



CANADA'S VENTURE CAPITAL & PRIVATE EQUITY ASSOCIATION
ASSOCIATION CANADIENNE DU CAPITAL DE RISQUE ET D'INVESTISSEMENT

The Drivers of Canadian VC Performance

Gilles Duruflé

**Full Report
June 2006**

Key questions

Included in this Report

Analysis of the Results

What is the true nature of historical performance?



Comparative analysis of net returns : slicing and dicing

Impact of the VC industry's characteristics and behaviour

How does the behaviour of Canadian VCs compare to leading US VC?



Quantitative and qualitative analysis of the behaviour of our industry compared to “best practices”

- The project was conceived and organized by the CVCA
- Funding was provided by the CVCA and Summit 2000
- The study was undertaken by Dr Gilles Duruflé, under contract to the CVCA

- **Quantitative analysis**
 - Thomson Financial
 - Standardized results and special computations
- **Research**
 - Academic Research : Lerner/Gompers
 - McKinsey
 - Macdonald & Ass.
- **In depth interviews**
 - Canadian managers : 10 PI, 6 others
 - US managers
 - LPs

We want to acknowledge the special contribution of

- **The managers whom were interviewed for their time and insights**
- **The CVCA steering committee for their comments and advise**
- **Thomson Financial for the access to their data bases and special computations**

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■ VC Industry Performance

- US industry overall has very good returns, driven by 1st quartile
- The US largely outperforms the EU on every aspect. However the first quartile in Europe is a performing asset category
- Canadian Industry overall is not yet performing, however the first quartile is a performing investment category

■ Canadian industry performance influenced by:

- Industry is young and timing has been unfavorable
- Selection process to direct the money to good managers not yet efficient
- Many funds are (too) small
- Capital allocation by stage appears inefficient and financings are too small
- Companies not driven to large exits – We need to build strong companies by global standards

Recommendations

■ Raise the bar at all levels

- Portfolio companies – entrepreneurs, management, boards: global ambitions
- VC companies – staffing, access to global resources, larger fundings
- VC fund investors – maturing of selection process

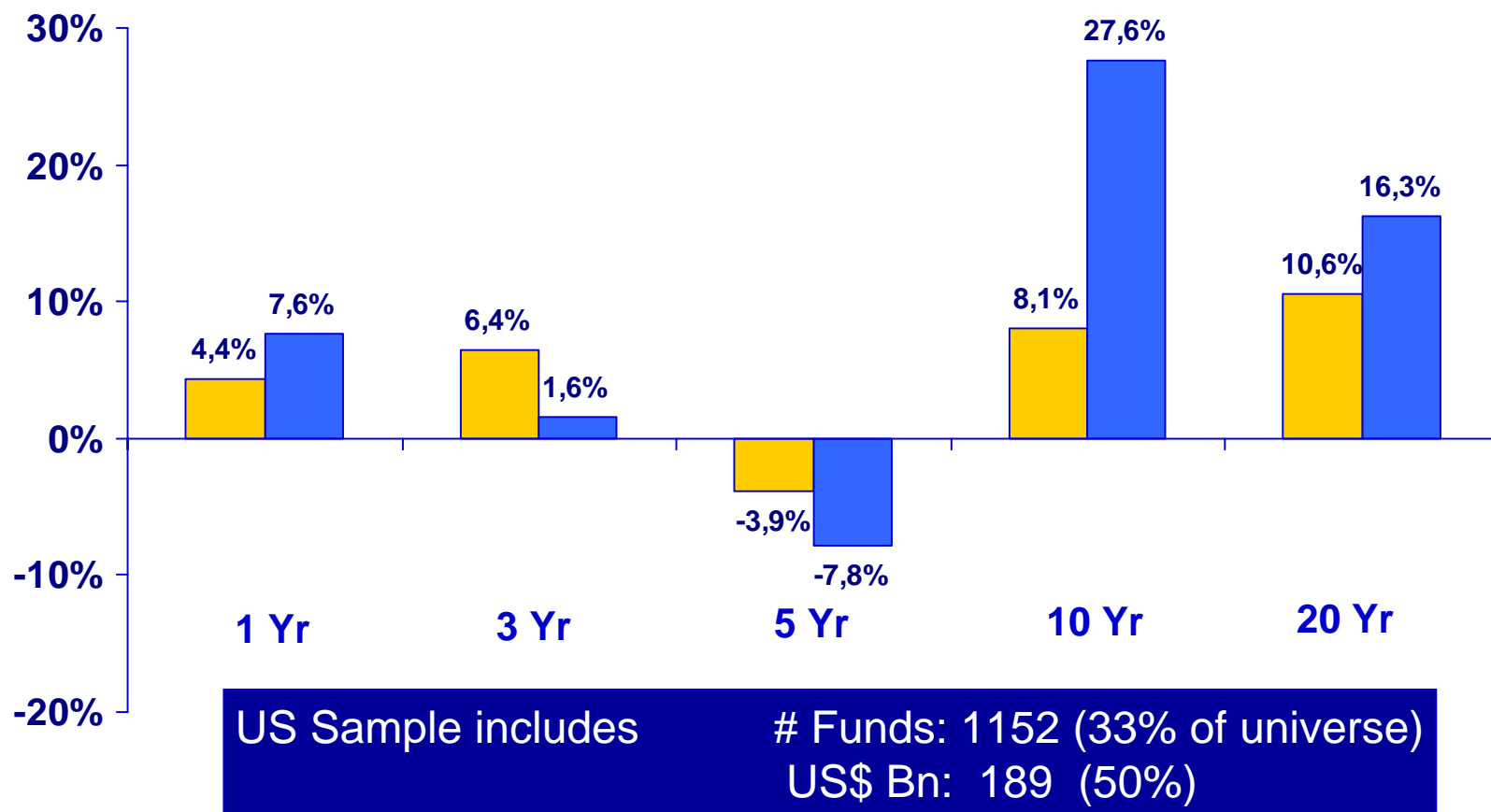
■ Adopt best North American practices and resources

- **The US VC industry has been a performing asset class in the long run.**
- **However :**
 - **This performance is highly cyclical**
 - **It is essentially due to the first quartile**
 - **It is concentrated in some states**
 - **In the long run, only the first quartile is an attractive investment**
- **One of the important drivers of the US VC industry performance is the LP selection process when GPs are raising successor funds**

In the long term, US VC has been a performing asset class

US Investment Horizon Returns

■ US VC
■ S&P 500

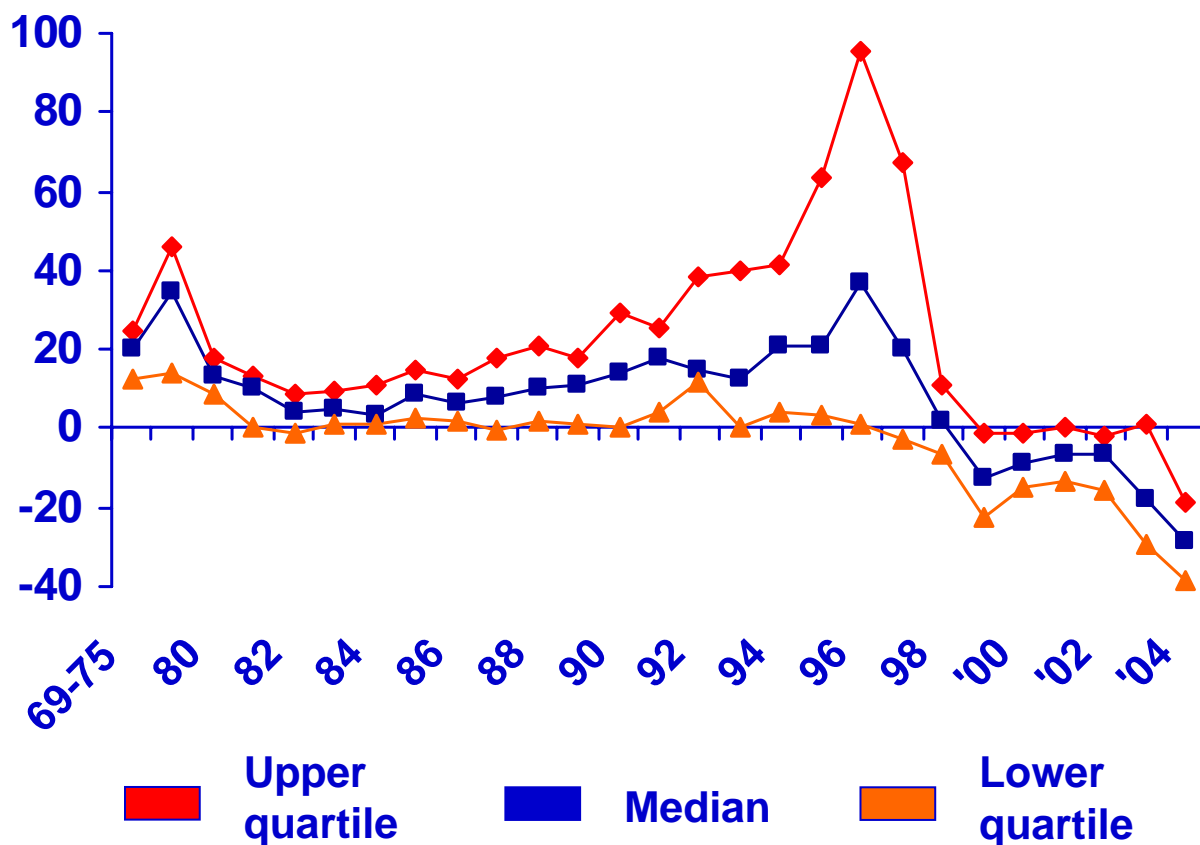


It is sometimes argued that the returns might be upward biased because non performing funds would tend not to report. There is no definitive evidence about this potential bias. However we have to keep this in mind when we look at the returns

However, this performance is highly variable

By vintage year and quartile

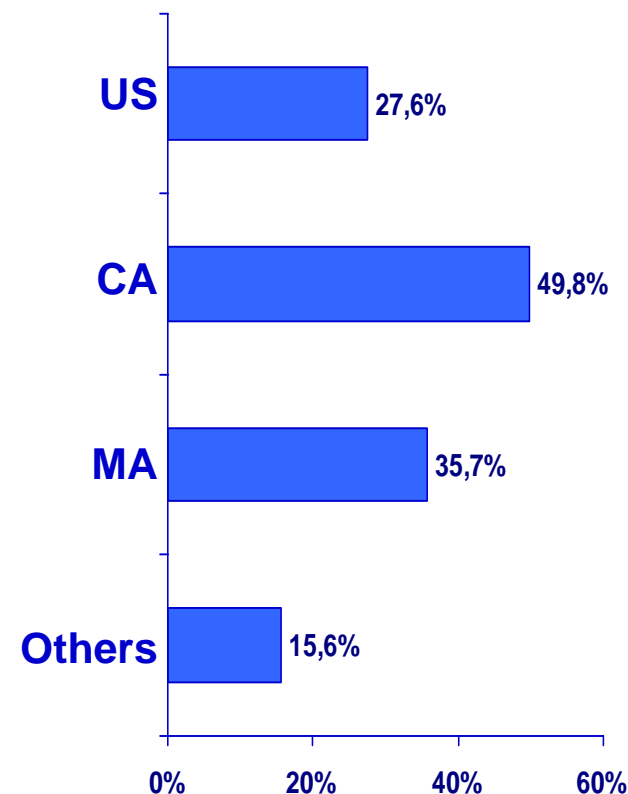
Cumulative Vintage Year Performance
By quartiles*



*lower boundary of the top quartile and upper boundary of the bottom quartile

And by location

10 Yr Horizon Return



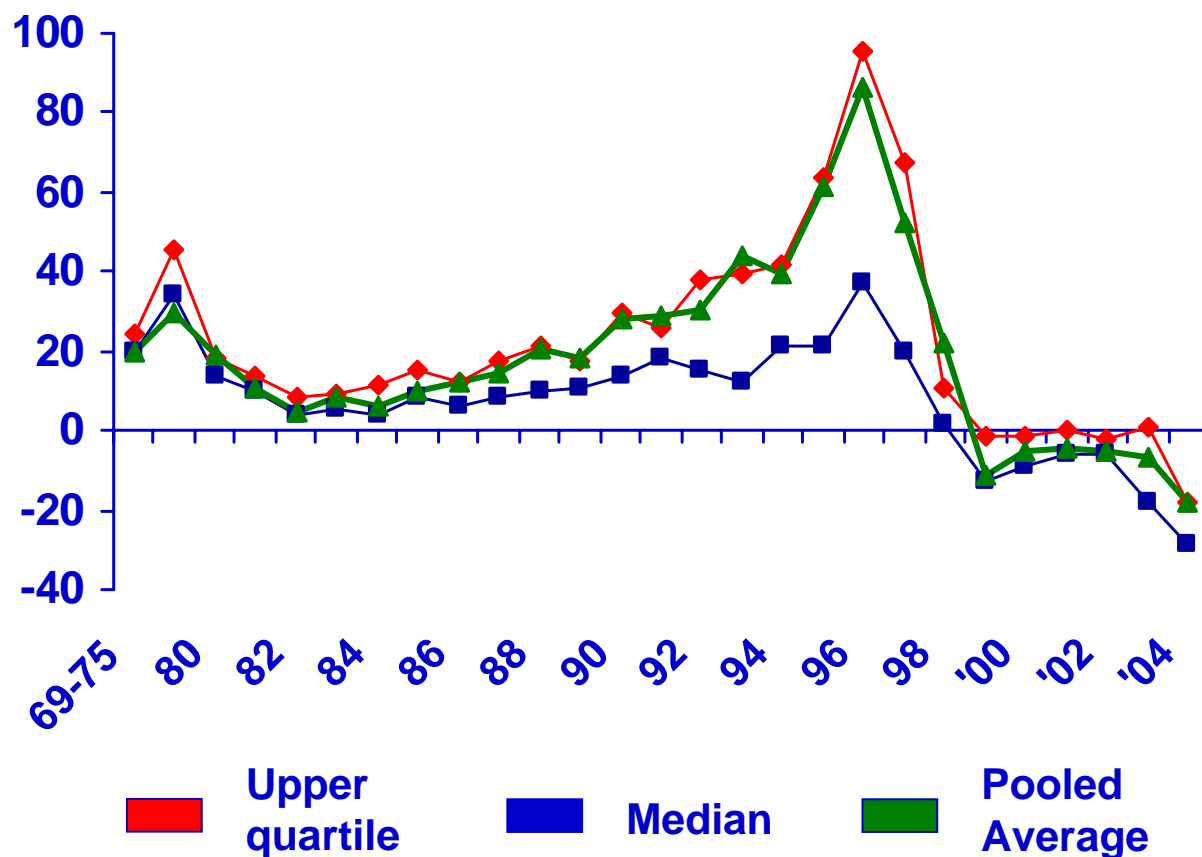
US : Performance is largely due to the first quartile

The money is directed to performing managers

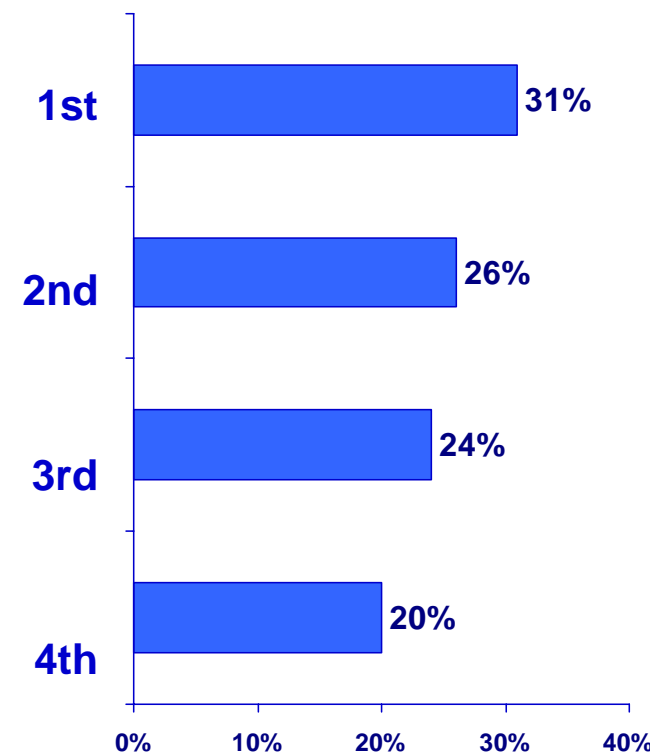
The pooled average tracks the first quartile

