fact-based analysis, and a team of employees from across BDC, including direct and indirect investment professionals. This effort was supported by outside advisors, including Charles Sirois, Yigal Erlich, Terry Matthews, Stephen Hurwitz, Dr. Gilles Duruflé and Robin Louis. Dr. Josh Lerner (Professor at Harvard Business School and venture capital industry specialist) and Réal Desrochers (former Vice President of Alternative Investments at CalSTRS) acted as special advisors to McKinsey & Company.

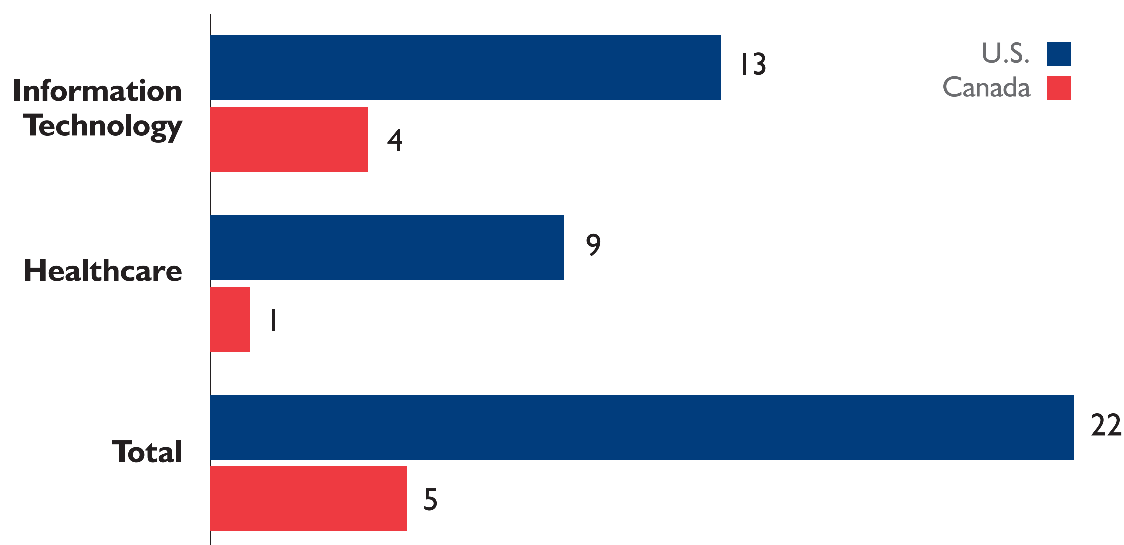
II. REVIEW OF THE CANADIAN VENTURE CAPITAL INDUSTRY

Venture capital plays an important role

Large-scale innovative firms play a key role in national economies by stimulating research and development (R&D), attracting applied research and business talent, and encouraging capital flow. These firms often nurture a strong ecosystem of local supplier and service companies, generating business, economic and social benefits at regional and national levels.

The U.S. has more large firms (e.g., Google, Apple, Oracle, etc.) on a relative scale than Canada does *(Exhibit 1)*.

Exhibit 1: *Firms with more than $1 billion in market capitalization per $ trillion GDP*



SOURCE: Bloomberg; Global Insight; McKinsey analysis

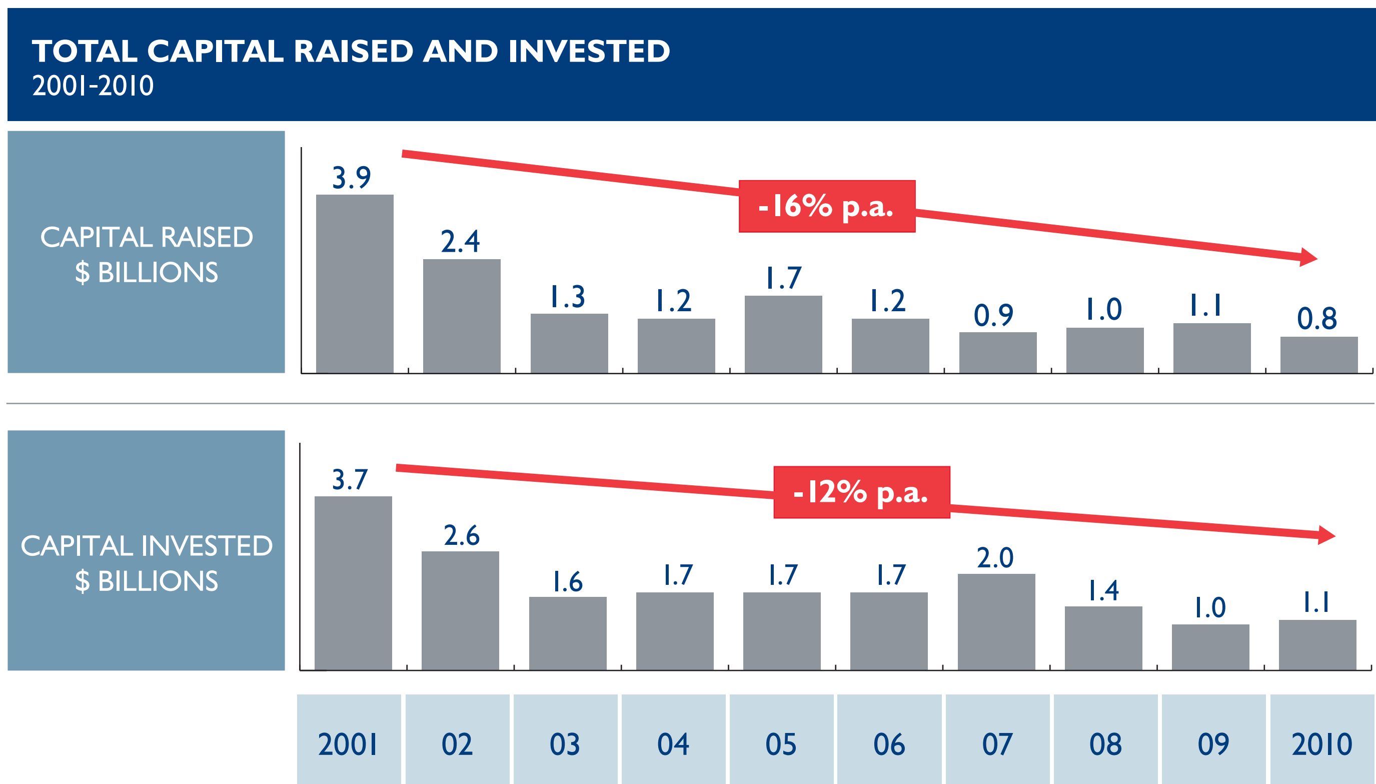
While venture capital is only one element in the overall innovation ecosystem, a strong and resilient venture capital industry is critical to the creation of strong technology companies, some of which may become the next champions. There is also a need for more small and medium size firms as their technology often is transferred to the rest of the economy.