The 1st quartile is the largest

Cumulative Vintage Year Performance

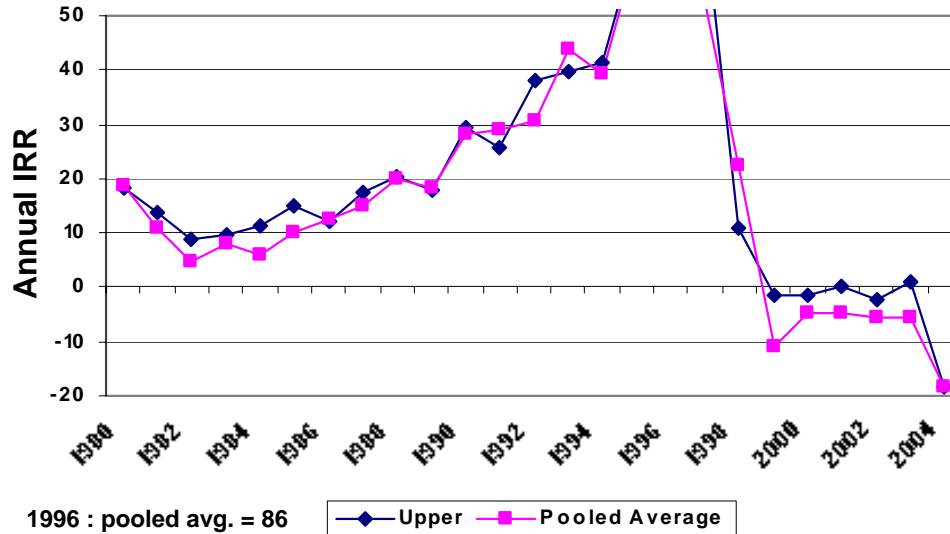


Cap weight by quartile



US : Performance is largely due to the first quartile (details)

1st Quartile and Pooled Avg. by Vintage Year

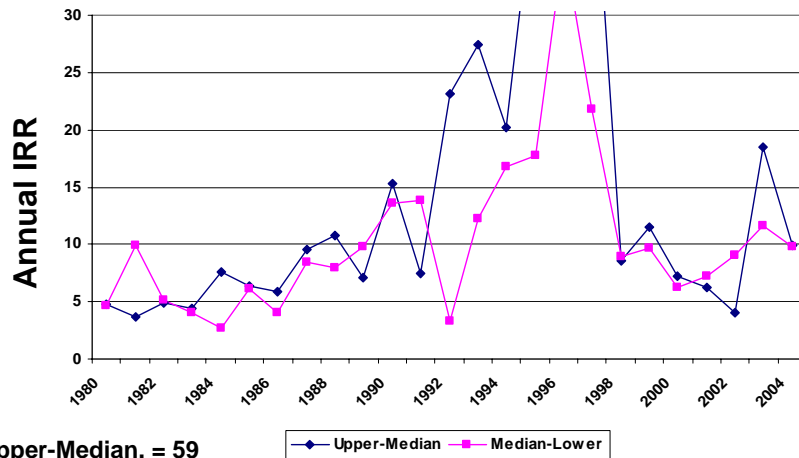


The pooled average performance tracks the first quartile.

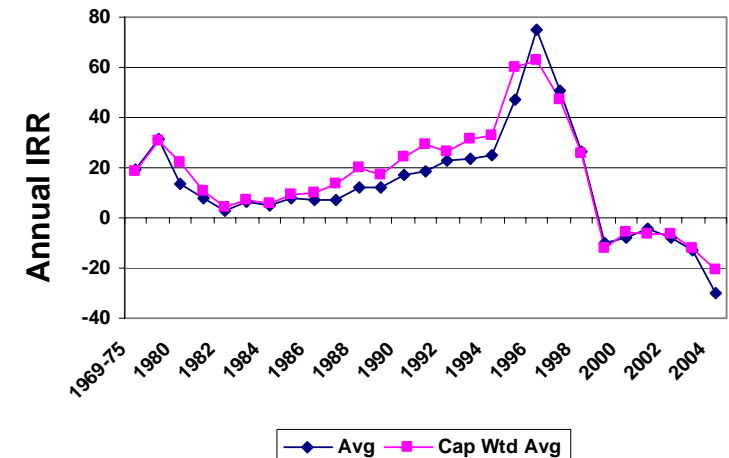
This is due to two factors :

- The difference between the first quartile and the median is larger than the difference between the median and the lower quartile
- Performance is correlated with size :
 - Capital weighted average is above the average
 - The capital weight of the first quartile is higher

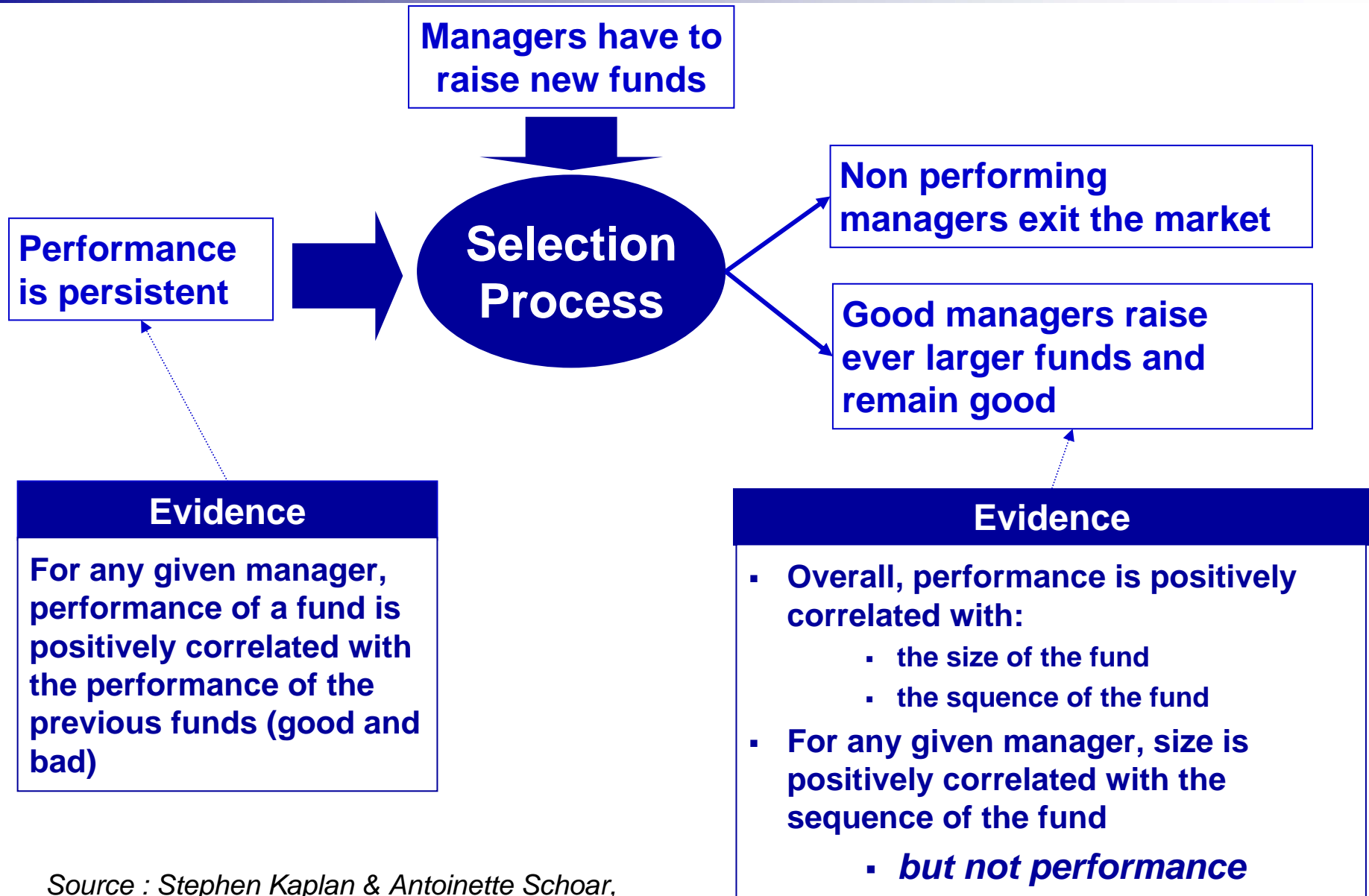
Difference of Returns by quartiles*



Avg. and Cap Weighted Avg. by Vintage Year

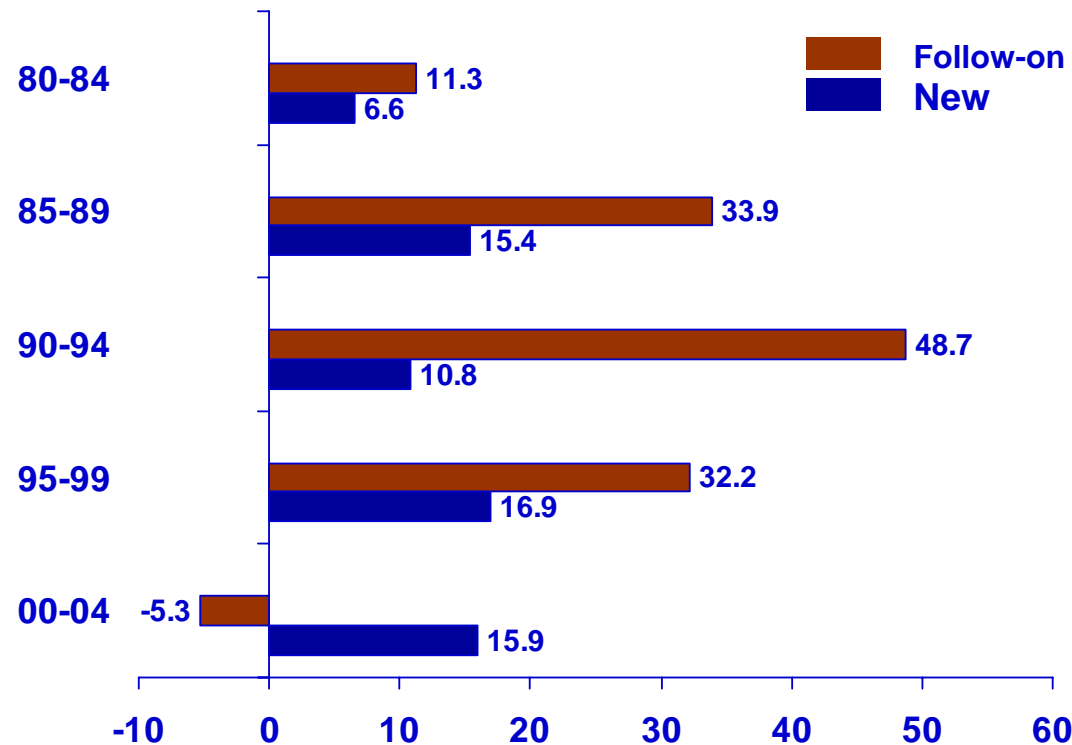


One of the key drivers of the performance is the selection process when a GP is raising a successor fund



Source : Stephen Kaplan & Antoinette Schoar,
Private Equity Performance: Returns Persistence and Capital, NBER Working Paper 9807

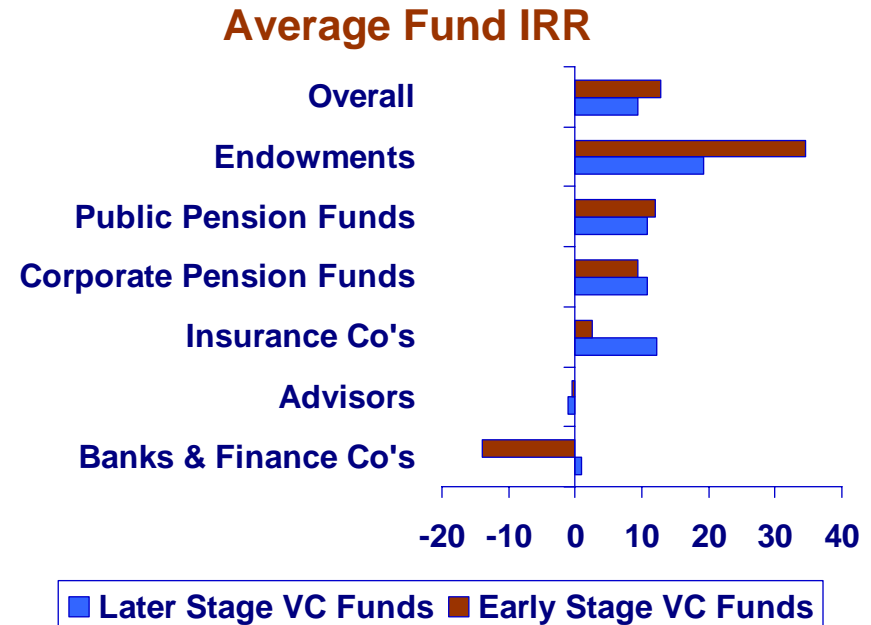
US 10 Year Investment Horizon IRR



Except for the last period, which is not yet very significant, follow-on funds systematically outperform new funds

The skills of the LPs play an important role in this selection process

- **Some types of LPs are more efficient in selecting VC funds**
 - Endowments out perform the overall average by more than 20 % in early stage VC and 10 % in later stage VC
- **Performing LPs have developed specific skills for**
 - **Selecting reinvestments**
 - They are less likely to reinvest in a given partnership
 - Funds in which they reinvest perform better than funds in which they don't (31 % vs 7 %)
 - Others tend to “reinvest if the current fund had high performance, but this often does no translate into higher future performance”
 - **Selecting new funds**
 - **Selecting undersubscribed funds**
- **More experienced LPs tend to have better performance**



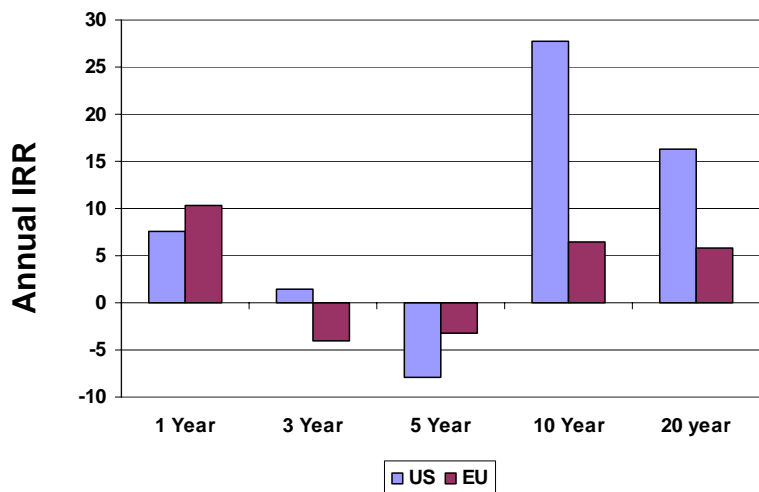
Source : Josh Lerner, Antoinette Schoar and Wan Wong
« *Smart Institutions, Foolish Choices?: The Limited Partner Performance Puzzle* »

- Overall, the European VC industry has not been a performing asset class in the long run
- The US largely out performs the EU in every aspect
- However the first quartile in Europe is a performing asset class
- The overall difference is largely due to the difference in the first quartiles
 - US first quartiles are far higher
 - Dollars in the US are more concentrated in the first quartile
- It is also partly explained by the impact of timing
- Funds are less concentrated in the two first quartiles in the EU. It is only since the mid 90 vintage years that the follow-on funds outperform the new funds.
 - This suggests that the selection process of the managers is not yet as efficient as in the US

Overall the EU has not been a performing asset class

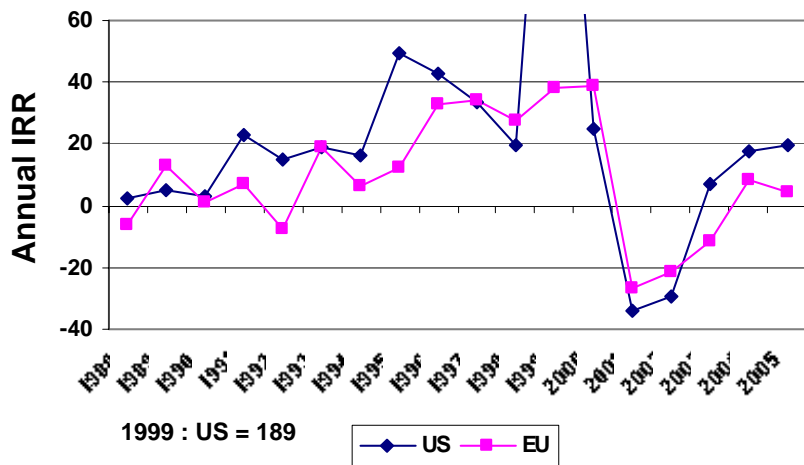
The US out performs Europe in every aspect

Horizon Returns

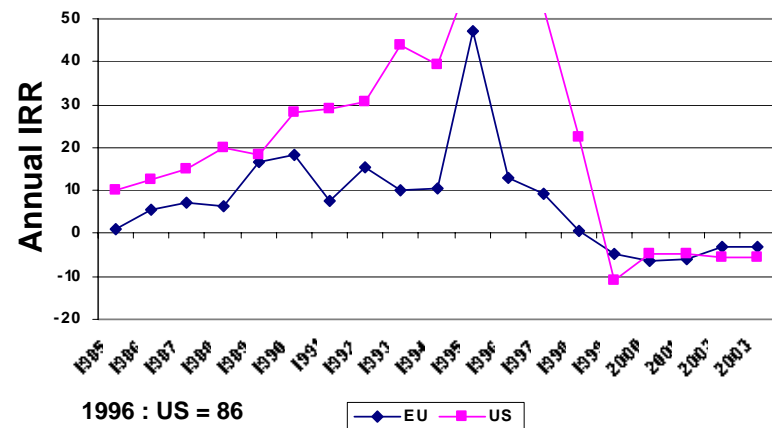


- The EU 10 yr and 20 yr horizon returns are 6.5% and 5.9 % respectively
- This is below the market indices
- This is 21.1 % and 10.4 % respectively below the US VC horizon returns
- The US outperforms Europe for every vintage and most years (one year horizon returns) except for some of the recent years

One Year Rolling Horizon Returns



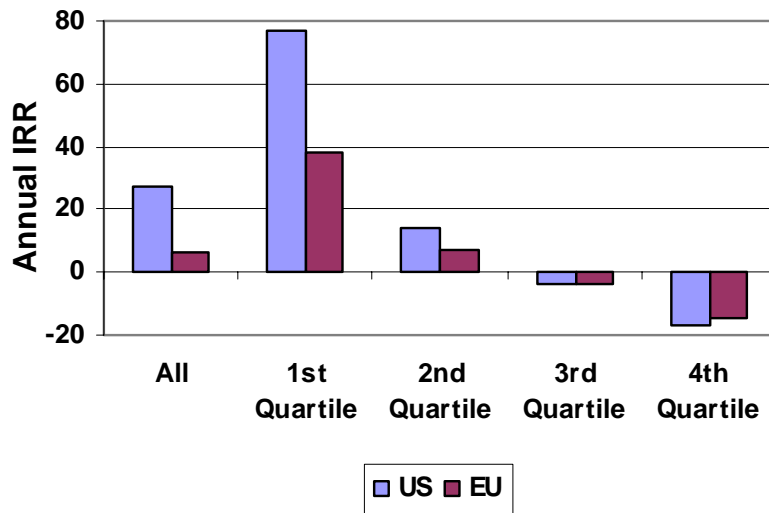
Pooled Average Returns by Vintage



The European first quartile has been a good investment

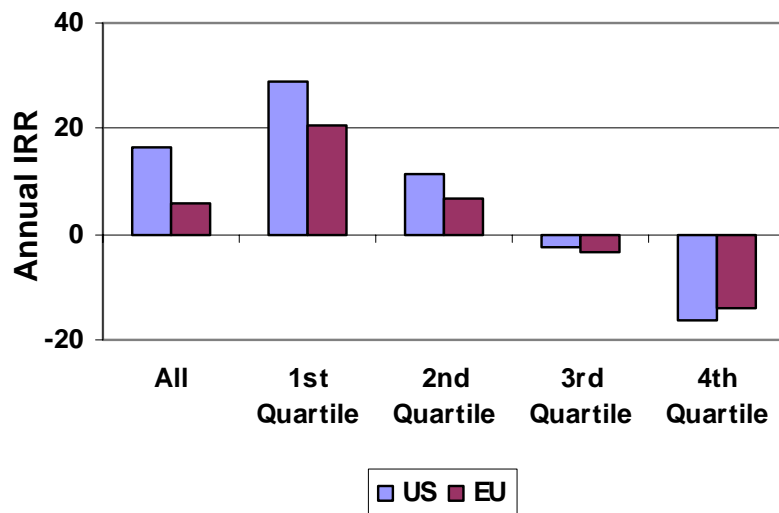
The US' higher performance is due to the first half

10 Year Horizon Returns by Quartiles



- The EU first quartile has been a good investment
 - 38.1 % 10 year horizon return
 - 20.5 % 20 year horizon return
 - 20.0 % since inception
- The US' higher performance is due to the first quartile and, to a lesser extent, the second quartile
- The lower quartiles are no better than the EU

20 Year Horizon Returns by Quartiles



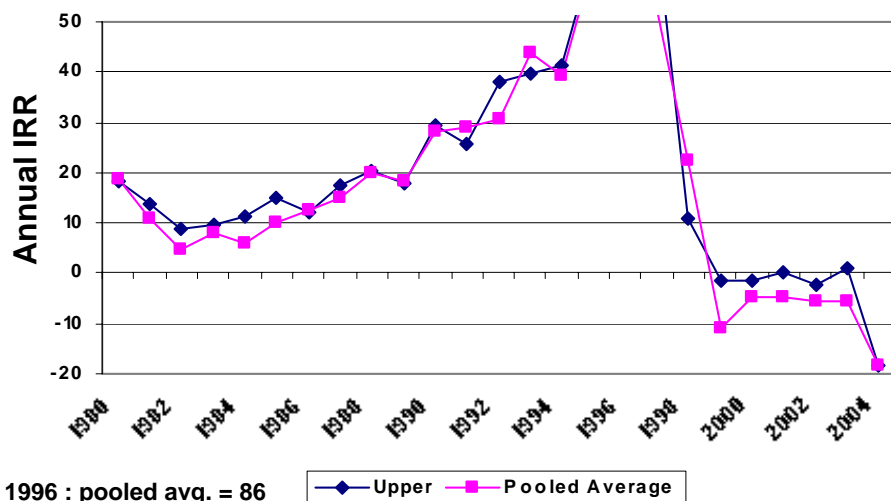
EU IRR since inception

	Pooled average*	Lower Limit**	
All	5.9		
1st Quartile	20.0	1st Quartile	6.5
2nd Quartile	6.7	Median	-0.5
3rd Quartile	-3.2	3rd Quartile	-9.3
4th Quartile	-13.9		

- * Pooled average returns of the funds included in the quartiles of each vintage year
- ** Lower limit of the quartiles of all funds in all vintage years

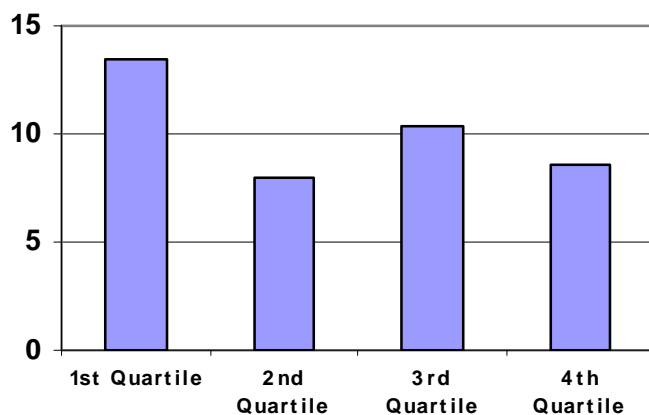
The greater weight of the first quartiles in the US increases the impact of its better performance

Cumulative Returns by Vintage Year US : Pooled average and upper quartile*

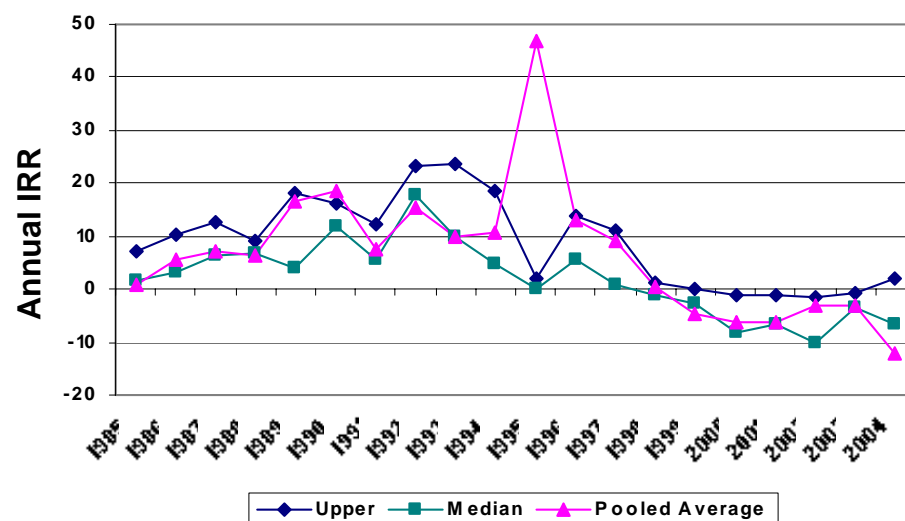


- In the US the pooled average tracks the upper quartile
- In Europe, it is lower than the upper quartile but superior to the median
- In Europe, funds are less concentrated in the two first quartiles

Capital Weight of Quartiles in Europe (B Euros)

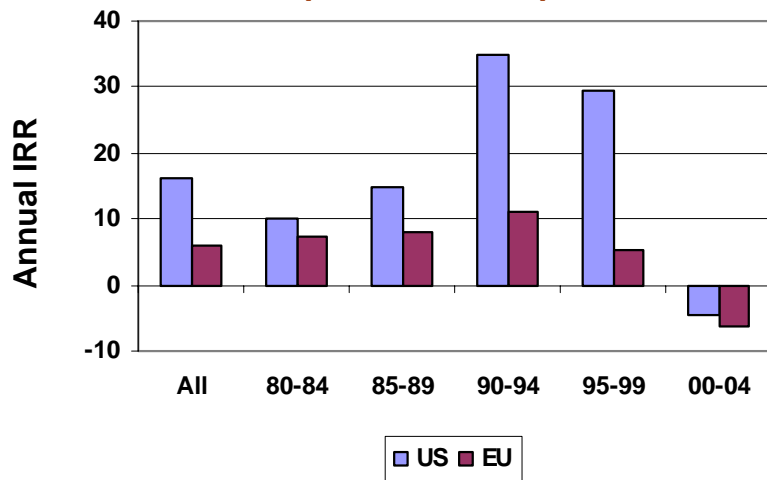


EU : Pooled Average and Upper Quartile*



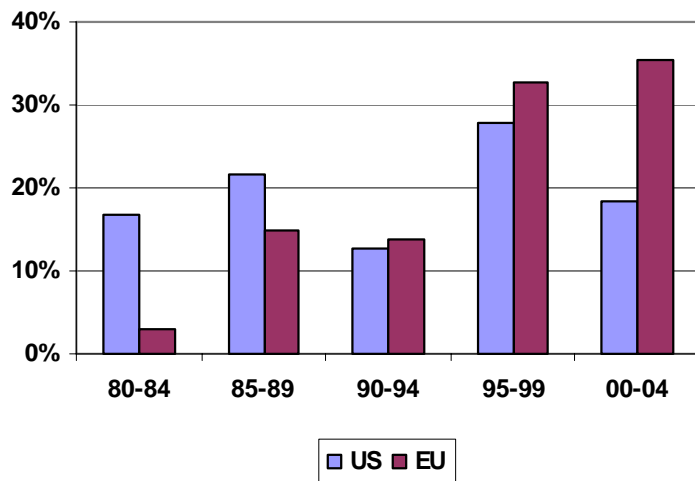
US and the EU : part of the difference can be explained by a difference in timing

20 Years Horizon Returns by Fund Years (Pooled IRR)



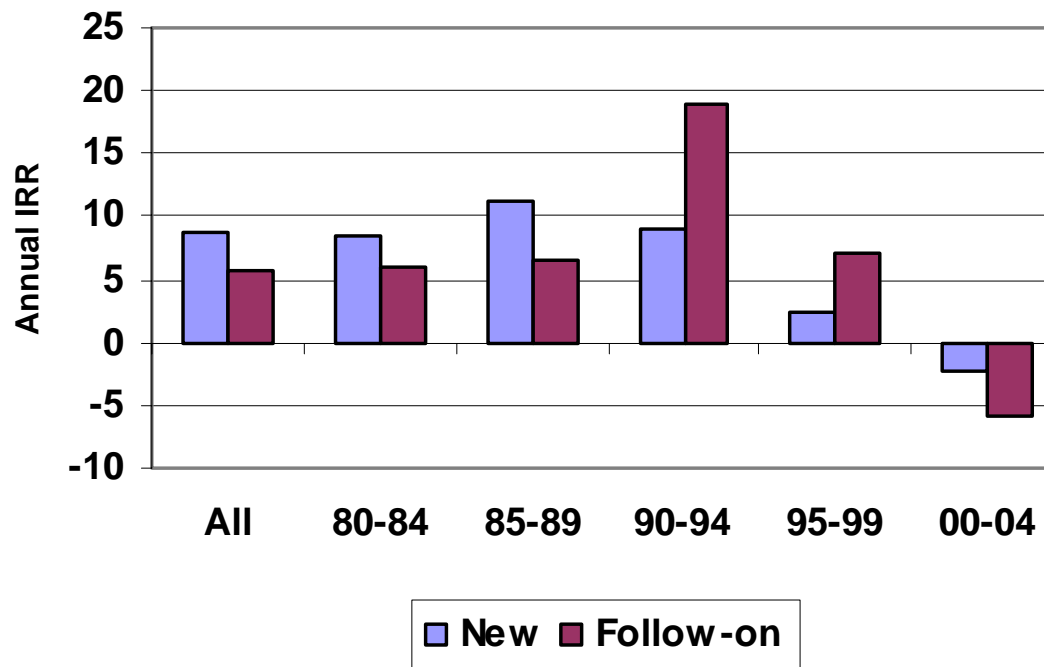
- US over-performance is highest for the funds formed during the 90-94 and 95-99 periods
- The EU sample is over-weighted in the 95-99 and 00-04 periods
- The large under-performance of the EU is partly explained by
 - Its over-weight towards the beginning of the J-curve (funds formed in 00-04)
 - The stellar performance of the US for the funds formed in the 90s

Vintage years of the Sample (# of funds)



A selection process of managers more recent and less efficient in Europe?