A vibrant venture capital infrastructure depends on the smooth functioning of a multitude of elements that are linked together. When just one link breaks down, smooth functioning of the system can be highly impeded.

Venture capital in Canada

Venture capital funds raised in Canada have hovered at around $1 billion for the last three years, down from a peak of almost $4 billion in the late 1990s. In turn, capital invested by venture capital funds hit a decade low of $1 billion in 2009 *(Exhibit 2)*.

Exhibit 2: *Canadian fundraising and investments have steadily declined since 2000*



SOURCE: Thomson Reuters; National Venture Capital Association

Most of the discussion on venture capital in Canada has centered around two beliefs:

- there is not enough venture capital available in Canada; and
- the industry is in a cyclical, not structural downturn, and time will heal the industry's difficulties.

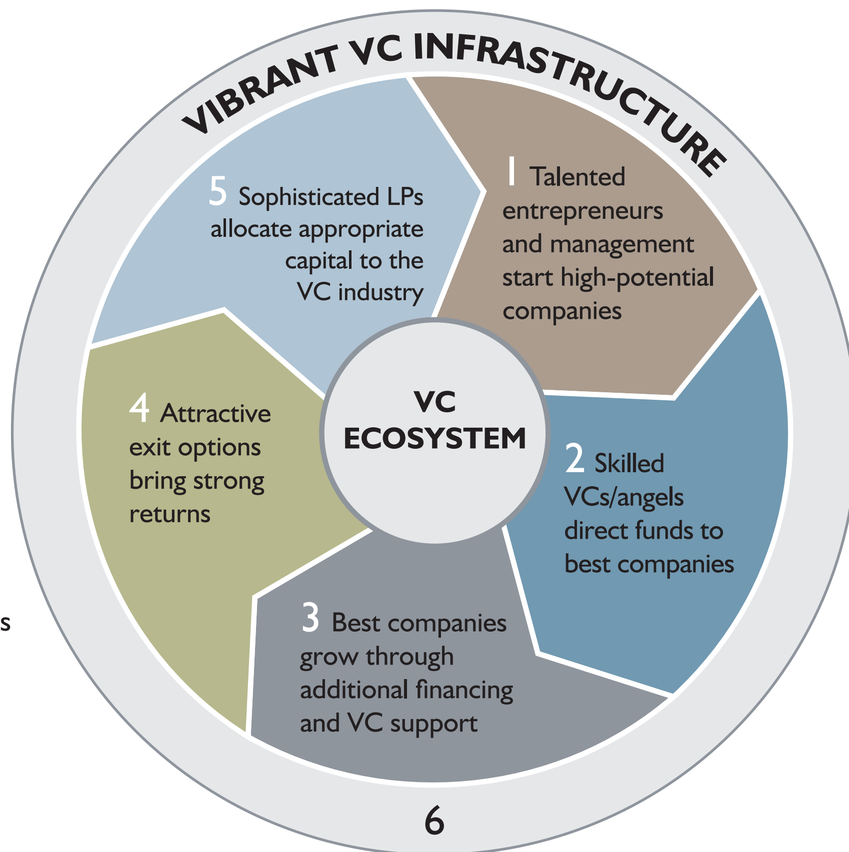
On the first point, the study determined that the current low level of capital is a symptom, not a cause, of industry woes.

On the second point, the study concluded that the Canadian venture capital industry is broken. Despite some attractive enabling elements for venture capital investments in Canada, there has been a 10-year IRR of -5% for the asset class. As a result, private LPs (e.g., pension funds) have left the venture capital market. It will take significant changes to draw them back.

To understand the potential causes of underperformance, it helps to consider the six elements of a virtuous venture capital industry cycle *(Exhibit 3)*.

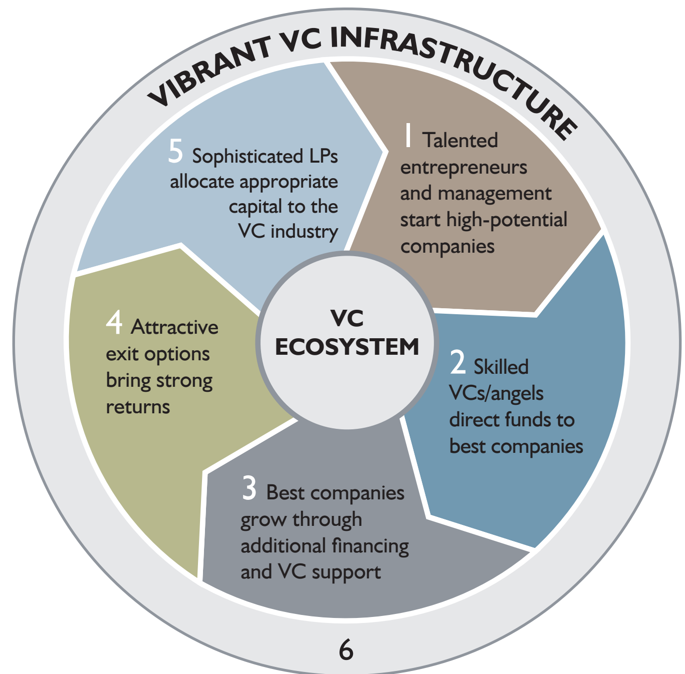
Exhibit 3: The 6 key indicators of a healthy venture capital ecosystem – the "virtuous cycle"

1	Supply of quality companies and ideas Skilled (serial) entrepreneurs, management teams
2	Strong angel network provides adequate seed and bridge capital GPs invest most in best companies, while quickly cutting off under-performing companies
3	Adequate amount of follow-on financing of best companies through exit GPs help develop companies (including management selection) using expertise and industry networks
4	Attractive IPO and M&A market that has confidence in VC-backed companies
5	LPs who allocate right amount of capital to best VCs to maximize risk-adjusted returns
6	Strong network that links all players domestically and to global experts, markets and businesses Government policies aligned to encourage VC and entrepreneurial activity (e.g., public R&D funding that is conductive to innovation and commercialization, legal, tax, IP regulations)



Unfortunately, the Canadian venture capital industry exhibits gaps in many of these elements *(Exhibit 4)*.

Exhibit 4: *Many gaps have resulted in a "vicious" Canadian VC industry cycle*



1

Shortage of serial entrepreneurs and skilled management with global networks

2

GPs are subscale and lack strong capabilities and experience compared to U.S. GPs

Significant investments made by government and retail funds, with objectives and constraints (e.g., region focus, pacing requirements) may hurt returns

Angel network not well developed

3

Over-investment in early stage without adequate follow-on capital, leading to dilution

Undercapitalized and sometimes dysfunctional syndicates make follow-on investment difficult

GPs lack experience and networks to develop companies to potential

Foreign GPs capture a disproportionate share of exit value

4

Exits have been mediocre as public markets place a discount on Canadian VC-backed companies

Relatively low listing requirements on the TSX Venture Exchange can be counterproductive

5

Total funding to VC eligible companies was proportionately higher in Canada than the U.S. at the turn of the decade but has significantly decreased in recent years

Current capital supply crunch as institutional LPs and retail funds have significantly reduced investments

Government-sponsored funds made up half of all available LP capital, with allocation sometimes driven by public policy and misaligned incentives

Bottom-quartile funds receive largest share of capital; the fund natural selection process is broken

6

Lower level of non-dilutive capital from government and other sources prior to first VC investment

Lack of commercialization focus in R&D investment

Relatively low effectiveness of Technology Transfer Offices in commercializing technology

Lack of connectivity to global markets, reducing opportunities for syndication, business development and exits

Understanding the gaps in the cycle

1. Talented entrepreneurs start high-potential technology companies

The innovation investment lifecycle starts with a technology entrepreneur. This individual needs many attributes to succeed, including a willingness to take risk and persevere, and an ability to identify, acquire or build attractive intellectual property. Perhaps most important is the skill to commercialize and grow an idea into a viable and thriving business, supported by a dynamic organization. The quality and experience of the entrepreneur in any venture may be the most critical ingredient for success. Fortunately, when investing in a new business, many venture capitalists correctly focus more on the entrepreneur and his team than on the technology.

Although the precise number and level of skilled technology entrepreneurs in Canada is not measurable relative to peers in global markets, industry experts believe that Canadian technology entrepreneurs are more likely to be first-time entrepreneurs than those in a more fertile ecosystem such as Silicon Valley.

Furthermore, many Canadian entrepreneurs are more focused on *technology push* strategies versus a *market pull* approach (i.e., pushing a new technology instead of trying to meet a need in the market). The lack of commercialization expertise often leads to over-investment in product engineering at the expense of sales and marketing. This implies that there is an increased need for mentoring of first-time Canadian entrepreneurs, and the development of commercialization skills and focus within technology start-ups.

2. Skilled early-stage investors invest in the most attractive opportunities

Skilled entrepreneurs need capital and mentoring. One critical measure in determining the effectiveness of an innovation ecosystem is how efficiently capital and resources are allocated to the most deserving ventures. Seed stage entrepreneurs generally raise capital in three ways: through non-dilutive financing, angel investors and venture capitalists.

Although Canada boasts a number of active angel investors and angel associations, provincial and national networks are underdeveloped compared to those in the United States. Also, many angels in Canada lack sufficient capital to do later rounds of investment; they suffer dilution which reduces their returns and limits their appetite for future investment.

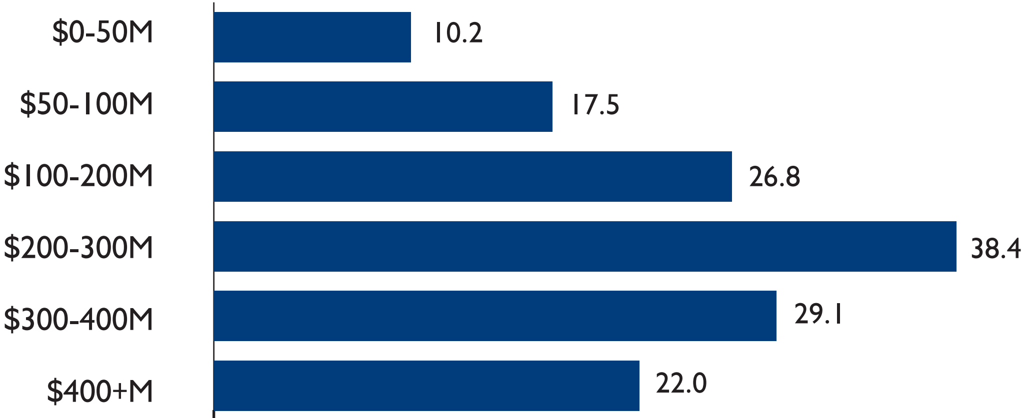
Many deserving entrepreneurs are unable to secure angel financing from investors. More importantly, these entrepreneurs do not benefit often enough from mentoring by investors who truly understand the start-up process and the industry in which they operate. In the absence of angel capital, venture capitalists must step in, sometimes earlier in the lifecycle of a company than they traditionally would.