EU 20 Year Investment Horizon IRR



- It is only since the 1990-94 period that follow-on funds outperform new funds
- Funds are less concentrated in the two first quartiles
- This suggests that the selection process of managers is not yet as efficient as in the US but moving in the right direction

Horizon Returns

US	1 Yr	3 Yr	5 Yr	10 Yr	20 Yr
All Venture	7.6	1.6	-7.8	27.6	16.3
NASDAQ	0.4	12.0	-12.3	8.2	11.3
S&P 500	4.4	6.4	-3.9	8.1	10.6

	1 Yr	3 Yr	5 Yr	10 Yr	20 Yr
Europe	10.4	-4.1	-3.2	6.5	5.8
MSCI Europe	18.1	6.1	-3.4	9.7	

Horizon Returns by quartiles*

US	3 Yr	5 Yr	10 Yr	15 Yr	20 Yr
All	1.6	-7.8	27.6	20.3	16.3
1st Quartile	12.8	2.3	76.6	38.5	29.0
2nd Quartile	3.7	-6.8	13.9	12.7	11.3
3rd Quartile	-3.5	-11.8	-3.7	-2.7	-2.4
4th Quartile	-16.6	-22.1	-16.9	-16.5	-16.4

Europe	3 Yr	5 Yr	10 Yr	15 Yr	20 Yr
All	-4.1	-3.2	6.5	6.0	5.9
1st Quartile	2.7	7.0	38.1	23.7	20.5
2nd Quartile	-0.7	-0.4	7.4	6.7	6.7
3rd Quartile	-6.6	-6.9	-4.0	-3.5	-3.3
4th Quartile	-18.7	-17.6	-14.4	-14.0	-13.9

- Pooled average returns of the funds included in the quartiles of each vintage year

Horizon Returns by periods**

US	3 Yr	5 Yr	10 Yr	15 Yr	20 Yr
All	1.6	-7.8	27.6	20.3	16.3
80-84	0.1	2.0	3.5	9.6	10.0
85-89	0.6	-3.1	31.4	19.4	14.8
90-94	1.0	-5.5	45.6	34.9	34.8
95-99	2.2	-10.0	29.6	29.5	29.5
00-04	1.1	-4.6	-4.6	-4.6	-4.6

Europe	3 Yr	5 Yr	10 Yr	15 Yr	20 Yr
All	-4.1	-3.2	6.5	6.0	5.9
80-84	-6.5	-12.8	10.6	9.9	7.2
85-89	-12.1	1.9	21.9	9.3	8.0
90-94	-1.0	1.8	13.9	11.1	11.1
95-99	-4.5	-3.2	5.3	5.3	5.3
00-04	-4.2	-6.2	-6.2	-6.2	-6.2

** Horizon returns of the funds formed in each period

- **While overall returns are low, there are performing funds**
- **Issues affecting performance**
 - The industry is young
 - Timing of fund flows into VC has been unfavorable
 - Fund selection process in Canada is not yet mature
 - Location: critical mass and other factors to be explored
- **The unique structure of the Canadian VC industry does not explain the difference (compared to the US)**
- **The Canadian industry has not been able to leverage its proximity with the US market as efficiently as Israel**
- **The Canadian industry can benefit by adopting the practices of the best US funds**

Canadian sample represents 60 % of the universe (# of funds) more than in the US, with no obvious bias

Canadian Sample vs Universe

		# Universe	# Sample	%	\$B Sample
All	All Venture	209	126	60%	\$12.0
Type	PI	115	66	57%	\$4.1
	OC	43	26	60%	\$4.2
	Retail	51	34	67%	\$3.7
Province	Quebec	33	20	61%	\$2.6
	Ontario	110	67	61%	\$6.4
	Manitoba	6	5	83%	\$0.4
	BC	34	23	68%	\$2.2
	Others	26	11	42%	\$0.4
Stage	Early Stage		57		\$4.0
	Late Stage		13		\$1.0
	Balanced		56		\$7.0
Sequence	New	46	28	61%	\$3.0
	Follow on	79	48	61%	\$4.4
	Sole	82	50	61%	\$4.6

Comparison with the US and EU

	Universe	Sample	%
US	3461	1152	33%
EU		569	
Canada	209	126	60%

Analysis by periods

	Universe	Sample	%
All	196	126	64%
75-84	5	2	40%
85-89	7	1	14%
90-94	13	7	54%
95-99	80	59	74%
00-04	91	57	63%

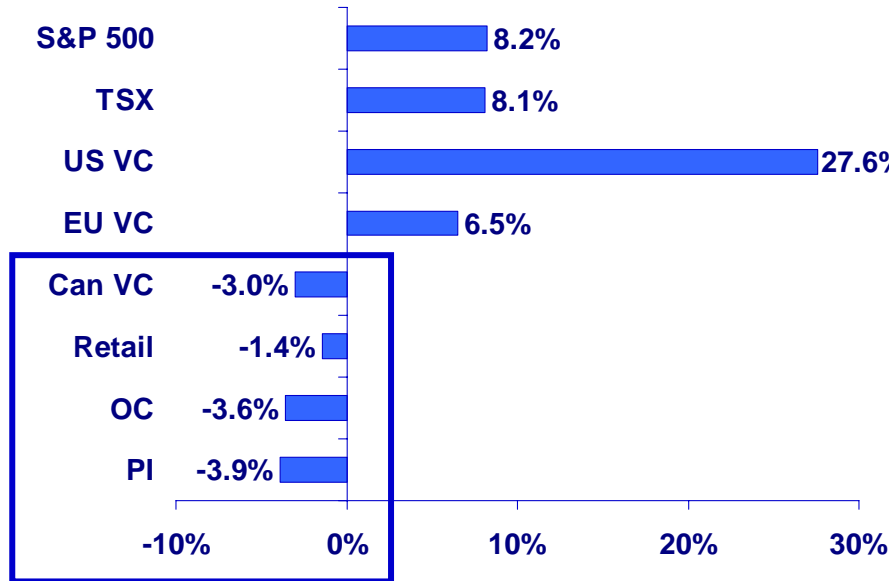
13 funds in the universe have no date

Overall Canada VC is not yet a performing asset class

However, the pooled first quartile is above the indices by > 5%

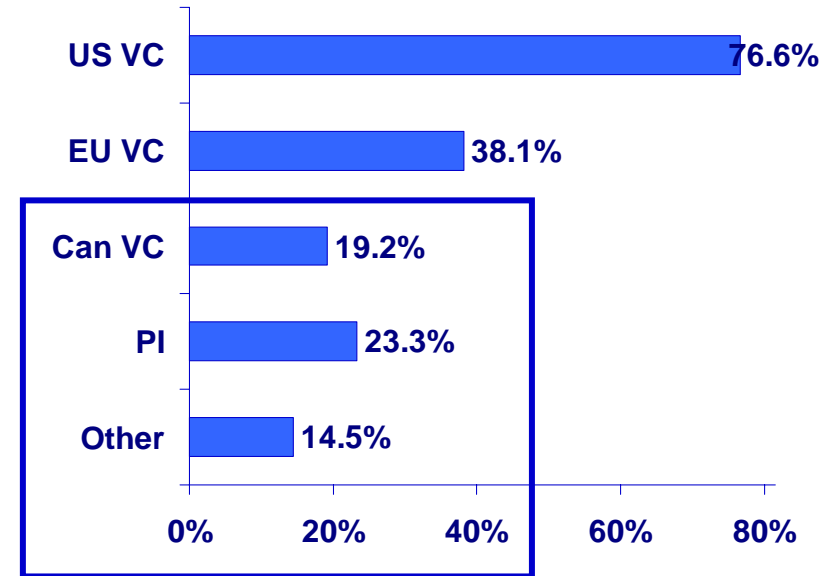
10 Year Horizon Returns

All Funds



Overall, the difference between the various types of funds in Canada is not very significant

First Quartile*



The average return of the Canadian first quartile is well above the TSX and the S&P

Canadian Sample includes 126 funds (60 % of universe)

As the Canadian fund sample is larger, it is less subject to bias than the US sample might be.

*For the US and Europe : pooled average returns of the funds included in the 1st quartile of their vintage year. For Canada: arithmetic average of the 25% best performing funds (proxy)

Canadian performance (details)

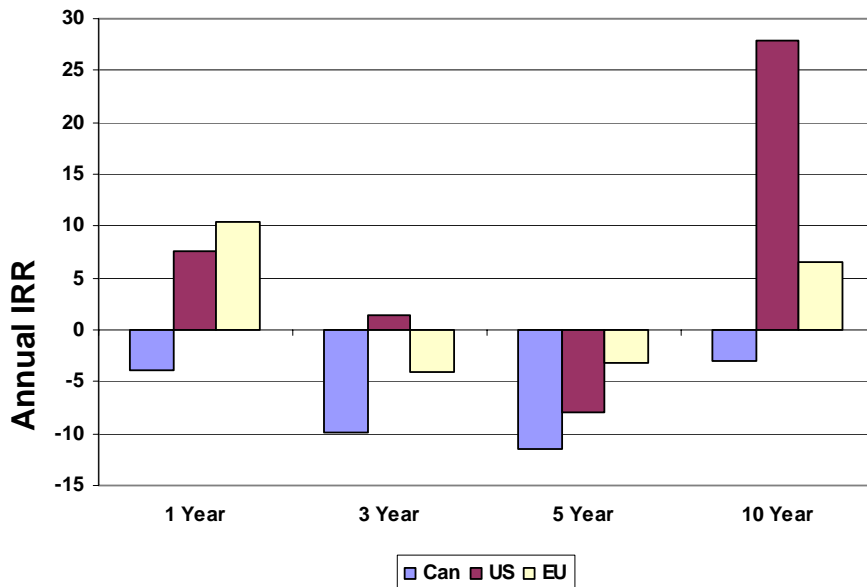
Horizon returns

Canada Horizon Returns

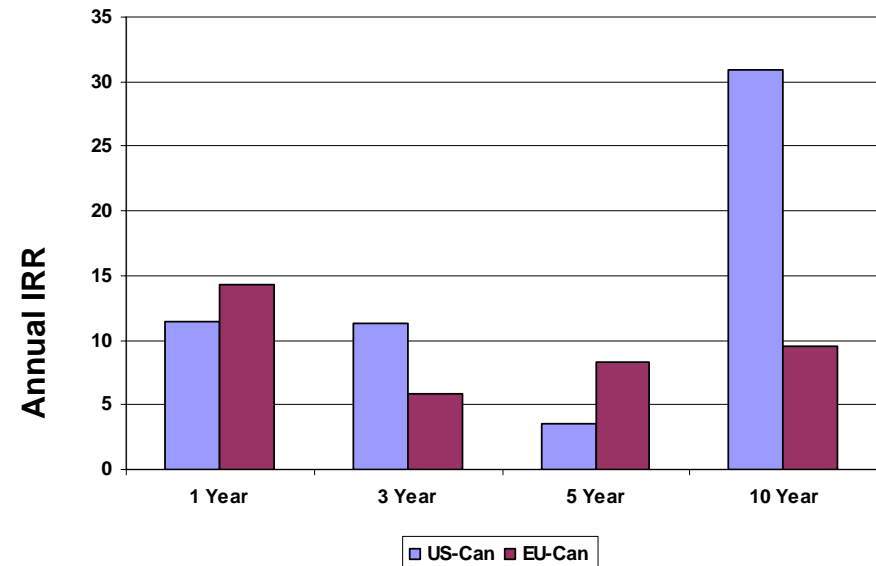
	1 Yr	3 Yr	5 Yr	10 Yr
Canada	-3.9	-9.9	-11.5	-3.0
S&P TSX	15.9	11.5	-0.6	8.1

- Canadian horizon returns are negative on all horizons
- Canadian returns have not yet bounced back after the post bubble trough
- On a 10 year horizon, Canada lags the US by more than 30 % and the EU by nearly 10 %

Horizon Returns



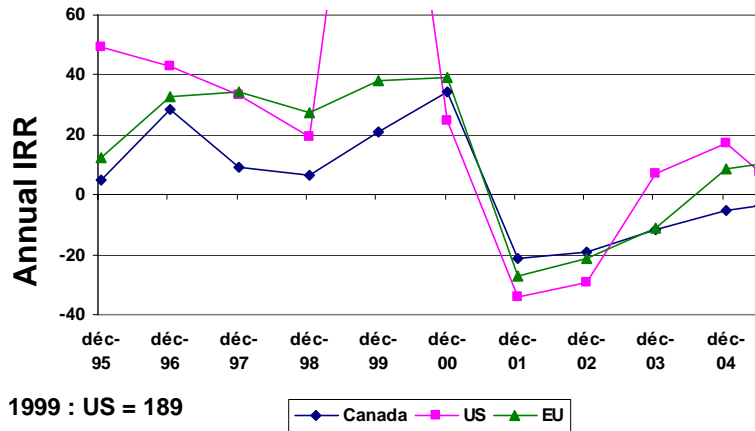
Horizon Returns Differences



Canadian performance (details)

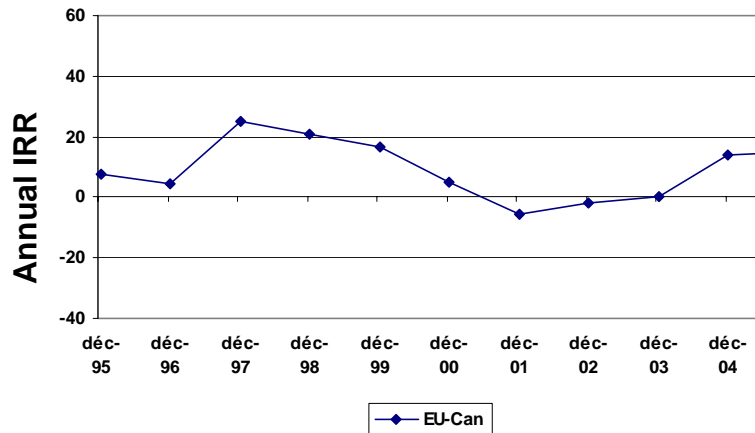
Rolling one year horizon returns

Rolling One Year Horizon Returns

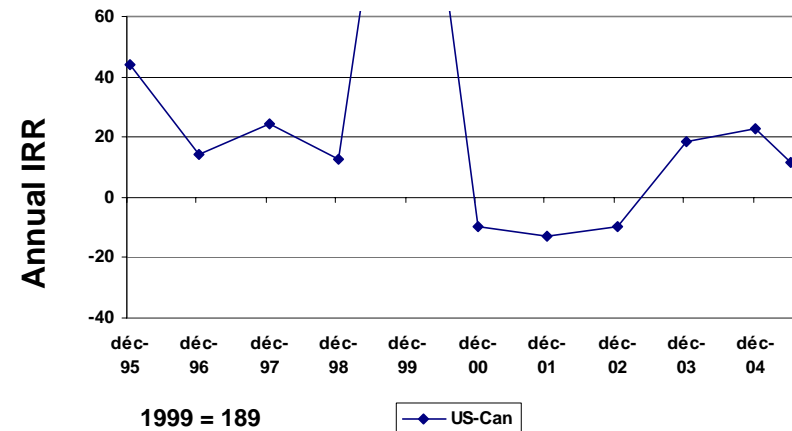


▪ Except for the post bubble trough (slower to adjust valuations in Canada?) Canada's returns are always below the US and Europe

EU minus Canada



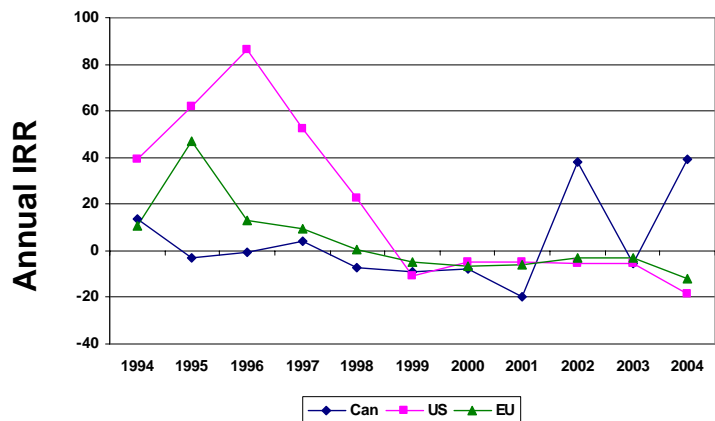
US minus Canada



Canadian performance (details)

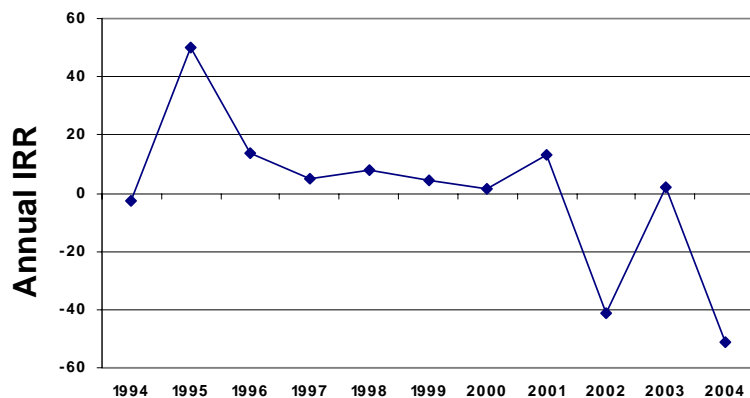
Pooled average by vintage year

Pooled Average Returns by Vintage

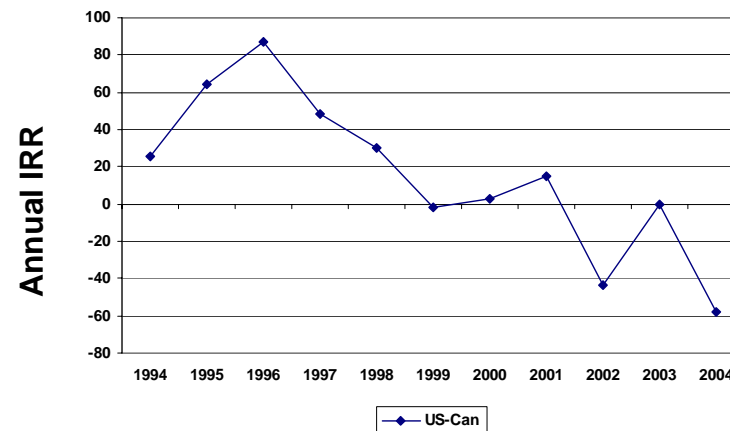


- Until 2001, Canada's vintages are always lower than the US and Europe
- However, after 1996, the difference with Europe is not large (both are low)
- Starting in 1999, Canadian returns are similar to or, in some cases, better than, US returns
- Canadian data for 2002 and 2004 is difficult to interpret