The quality of venture capitalists making the investment decisions has a tremendous impact on the overall performance and health of the industry. Skilled venture capitalists can help in four ways. They:

- select appropriate investment opportunities and invest the appropriate amount of capital;
- mentor entrepreneurs and help them make better strategic management decisions;
- create opportunities for portfolio companies through their sector-focused networks, both in business development and partnership/acquisition opportunities; and
- build companies to maximize exit values to attract more skilled entrepreneurs to the business area and more capital to the asset class.

However, it takes more than just skilled venture capitalists. Size of fund also appears to influence the degree of return. Empirical evidence from the U.S. shows that over a 20-year period, funds in the $200-300 million range overall have the highest returns *(Exhibit 5)*.

Exhibit 5: *Empirical evidence from the U.S. suggests that scale matters; funds in the $200-300 M range overall have the highest returns*



SOURCE: Thomson Reuters; Thomson Financial; Gilles Duruflé

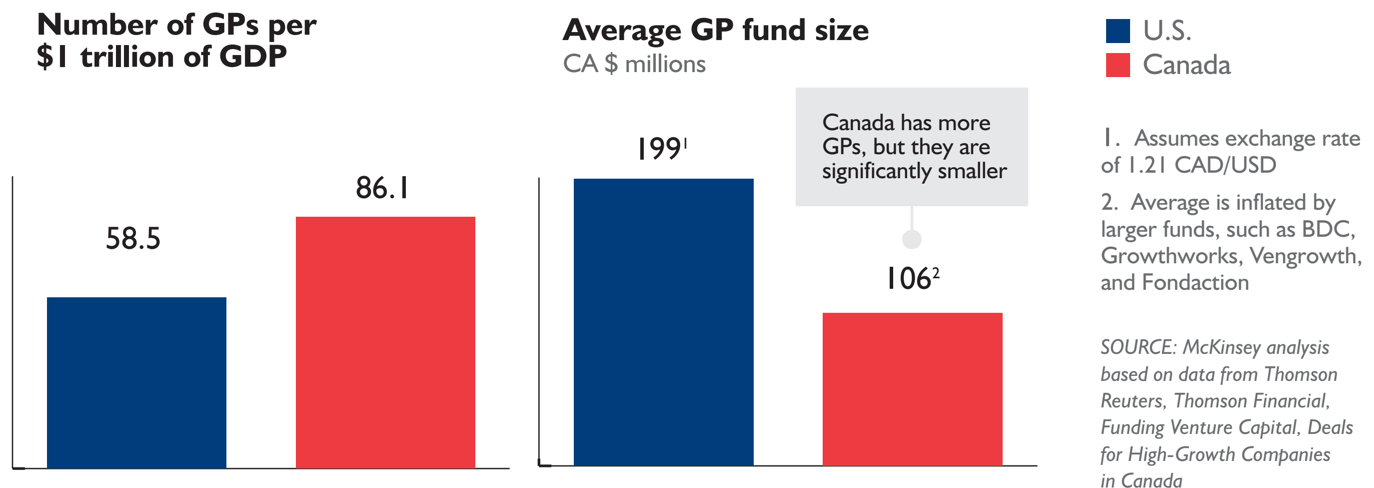
Unfortunately, historically poor returns combined with modest capital available for private funds in Canada have created a lack of sufficiently large, skilled GPs. In 2005, the average Canadian GP was half the size of a U.S. GP and the gap has widened, according to industry experts *(Exhibit 6)*.

Sub-scale GPs lack the operating budget needed to attract top-tier global partners, and often lack sufficient capital to follow through on an investment.

Through the late 1990s and early 2000s, the rise of tax-incentivized, labour-sponsored funds in Canada greatly increased the amount of venture capital available in the industry and created a number of GPs. However, these funds were often limited by foreign content constraints, pacing requirements and, in some cases, lower performing fund management teams.

On this point, it is important to note that though this first generation of government sponsored funds showed lacklustre results, the new model for government sponsored investment through funds-of-funds appears promising. Indeed, examples such as Teralys in Quebec and OVCF, managed by Northleaf in Ontario, improve the sophistication of the fund selection and capital allocation process, which should lead to improved industry performance over the long term.

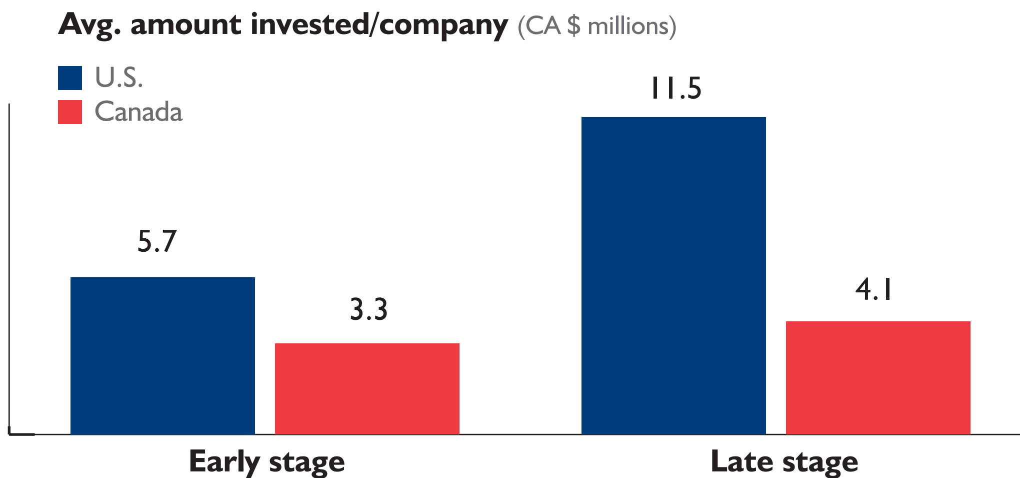
Figure 6: *Compared to the U.S., Canadian GPs are subscale (2005)*



3. Highest-potential companies receive follow-on investment and significant value-added support

Both subscale private funds and labour-sponsored funds focused on a large volume of early stage investments and "spread the jam too thin." Between 2005 and 2009, they invested almost 70% more in early stage companies than in the U.S., while also investing 40% less capital per company. This forced Canadian technology entrepreneurs to spend too much time on fundraising and not enough time on running their businesses. Furthermore, there was insufficient capital available for follow-on rounds of investing *(Exhibit 7)*.

Exhibit 7: *Subscale GPs have "spread the jam too thin" and allocated insufficient capital to late stage*



SOURCE: VC Reporter; Investment Analytics

In some situations, foreign GPs with available capital were able to cherry-pick the most attractive opportunities. Although foreign GPs invest in only 10% of Canadian venture capital deals, they account for 31% of exits and 44% of exit proceeds.

In other cases, this has led to undercapitalized and dysfunctional syndicates of investors, some of which have run out of capital for follow-on investments. This creates an unhealthy dynamic since these investors, in order to maintain the same ownership percentage, may resist much needed follow-on financing rounds.

4. Successful companies capitalize on attractive exit options

For those companies that manage to weather the dual challenges of growth and financing, some are acquired by strategic buyers, while others exit via listings on public markets.

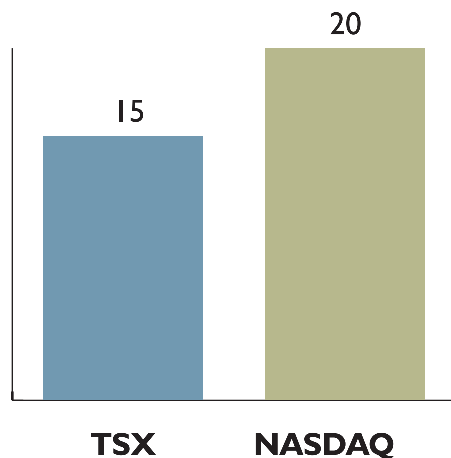
The lack of mature technology clusters and local $1B+ companies has an impact but is not likely a root cause for industry underperformance, since the market for truly innovative technology companies is generally global.

Canadian public markets also may put the industry at somewhat of a disadvantage. Canadian companies listing in Canada suffer more than a 50% discount on average exit values compared to the U.S. The TSX also shows a discount to the Nasdaq in terms of price-to-earnings ratios *(Exhibit 8)*.

Exhibit 8: *Exit valuations*

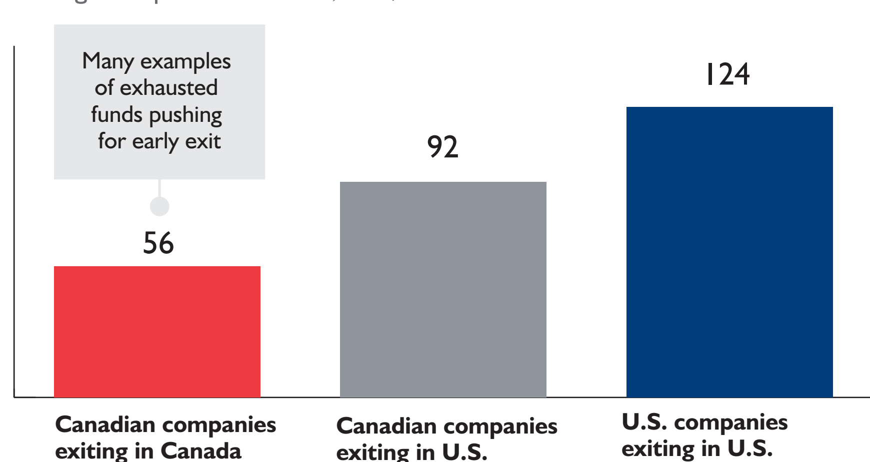
There's a discount in P/E ratios for TSX compared to NASDAQ

Median P/E ratio 2002-2009



Canadian VC-backed companies exiting in the U.S. perform worse than U.S. companies

Average exit price 2002-2009, CA $ millions



SOURCE: McKinsey analysis based on data from Thomson Reuters, Datastream. Analysis excludes impact of any Canadian companies not backed by VC

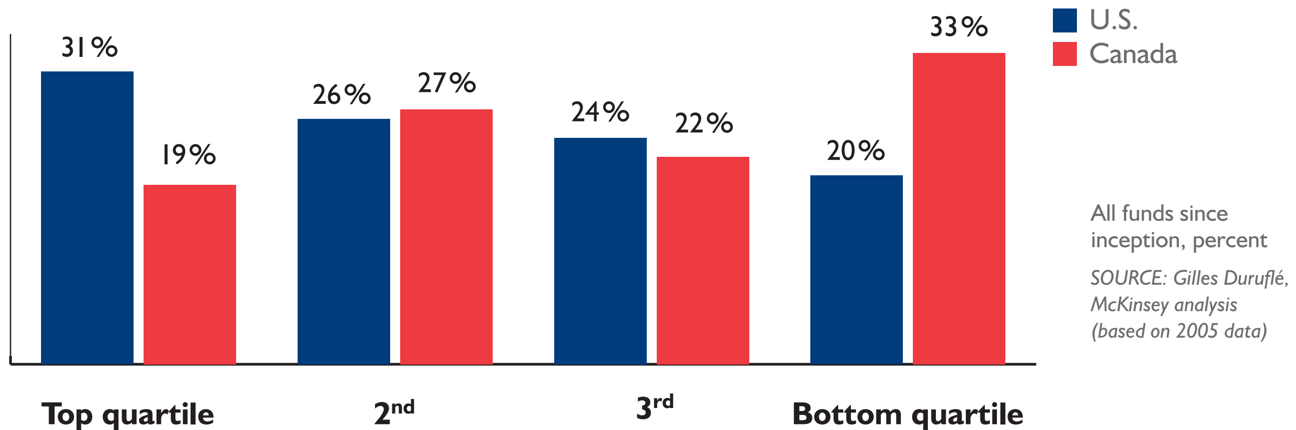
As well, low listing requirements on the TSX Venture Exchange may allow some companies to list too early in their lifecycle, often becoming an "orphan stock," stalling growth and further investment.