EU minus Canada



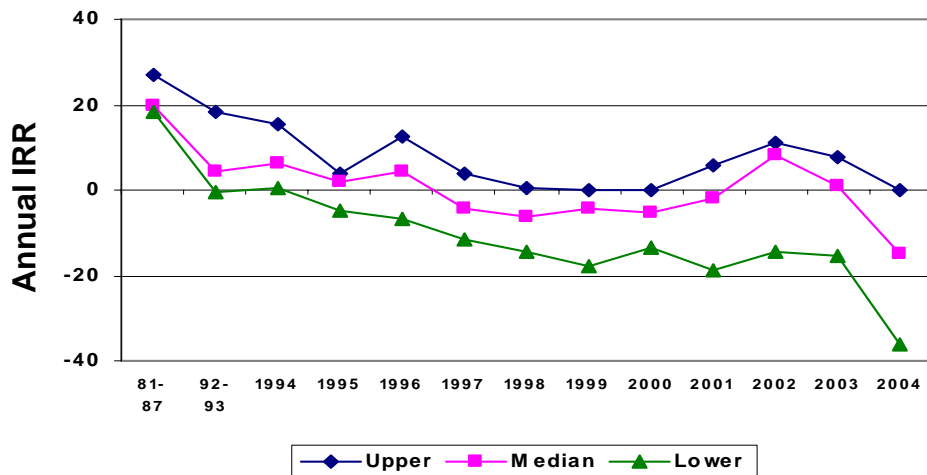
US minus Canada



Canadian performance (details)

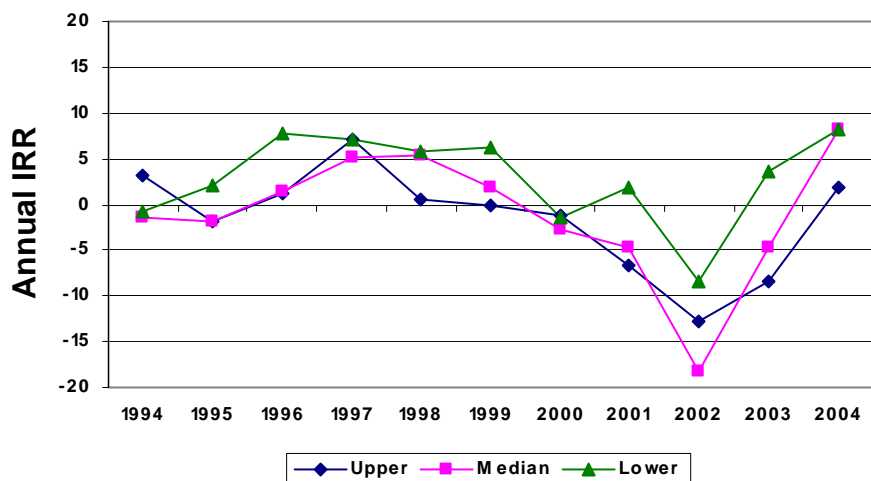
Canada lags especially by its lowest quartile

Canadian Returns by Quartiles* and Vintages



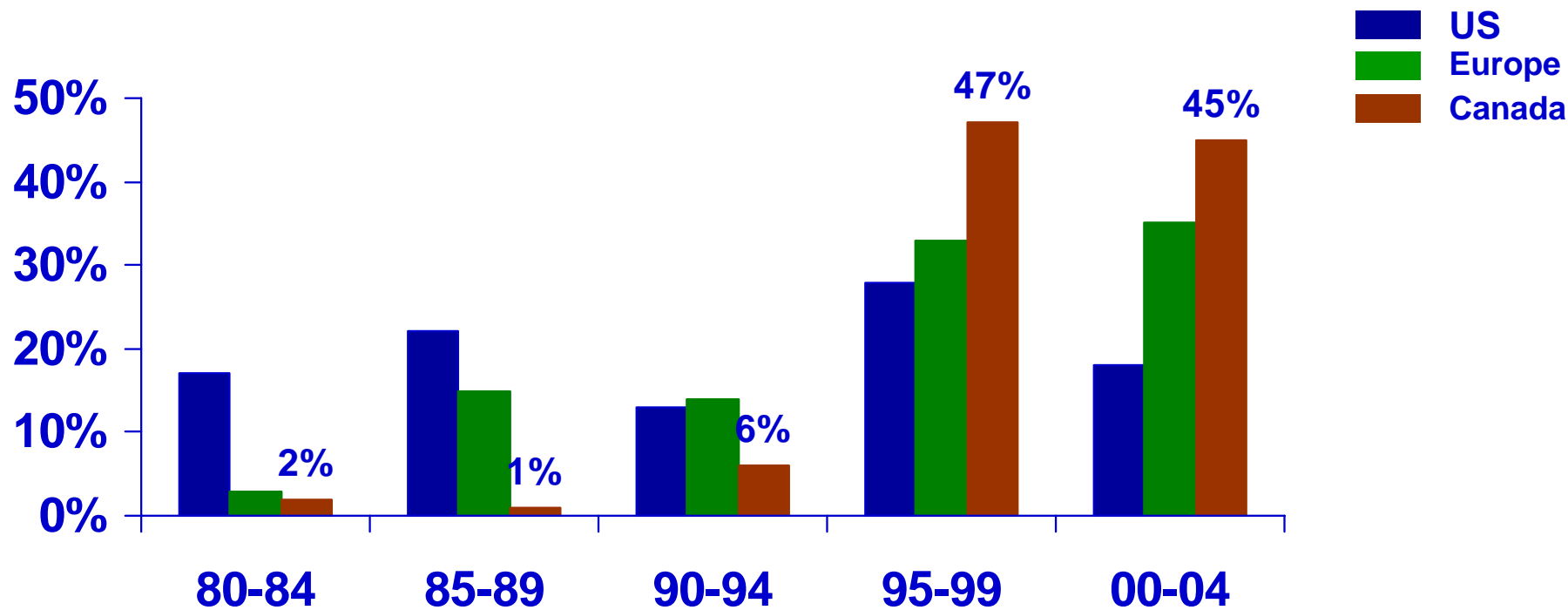
- Recent vintage returns (2000-2004) are higher in Canada than in Europe
- Canada's 4th quartile is especially low
- The difference with the EU is the greatest for the lowest quartile
- The first quartile is not very positive for the post 1996 vintages
- The Canadian first quartile is not far below the European first quartile
- The Canadian data for the 2002-2004 vintages is difficult to explain (inverted J curve)

EU minus Canada by Vintage Year



The Canadian Industry is very recent and the Canadian industry timing has been unfavorable

Distribution of the Sample (# of funds)



Funds formed before 1995 represent

- 46% of the sample in the US,
- 32% in Europe
- and only 8% in Canada

Timing explains approximately

- 11% of the 31% difference between Canada and the US
- 7% of the 10% difference between Canada and Europe

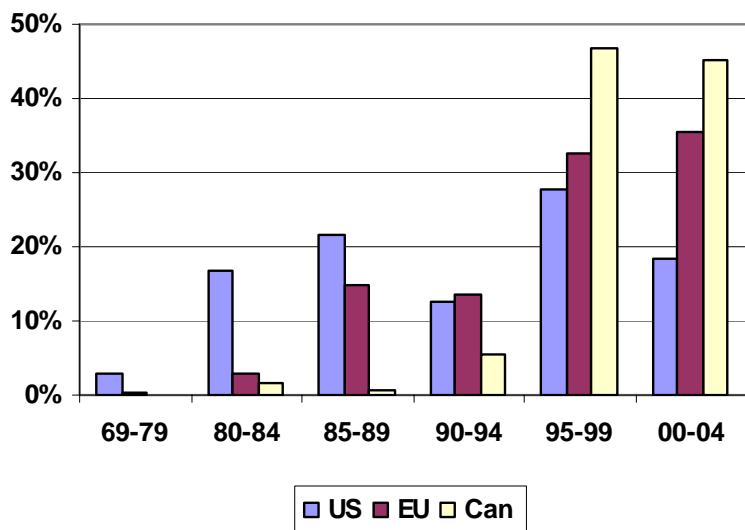
The Canadian sample is much more recent than the US and Europe: timing is an issue (details)

Size of the sample (# of funds)

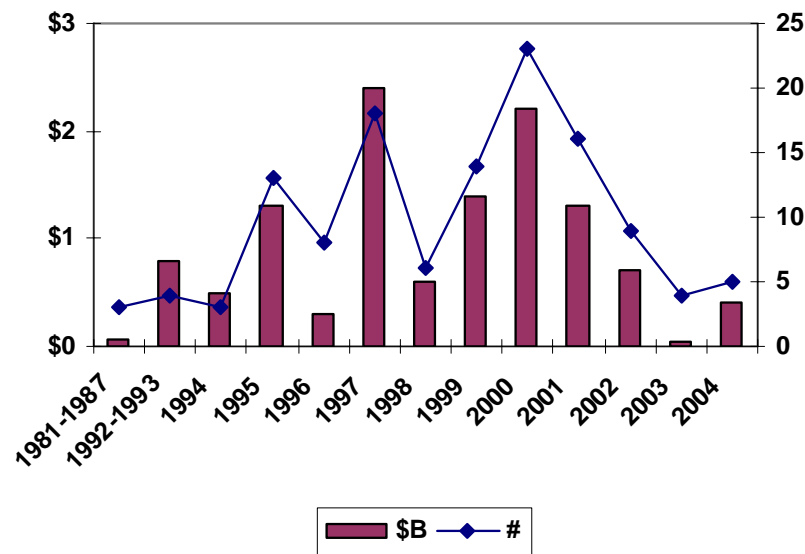
	US	EU	Can
All	1 151	569	126
69-79	32	2	0
80-84	193	17	2
85-89	250	85	1
90-94	145	78	7
95-99	321	186	59
00-04	210	201	57

- The Canadian sample is much younger than Europe and the US
- It is virtually non-existent before 1995
- Therefore, timing is an issue in explaining the performance

Vintage year distribution of the sample (# of funds)

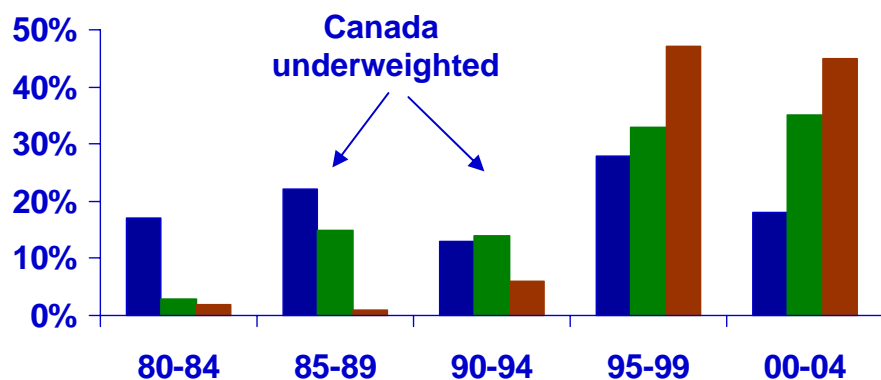


Canadian Sample by year



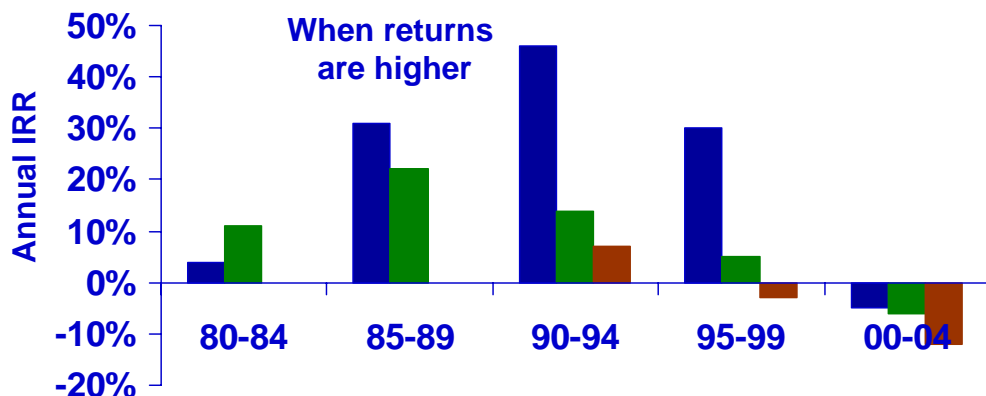
Part of the Canadian performance is explained by timing (details)

Distribution of the Sample (# of funds)



- Canada is under-weighted in the pre 1995 vintages which have had better returns
- This explains approximatively
 - 11% out of the 31% difference with the US
 - 7% out of the 10% difference with Europe

10 Years Horizon Returns by Fund Years



10 Year Horizon Returns

	All years	95-04 Funds
US	27.6	16.4
Europe	6.5	-0.7
Canada*	-3.0	

*95-04 data for Canada not available. -3% is a proxy given the small number of Canadian funds before 1995

Canada can be compared, not too unfavourably, to the 95-05 European Composite (Timing – details)

- **The Canadian sample has only 10 small funds before 1995. It would thus be comparable to the 1995-05 composite**
 - The pooled average is lower than in Europe
 - The upper quartile and the median are better and the lower quartile is worse
 - The \$ weight of the first half is smaller (since the pooled average is lower)
 - Neither Canada nor Europe are very attractive
 - Part of the out performance of Europe in the horizon returns is due to the positive effect of the funds started before 1995

Europe: Cumulative Vintage Year Composite Performance

		Pooled						
	Vintage Year	Num	Avg	Max	Upper	Med	Lower	Min
Annual IRR	1990-05	464	4.2	262.0	4.4	-2.0	-10.8	-100.0
	1991-05	450	3.1	262.0	3.1	-2.4	-11.1	-100.0
	1992-05	430	2.3	262.0	2.3	-2.9	-11.8	-100.0
	1993-05	422	1.9	262.0	1.9	-3.0	-11.9	-100.0
	1994-05	406	1.1	262.0	1.1	-3.3	-12.4	-100.0
	1995-05	387	0.4	262.0	0.4	-3.7	-12.6	-100.0
Canada since inception								
	All Venture	126	-3.0	98.4	5.8	-2.4	-13.9	-96.1

The 1995-05 US composite outperforms due to the first quartile (Timing – details)