5. Sophisticated LPs allocate appropriate capital to Canadian venture capital funds

Institutional LP capital from pension funds and other sources has fled the industry as a result of the challenges on exits and other obstacles facing the industry, such as poor returns. Consequently, very few large LPs remain (mostly government-backed), making fundraising extremely difficult.

The tax incentives allowing unsophisticated retail investors to invest in this asset class are not a silver bullet. In fact, they may have been somewhat counterproductive. Historically, capital allocation to venture capital funds has been inefficient in Canada and has broken the natural selection process: top quartile funds in Canada received 19% of capital compared to 31% for U.S. top quartile funds, while bottom quartile funds received 33% of capital compared to 20% for those in the U.S. *(Exhibit 9)*.

Exhibit 9: *Capital allocation is un-Darwinian*



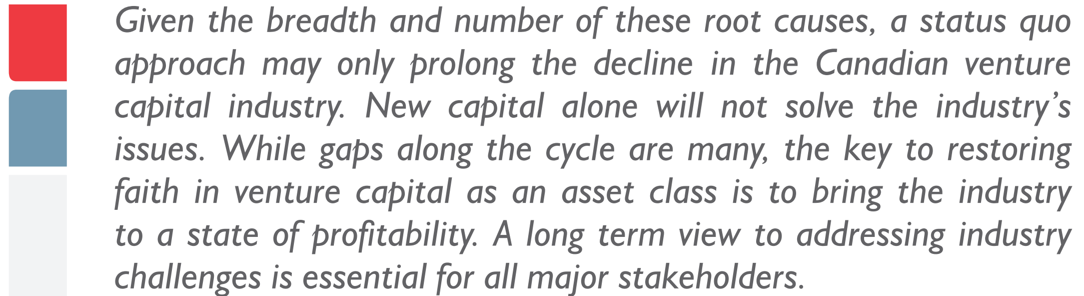
For a healthy innovation ecosystem, savvy investors need to invest in the right venture capital funds, just as those funds need to invest the right amount of capital into the right businesses. Among investable asset classes, venture capital shows one of the highest "persistence" of returns, meaning that funds which deliver top quartile returns for one fund are more likely to deliver top quartile returns on following funds. Therefore, the historically inefficient allocation of capital to lower-performing funds has been truly damaging to the industry and must be reversed.

The next generation of investments into new structures, such as Teralys in Quebec, is taking a more sophisticated approach to capital allocation and should have a significant long term positive impact.

6. A vibrant venture capital infrastructure supports the investment process

The improved capital allocation process, such as Teralys, is one of several recent positive changes resulting from government intervention. Another would be the changes made in 2009 to section 116 of the Canadian *Income Tax Act* that removed taxation impediments faced by foreign investors. Governments worldwide understand the potential benefits of a well-capitalized and healthy venture capital ecosystem, and aim to create the necessary winning conditions.

Although Canada has many advantages, including economic stability, significant investments in university research and development, investor protection and corporate governance, more opportunities exist. First, Canadian companies generally receive far less non-dilutive financing than U.S. companies prior to the first investment by a venture capitalist. Second, research and development investment is more focused on fundamental research, often at the expense of commercialization. Third, operating rules and investment philosophies of Technology Transfer Offices vary across the country and, in many cases, can be ineffective. Fourth, the Canadian venture capital industry appears to be less connected to global markets than its industry counterparts in other countries.



Given the breadth and number of these root causes, a status quo approach may only prolong the decline in the Canadian venture capital industry. New capital alone will not solve the industry's issues. While gaps along the cycle are many, the key to restoring faith in venture capital as an asset class is to bring the industry to a state of profitability. A long term view to addressing industry challenges is essential for all major stakeholders.

There is no silver bullet solution available to fix the industry. *However, fostering the emergence of at-scale, skilled GPs is the most likely approach to succeed in kick-starting a virtuous cycle in Canadian venture capital. These GPs will be able to allocate capital more efficiently, and select and develop the most promising companies and entrepreneurs. Over time, they will deliver attractive returns which will attract private LP capital back into the system.*

REASONS FOR OPTIMISM

Looking ahead, we believe there is reason to be hopeful:

- More serial entrepreneurs seem to be emerging
- Angel networks are becoming better structured
- Forced rationalization has resulted in healthier GP portfolios
- The limited available capital is flowing to the highest quality GPs
- There are "green shoots" in the exit markets, particularly in M&A
- LPs recognize the importance of funding at-scale GPs, in line with their industry sector and focus
- Existing LPs now have scale and expertise

III. NEW STRATEGY FOR BDC VENTURE CAPITAL AND ITS IMPLICATIONS

Given its experience in the asset class, and breadth in the Canadian marketplace, BDC has an opportunity to truly play its role as an industry catalyst. With that in mind, we have developed a long-term strategy that is both robust and realizable, which seeks to build on the existing positive shifts in the industry, and help us reach a tipping point towards the virtuous cycle of innovation and investment. It addresses the critical issues facing the industry (Appendix 2).

This new strategy has three main elements:

- refined mission;
- four strategic initiatives; and
- restructured organization and governance model.

Refined mission

BDC VC has refined its mission to refocus its activities on achieving a positive rate of return, and to emphasize the importance of building businesses instead of selling technology.

"BDC VC's mission is to help Canadian entrepreneurs create and grow successful, innovative technology businesses through patient investment and value-added support. In acting as a strategic partner in the development and commercialization of technology, as well as a catalyst for the Canadian VC industry, we strive to earn a positive return on our investments in order to:

i) highlight the success of underlying businesses;

ii) enable and attract future investment and value-added support for these businesses; and

iii) demonstrate the viability of the Canadian VC industry and attract further capital into this asset class."

Four strategic initiatives will allow BDC to deliver on its mandate and improve its financial performance over the long term.

1. *Develop at-scale "internal GPs" to build leading technology businesses*
2. *Manage and grow a diversified portfolio*
3. *Catalyze the emergence of world-class Canadian venture capitalists through indirect investment*
4. *Stimulate the VC and innovation ecosystems*

Four strategic initatives

Four strategic initiatives will allow BDC to deliver on its mandate and improve its financial performance over the long term.

1. Develop at-scale "internal GPs" to build leading technology businesses

Direct investment activities will be maintained in part through the creation of three distinct "internal GPs" covering Life Sciences, IT/Telecom, and Energy and Cleantech. For the time being, BDC will be the sole investor but will aim to spin them off once they are able to raise private capital.

GO Capital [1] will remain a fourth "internal GP," focused on Quebec seed investments.

All four funds will have increased autonomy and operational flexibility, counterbalanced with a prudent level of value-added oversight. They are expected to implement investment practices similar to the best performing players in the industry.

2. Manage and grow a diversified portfolio

Direct investment activities will also be maintained through investments in a separate portfolio of businesses. It will grow businesses currently in this portfolio to their full potential with value-added support and follow-on investments. It also will make new investments, including those made in response to specific government policy objectives.

1. GO Capital is a $50 million venture capital fund intended to support young Quebec technology firms in search of financing, particularly firms working in the fields of advanced technologies, information technology, life sciences and telecommunications. GO Capital investments in the selected firms will match, dollar for dollar, the investments made by BDC, bringing the available capital to $100 million.

FIER Partners has undertaken to invest $25 million in the new stream of seed funding for technology firms in GO Capital. The remaining capital is being provided by BDC ($10 million), the Caisse de dépôt et placement du Québec ($10 million), the Solidarity Fund QFL ($3 million) and Fondaction, the CSN's development fund for co-operation and employment ($2 million).

3. Catalyze the emergence of world-class Canadian venture capitalists through indirect investment

BDC's Funds group will ensure the creation of a number of at-scale funds, staffed with high-potential emerging or existing GPs. BDC VC will play a very active role in supporting the emergence of these new funds, creating the right conditions for success (e.g., helping find the right mix of investment professionals) and connecting these funds to BDC's network of domestic and international co-investors. As one of Canada's very few large nationally focused LPs, BDC VC can take the lead to reshape the LP landscape and attract institutional capital back into the market.

4. Stimulate the VC and innovation ecosystems

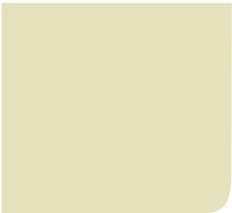
A series of initiatives will be put in place to address many challenges faced by the industry. Given BDC's mandate and capabilities, BDC VC can play a key role in collaborating on and coordinating a number of nationwide initiatives, while building on existing programs. These initiatives will include improving industry global connectivity, reinforcing angel networks and supporting entrepreneurship development.

Restructured organization and governance model

BDC VC has made internal structural changes to its organization and governance process in order to streamline its activities and permit its investment professionals to provide more value-added services to portfolio companies and funds.

CONCLUSION

These proposed changes are bold but achievable. BDC VC can play a true leadership role in kick-starting the industry into a virtuous cycle. By doing so, it will help support innovation in Canada to create the industry champions of tomorrow.



APPENDICES

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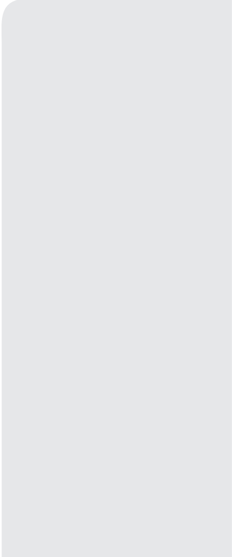
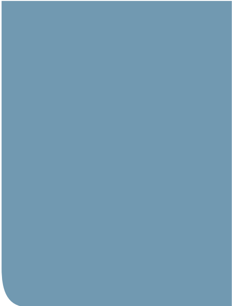
Appendix 2 25