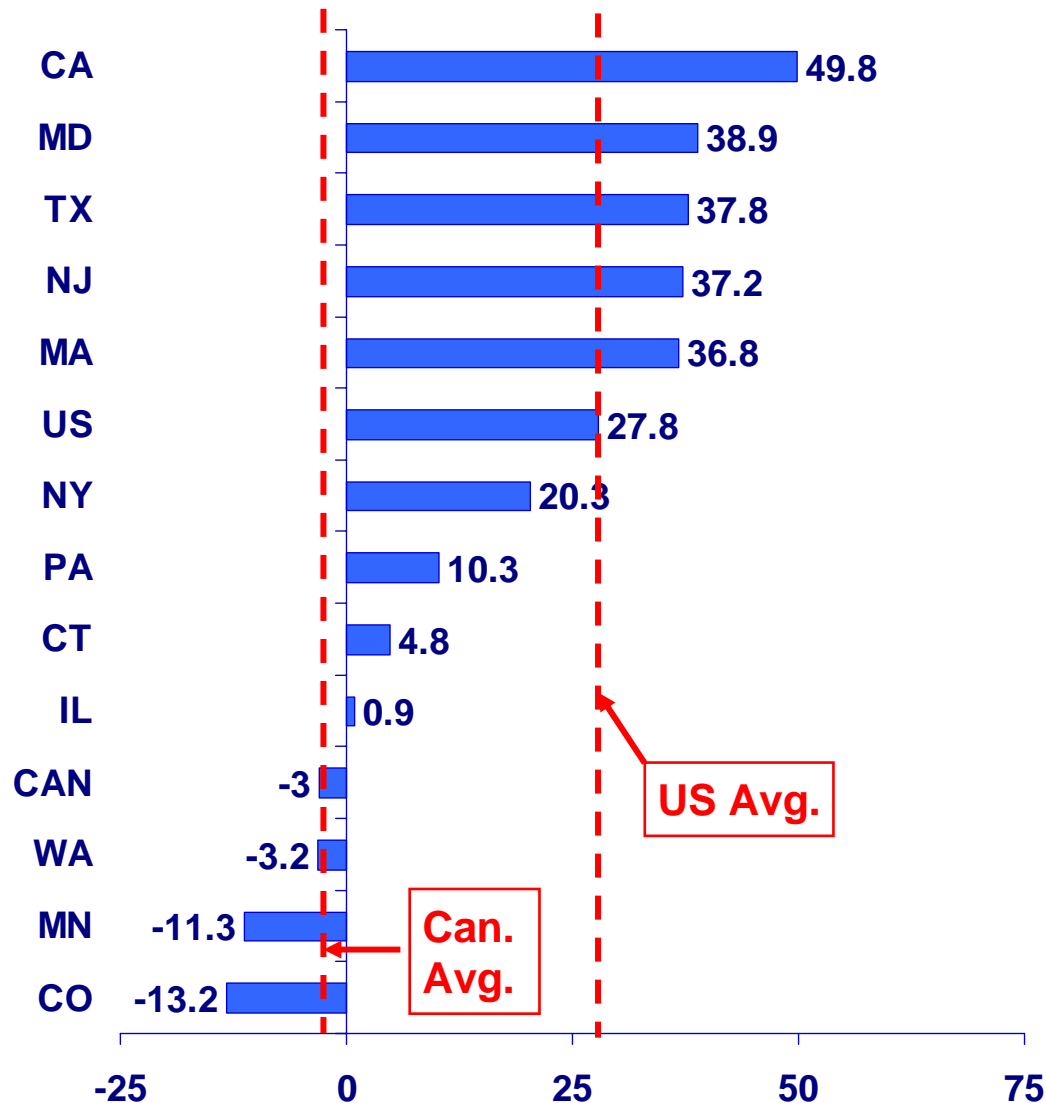
- On the same basis (1995-05 composite) :
 - The US median and lower quartile are very similar to Canada
 - The pooled average outperforms due to the first quartile

US: Cumulative Vintage Year Composite Performance

Annual IRR	Vintage Year	Num	Pooled					
			Avg	Max	Upper	Med	Lower	Min
	1990-05	663	26.8	721.0	17.9	0.0	-10.7	-100.0
	1991-05	641	26.6	721.0	16.4	-0.5	-11.2	-100.0
	1992-05	623	26.4	721.0	15.9	-0.7	-12.0	-100.0
	1993-05	598	25.6	721.0	15.1	-1.3	-12.5	-100.0
	1994-05	558	22.1	721.0	13.6	-1.7	-13.4	-100.0
	1995-05	518	16.6	721.0	10.5	-2.3	-14.0	-100.0
	Canada since inception							
	All Venture	126	-3.0	98.4	5.8	-2.4	-13.9	-96.1

States outside California, New-England/Mid-Atlantic and Texas are somewhat comparable to Canada

10 Year Horizon Net IRR



*Regions with more than 20 funds

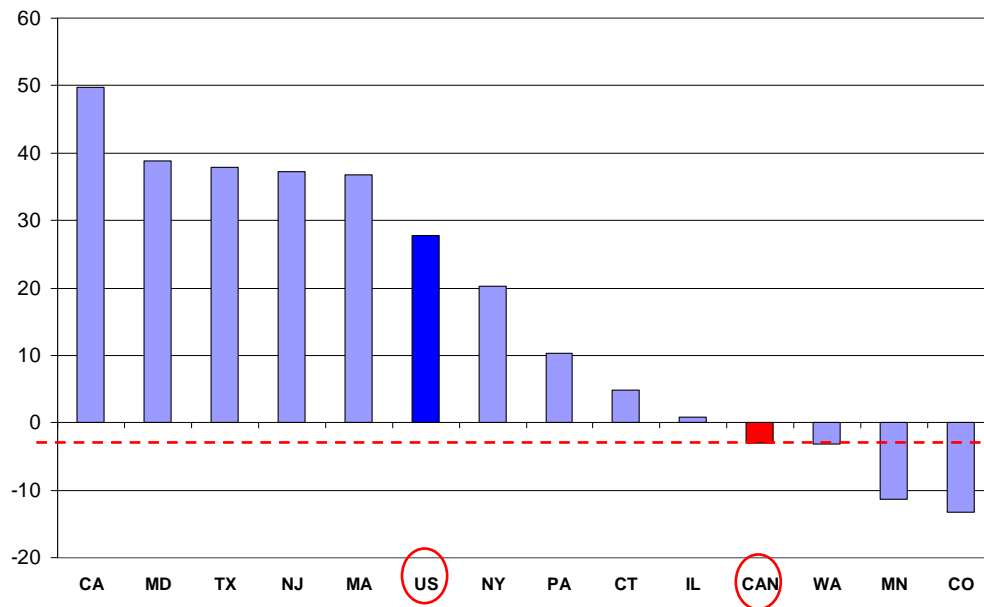
- High US returns driven by states with heavy R&D base
 - CA, MD, TX, NJ, MA
- WA has poor returns despite having long history of venture funds and notable winners (MSFT, AMZN, RNWK, Immunex, etc.)
- Canadian venture industry substantially younger than most US states
- Restricted to 95-05 funds the US performance excluding CA, MA, MD, NJ. TX is not that far from the Canadian performance

US minus (CA, MA, MD, NJ, TX)

	All funds	95-05
10yr IRR	11.4%	0.6%
# Funds	473	205

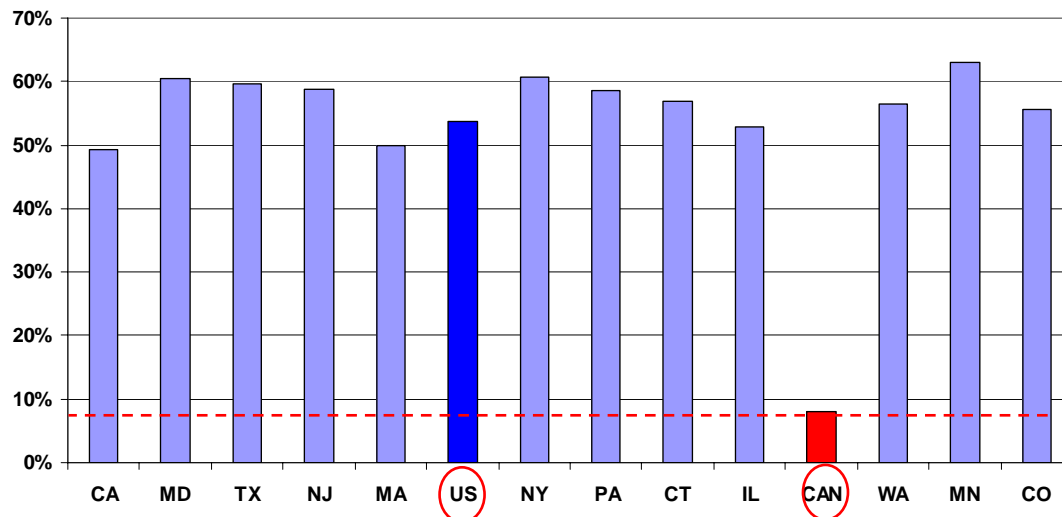
Canadian returns are lower than most US regions (details)

10 Year Horizon Net IRR (6/30/05) – regions with more than 20 funds



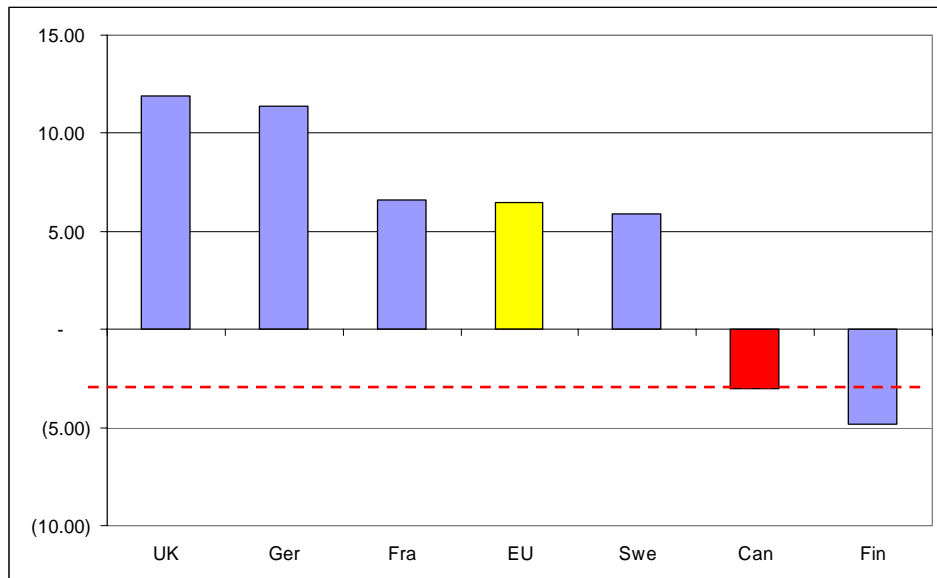
- High US returns driven by states with heavy R&D base
 - CA, MD, TX, NJ, MA
- WA has poor returns despite having long history of venture funds and notable winners (MSFT, AMZN, RNWK, Immunex, etc.)
- Canadian venture industry substantially younger than even second-tier US states
 - IL, WA, MN, CO

% of Funds in Sample from 1969 - 1994



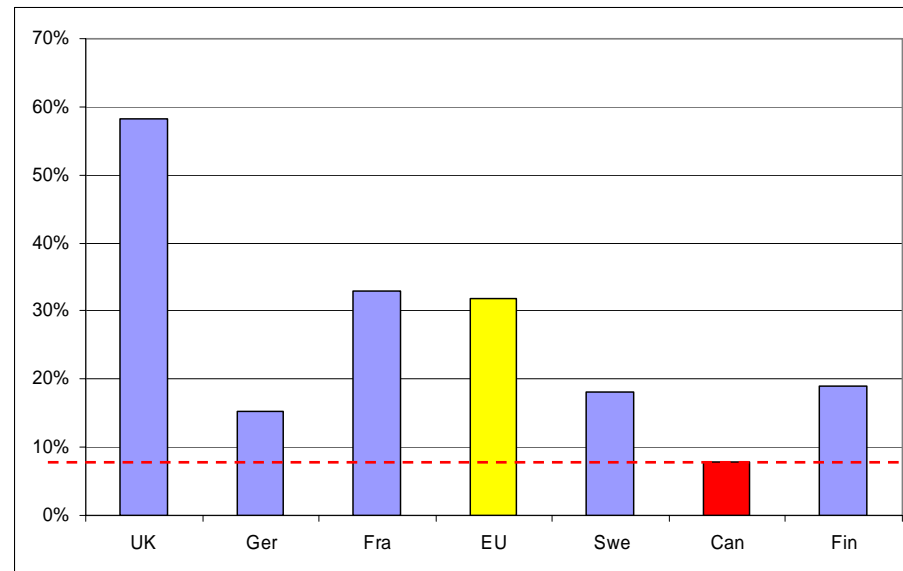
Canadian returns are lower than most EU regions (details)

10 Year Horizon Net IRR (6/30/05) – regions with more than 20 funds



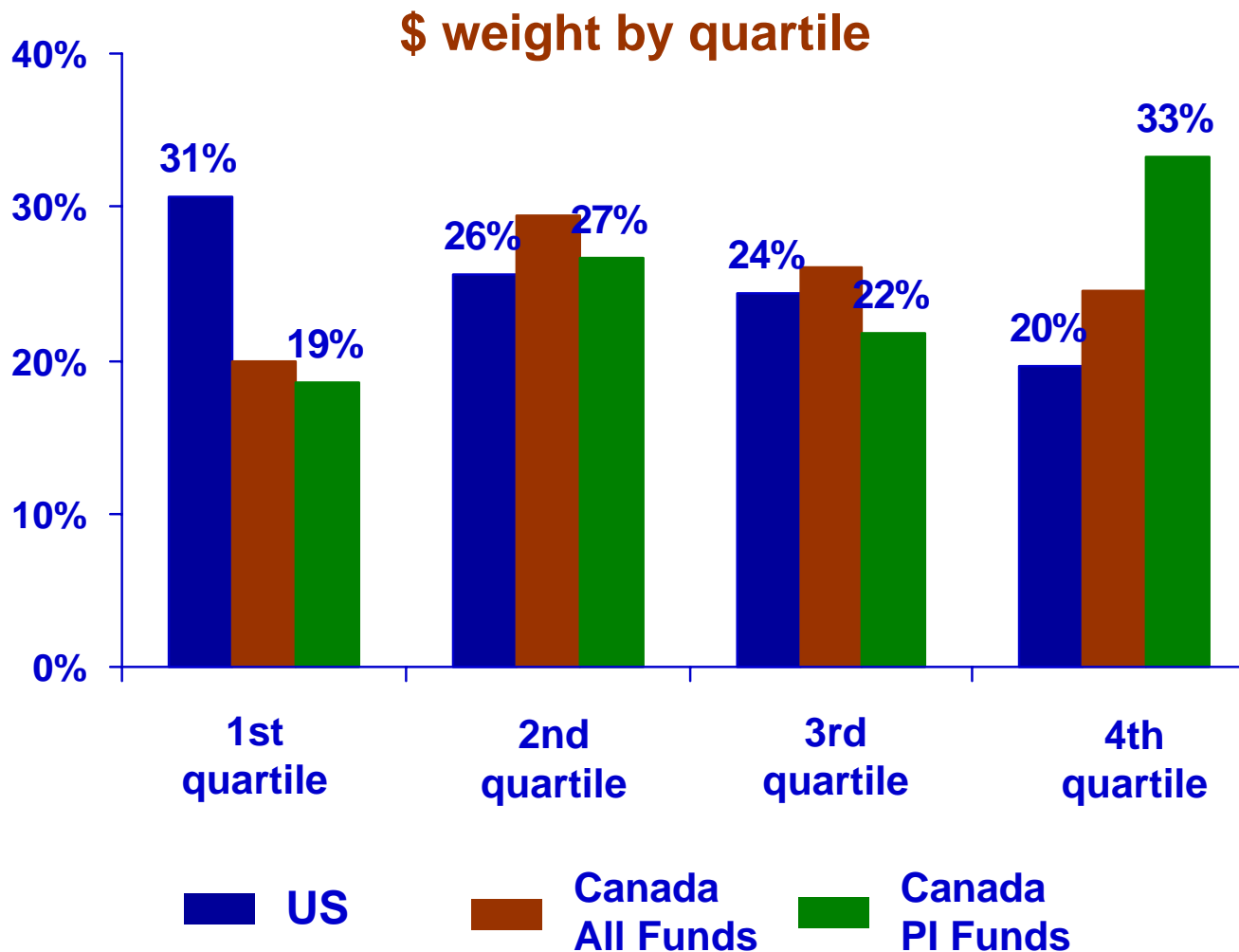
- EU returns driven by traditional powerhouses : UK, Ger, Fra
- Finland has poor returns despite having a reasonable # of venture funds and an industry defining leader (Nokia)
- EU industry younger than US (except UK), but more seasoned than Canada
- EU returns correlated with age except
 - Ger out performs its age
 - Fin under performs its age

% of Funds in Sample from 1969 - 1994



Selection Process

The money is not yet concentrated in the best managers

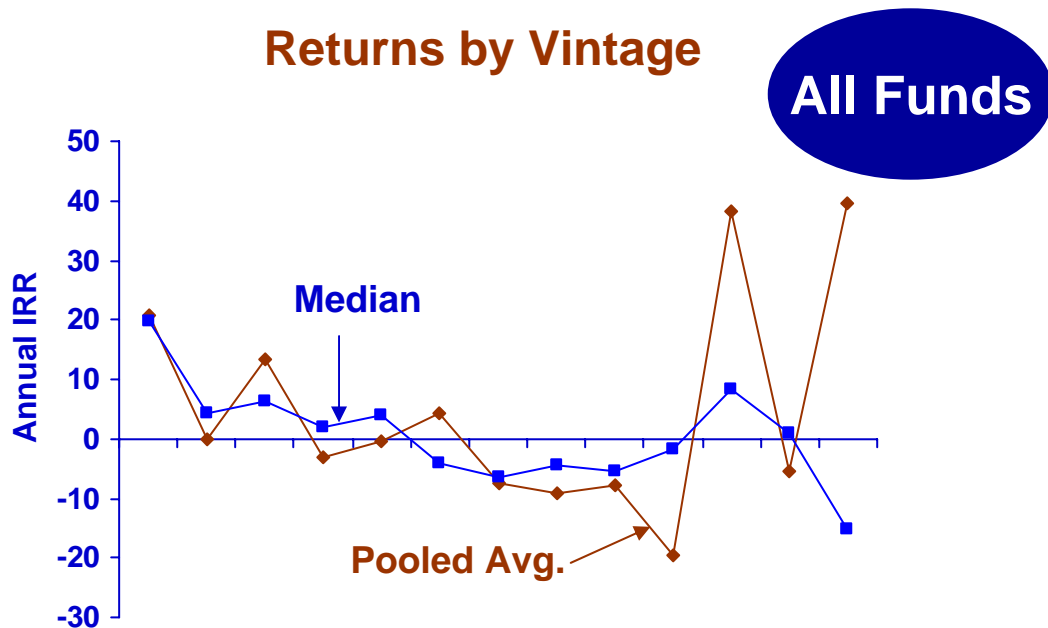


The largest quartile is the first quartile in the US and the fourth quartile for Canadian PI funds

Selection Process (details)

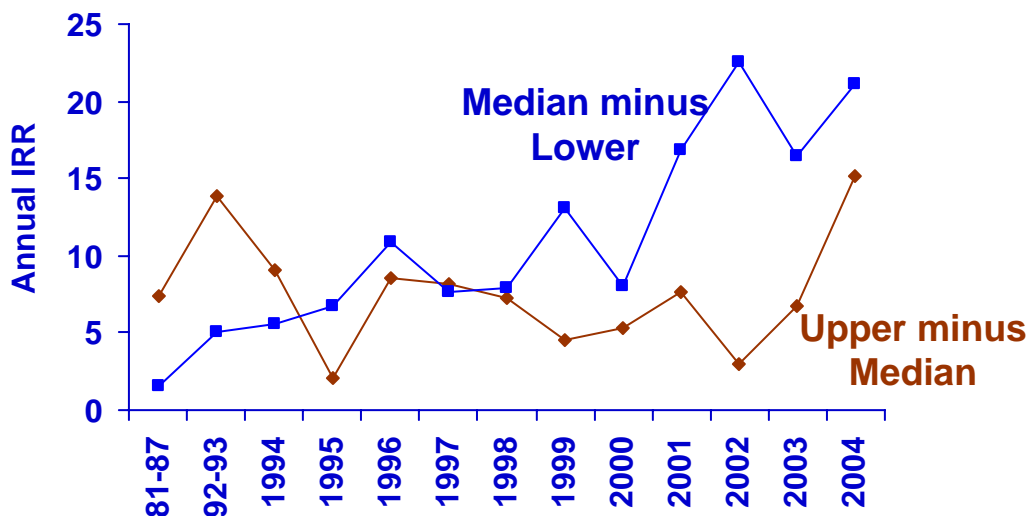
The money is not yet directed to the best managers

Returns by Vintage

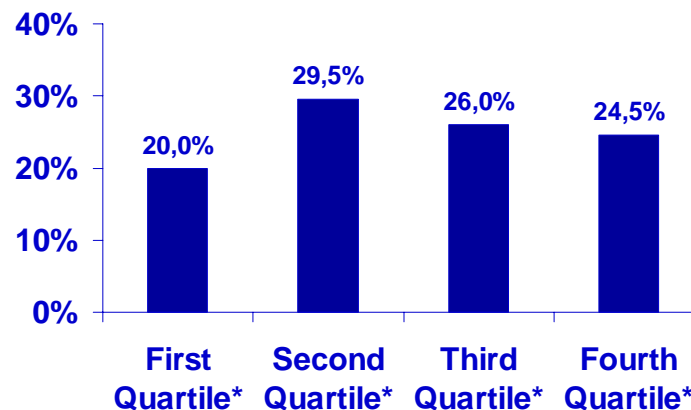


The pooled average performance tends to be below the median

- The difference between the Median and the lower quartile is larger than the difference between the upper quartile and the median
 - Outstanding funds do not compensate for non-performing ones
- The first quartile has the smallest capital weight
 - Money is not yet funneled to the best managers



Capital Under Management by quartile

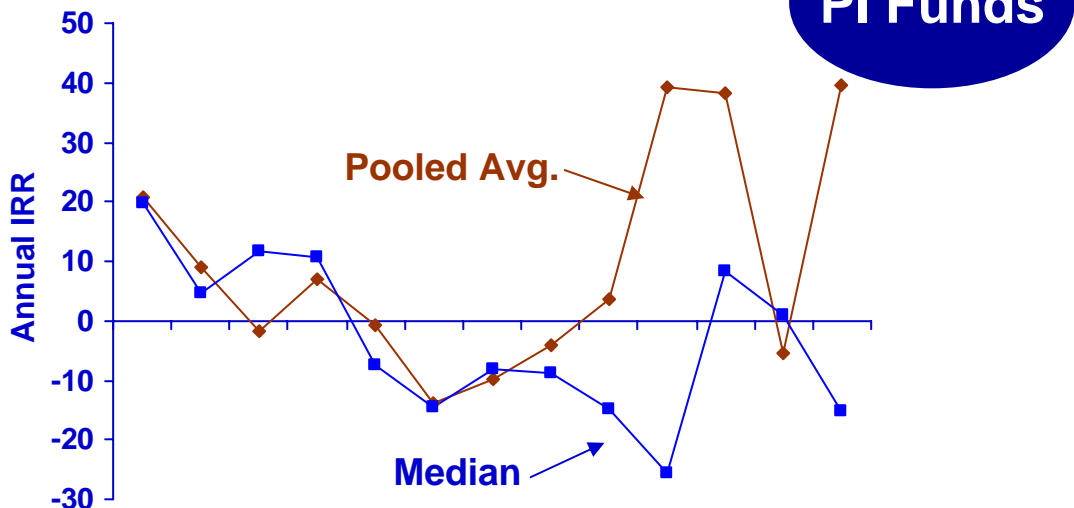


*All vintages together (proxy)

Selection Process (details)

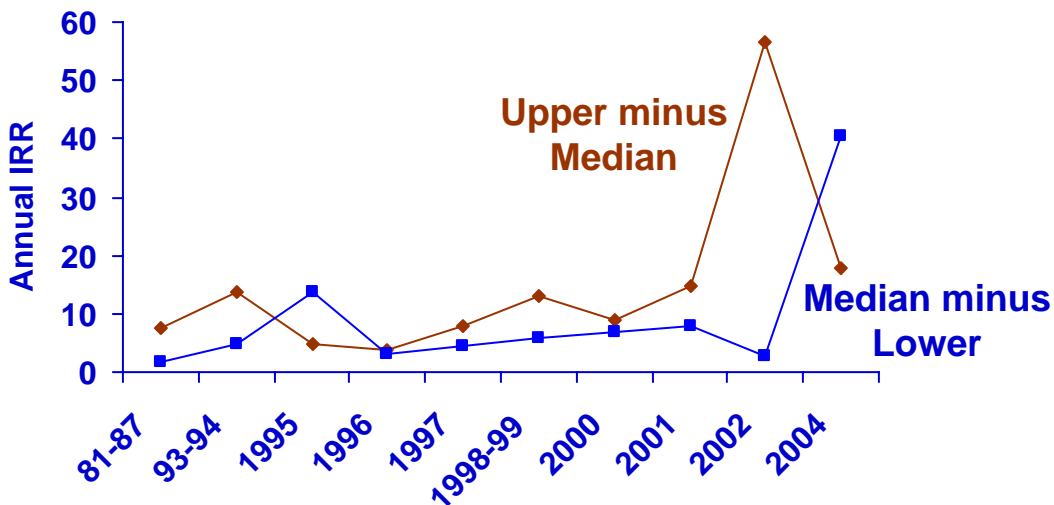
The money is not yet directed to the best managers

Returns by Vintage

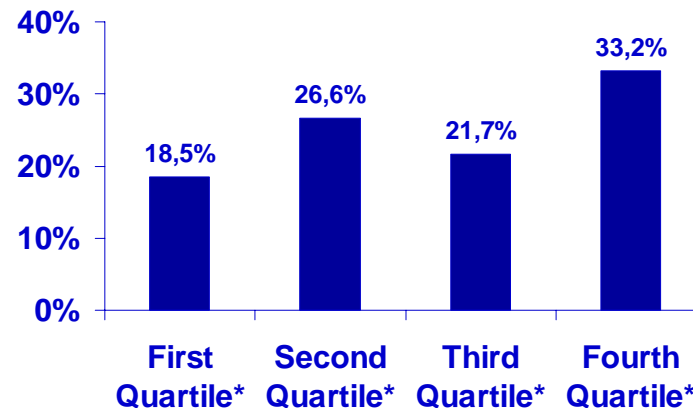


Except for the recent years, the pooled average tracks the median

- Good managers tend to outperform more clearly
 - The distribution of returns is more spread out
- Still, the first quartile is underweighted



Capital Under Management by quartile

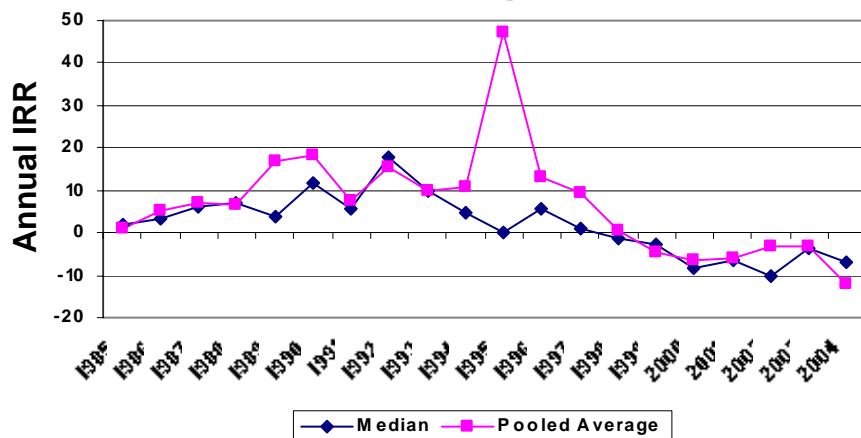


*All vintages together (proxy)

The relative weight of the lower quartiles is higher in Canada (Selection process – details)

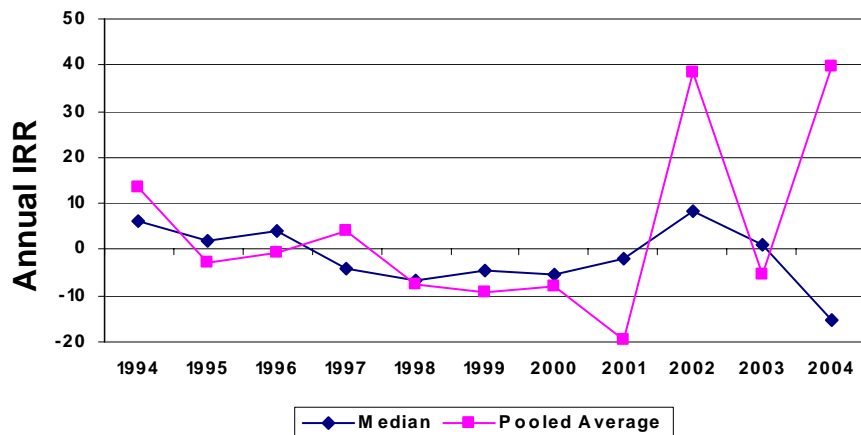
Cumulative Returns by Vintage Year

EU : Pooled Average and Median

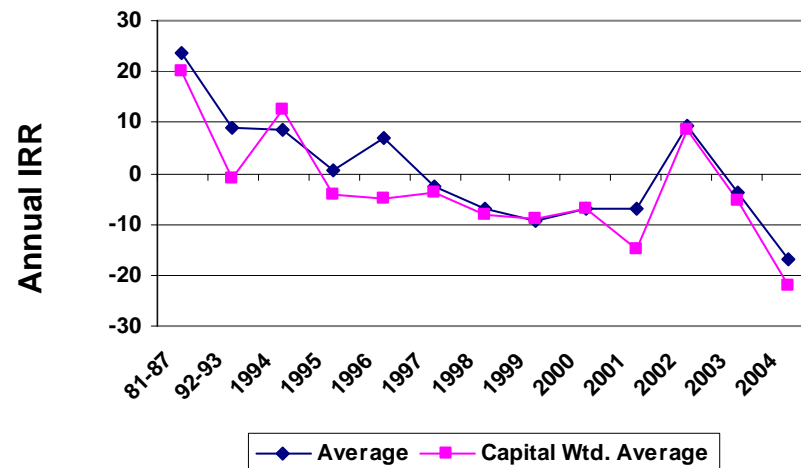


- In the US the pooled average tracks the upper quartile
- In Europe, it is lower than the upper quartile but larger than the median
- In Canada, it is lower than the median
- In Canada, the capital weighted average is below the average

Canada : Pooled Average and Median



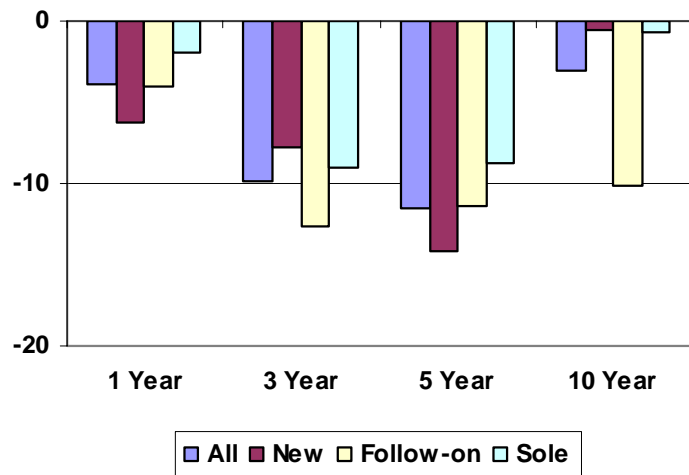
Canada : Cap Weighted Avg. and Avg.