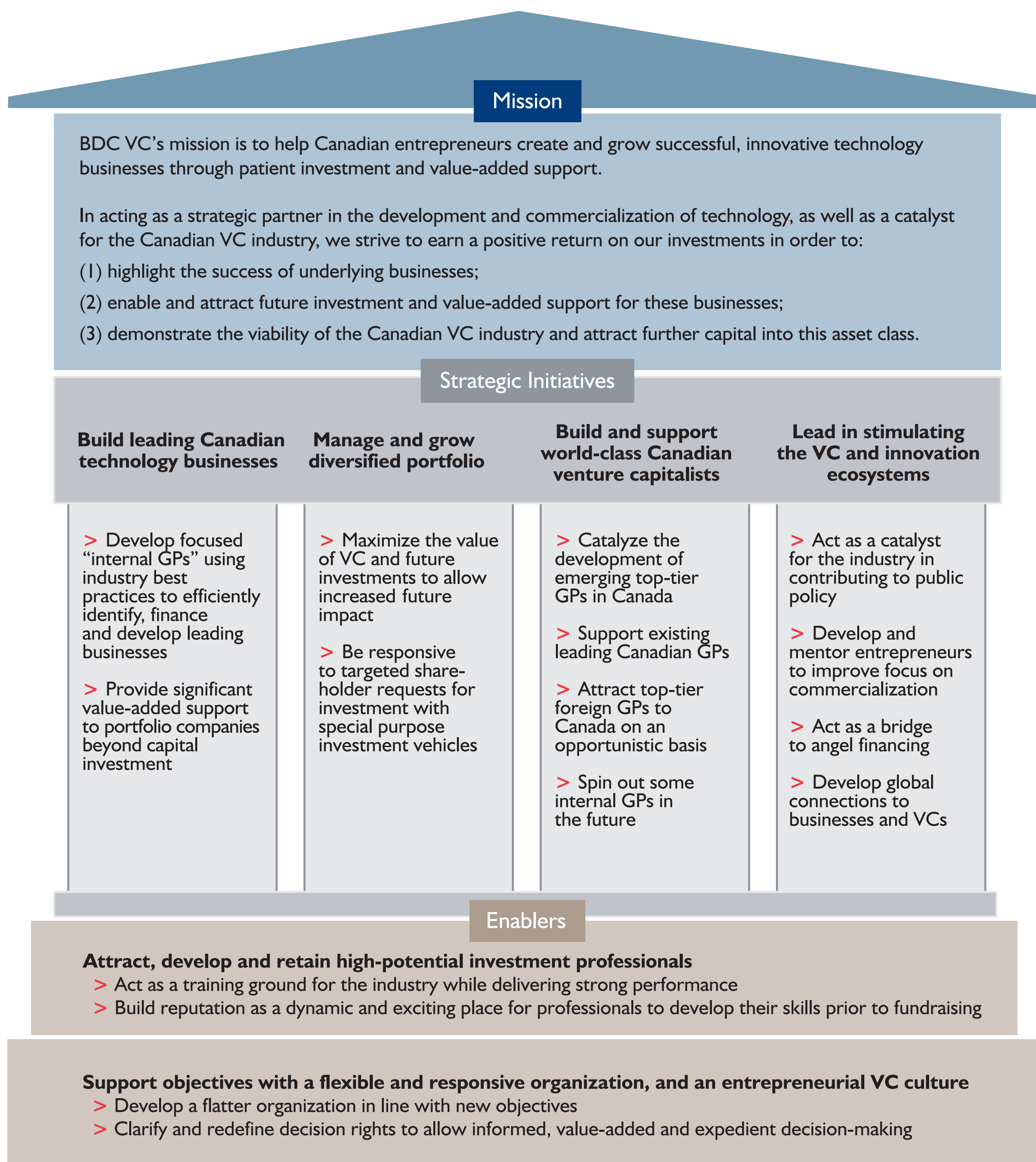
APPENDIX I

To ensure multiple perspectives, 68 interviews were conducted among 11 stakeholder groups, including a comprehensive survey of all BDC VC investment professionals

INTERVIEWS

			Planned	Conducted
INTERNAL	BDC leadership	Board	4	4
		Shareholders	4	4
		Executives	4	4
	BDC Venture Capital	Senior Management	10	10
		Directors	12	12
EXTERNAL	Portfolio companies		8	8
	Canadian GPs		7	7
	Canadian LPs		2	2
	Experts		5	5
	Global GPs		6	6
	Others		6	6
		Total	68	68

APPENDIX 2



Angel investor
A wealthy individual who invests in companies in early stages of development.

Bridge capital
Temporary funding that is eventually replaced by permanent capital from equity investors or debt lenders.

Dilution
The reduction in the ownership percentage of current investors, founders and employees caused by the issuance of new shares to new investors.

Early stage
The state of a company after the seed (formation) stage but before the middle stage (generating revenues). Typically, a company in early stage will have a core management team and a proven concept or product, but not positive cash flow.

Exit
The means by which owners and investors generate profits from their investments in a business. Typically, the options to "exit" from a VC investment are to merge the company with another company, have it acquired or make an initial public offering (IPO).

General partner (GP)
Typically, a venture capital fund is structured as a limited partnership, with the venture capital firm as the general partner and limited partners (LPs) being investors that provide most of the capital in the partnership. The GP manages the fund and retains liability for the actions of the partnership.

Initial public offering (IPO)

The first offering of stock by a company to the public. An IPO is one of the methods that a company that has achieved significant success can use to raise additional capital for further growth. Early investors may take this opportunity to sell their investments in the company.

IP regulations

Intellectual property rules are for the protection of the ownership of knowledge, techniques, writings and images by means of patents, copyrights and trademarks.

IRR

The internal rate of return is the interest rate at which a certain amount of capital today would have to be invested in order to grow to a specific value at a specific time in the future.

Late stage

The state of a company that has proven its concept, achieved significant revenues compared to its competition, and is approaching cash flow break even or positive net income. Typically, a late stage company is about 6-to-12 months away from an exit event such as an initial public offering or acquisition.

Limited partner (LP)

Refers to an investor in a limited partnership. The general partner is liable for the actions of the partnership while the limited partners are generally protected from legal actions and any losses beyond their original investment.

Market capitalization

The value of a publicly traded company as determined by multiplying the number of shares outstanding by the current price per share.

M & A

Mergers and acquisitions refers to the corporate strategy, finance and management involved in buying, selling and combining companies.

Seed capital

Money provided by angel investors, friends and family to the founders of a start-up at its initial stage of development.

Syndication

Forming a group of investors that agree to participate in a round of funding for a company. Alternatively, a syndicate can refer to a group of investment banks that agree to participate in the sale of stock to the public in an initial or secondary public offering.