Selection process (details)

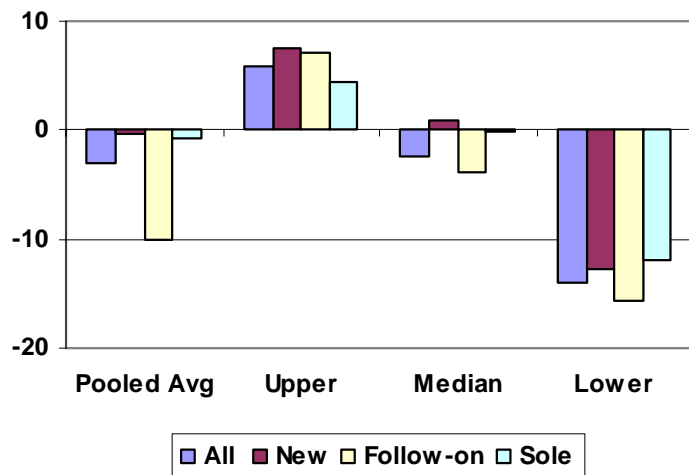
Follow-on funds underperform

Canada Investment Horizon IRR



- Follow-on funds under perform new and sole funds on a 10 yr horizon
- Since inception, they under perform as well (pooled average)
- Even in the first quartile, they do not outperform
- Overall the selection process for reinvesting does not seem to be efficient
- However timing may explain part of these results

Cumulative IRR since inception



- **Best performing funds:**
 - Enter emerging sectors early
 - Make many small bets
 - Concentrate on winners
 - small number of very high performing investments
 - quick to walk away from non-performing investments
 - Are company builders
 - Engineer large exits quickly
- **To build this they rely on very experienced partners with:**
 - broad and deep industry and operational knowledge and
 - far reaching strategic networks

Within the Canadian VC Industry, this blueprint is now accepted as desirable but is not yet fully implemented

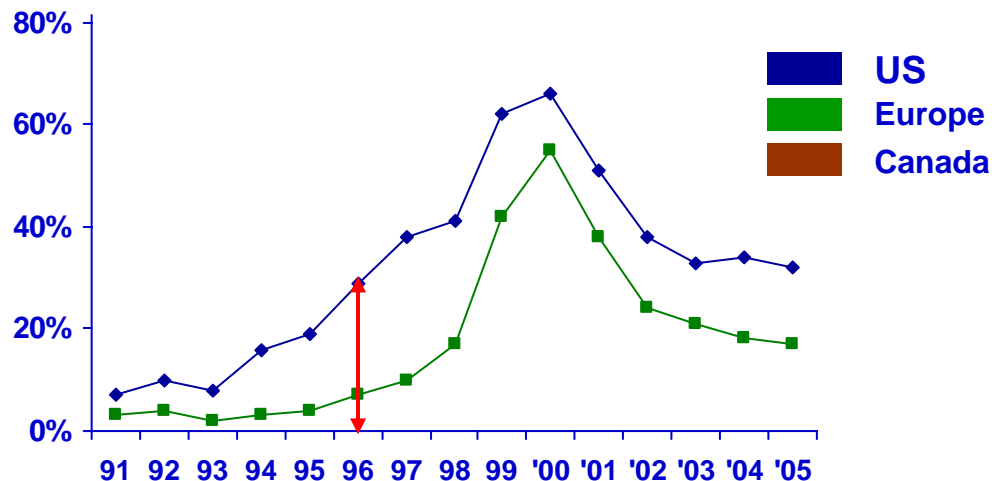
- **What is the reality?**
- **What are the obstacles?**
- **What recommendations?**

Source : McKinsey, Gompers & Lerner, due diligence of funds, interviews

Selection of Sectors: the evidence

Canadians and Europeans are slower to enter new sectors

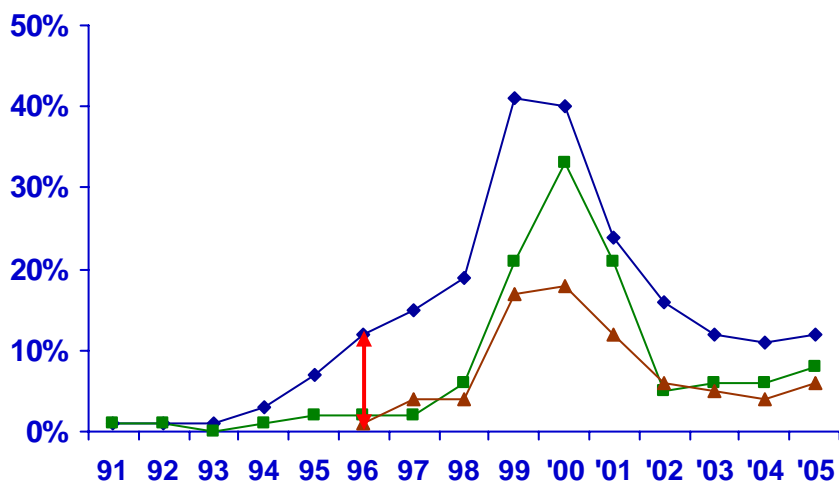
VC firms investing in Internet companies



In 1996,

- 30% of US VC firms were investing in Internet related companies
- 7% in Europe
- Virtually none in Canada
(see bottom graph – Data not available for the top graph)

VC Investments (\$) in Internet companies



Building Winners with high exit values

The evidence

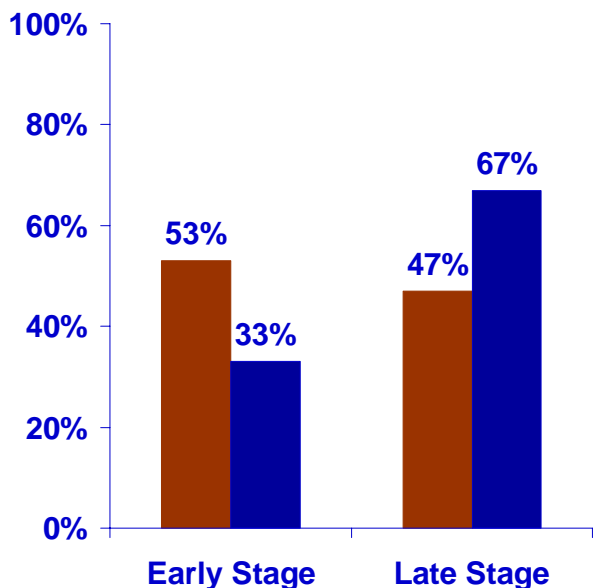
- **Canadian VC tend to:**
 - concentrate on early stages
 - invest less frequently at later stages and with much smaller amounts of money
- **Smaller number of exits with much smaller exit value**
- **Exit values on the American markets are much higher**
 - Israeli VC benefit from a much larger proportion of exits in the US
- **Foreign funds seem to play a very important role in Canada in**
 - Financing larger rounds
 - Exiting companies
 - Obtaining higher values at exit
- **Canadian VC have only a small number of big winners (10x+) and are slower to exit non-performing investments**
- **Canadian VC tend to be less demanding than their US counterparts**
- **Their managers' profiles do not match those of the top performing US funds**

Canadian VC is much more concentrated on early stages than the US and financings are much smaller

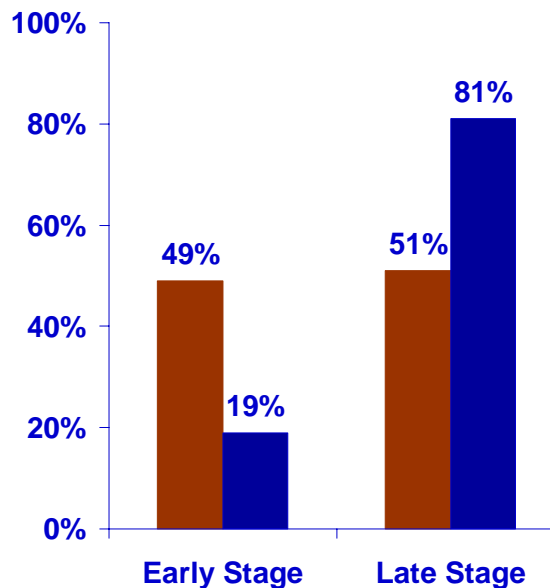
Investments by stage (2002-2005)

■ US
■ Canada

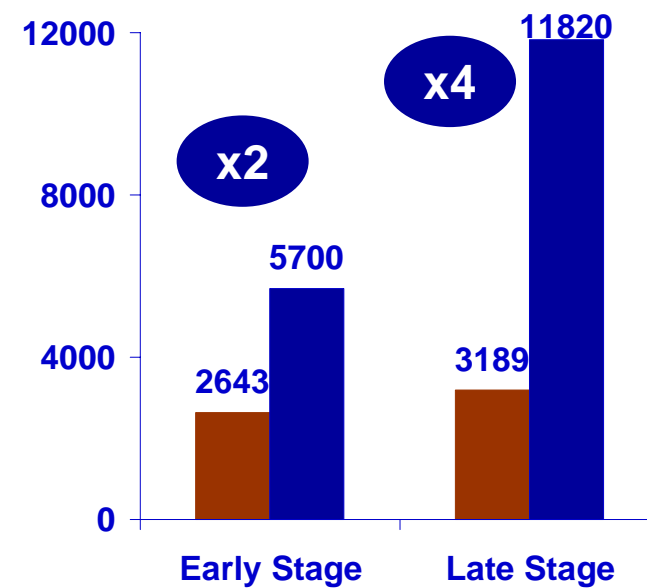
Number of Financings



Amount invested



Avg. \$



Compared to the US

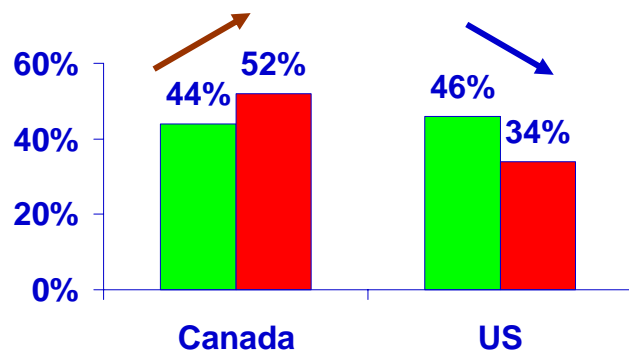
- Canada is overwhelmingly skewed towards the early stage
- Financings in Canada are 1/2 to 1/4 the size of those in the US

Canadian VC is much more concentrated on early stages than in the US and increasingly so (details)

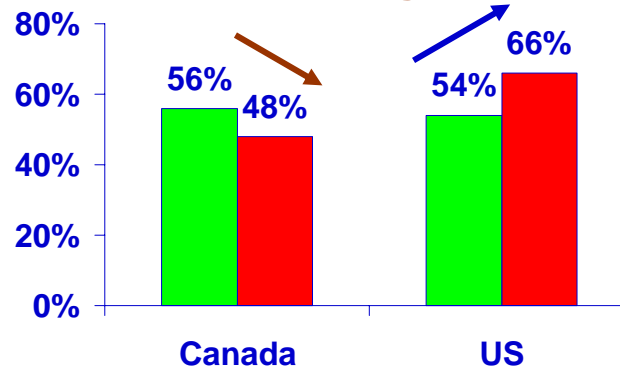
Number of deals by stage

1996-2000
2001-2005

Early Stage

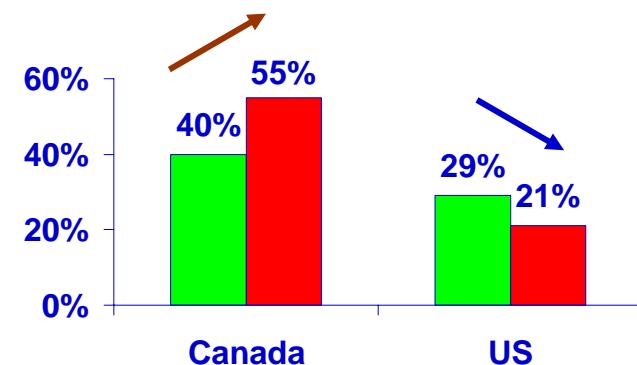


Late Stage

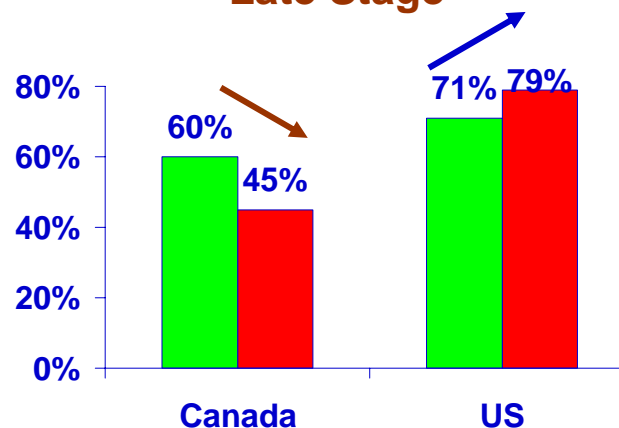


\$ invested by stage

Early Stage



Late Stage



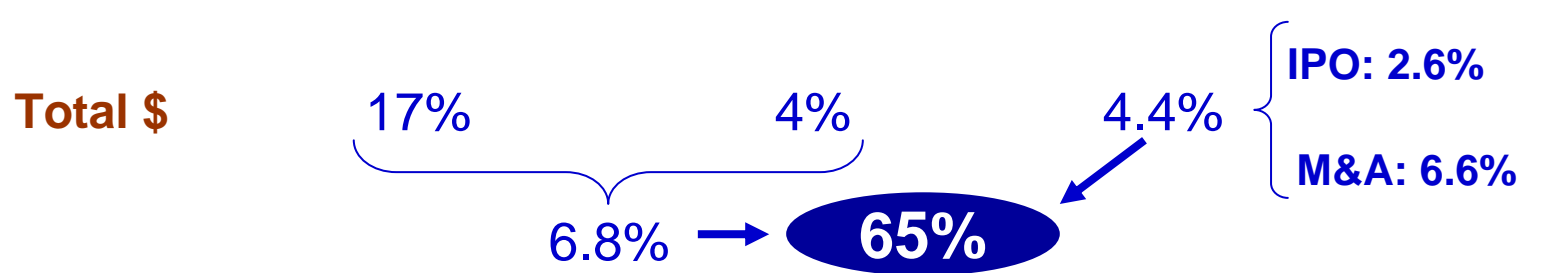
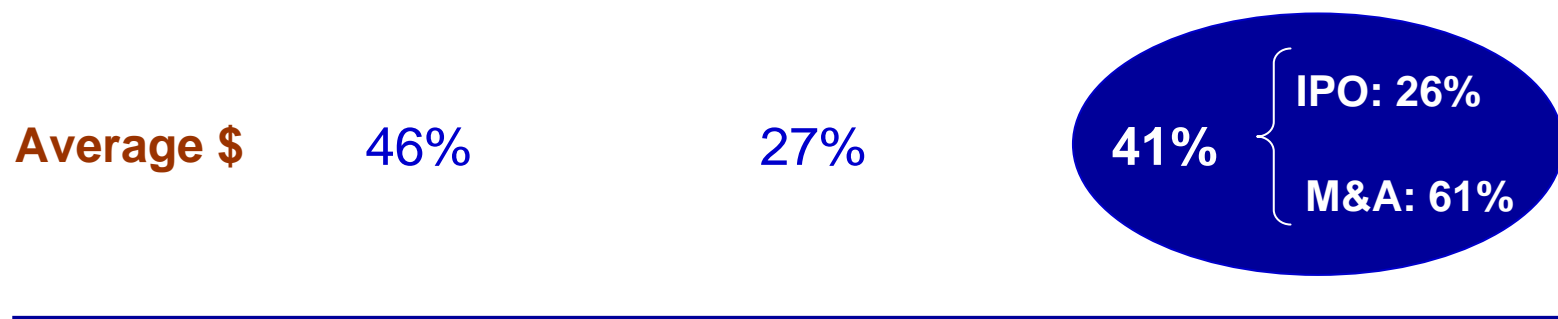
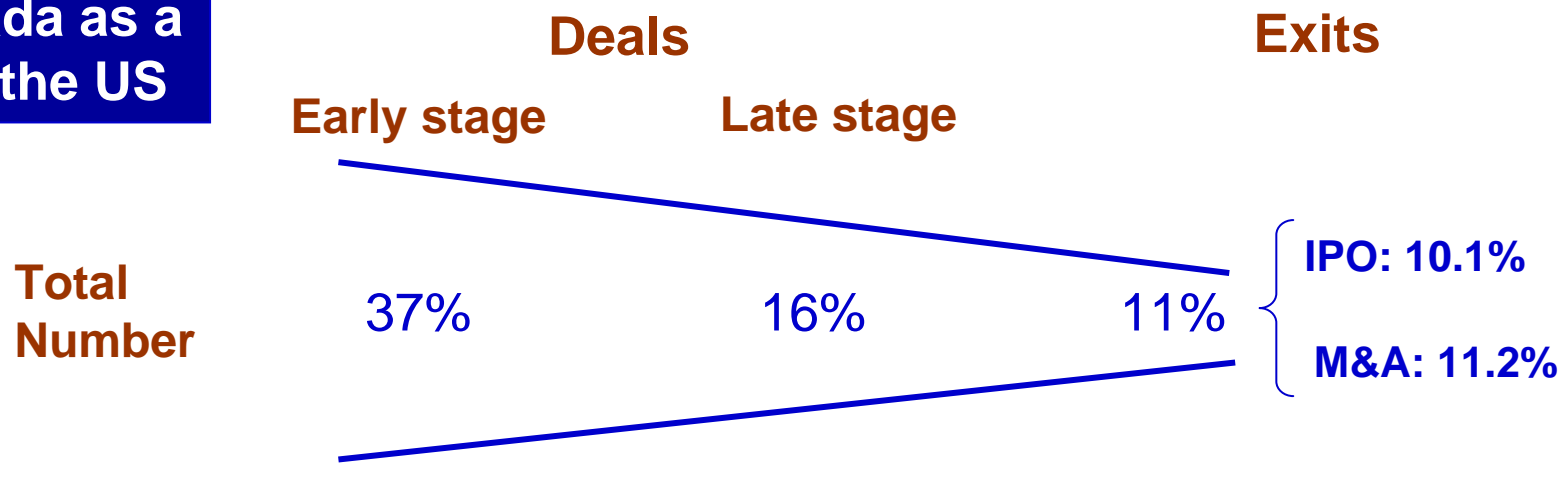
■ Between the 1996-2000 and 2001-2005 periods

- Early stage deals declined in the US from 46 % to 34 % of the total number of deals and from 29 % to 21 % of the dollars invested
- In Canada, early stage deals increased from 44 % to 52 % of the number of deals and from 40 % to 55 % of the dollars invested

Pipeline and exits: Canada vs US

More investments, fewer exits, lower values at exit, lower returns

Canada as a % of the US

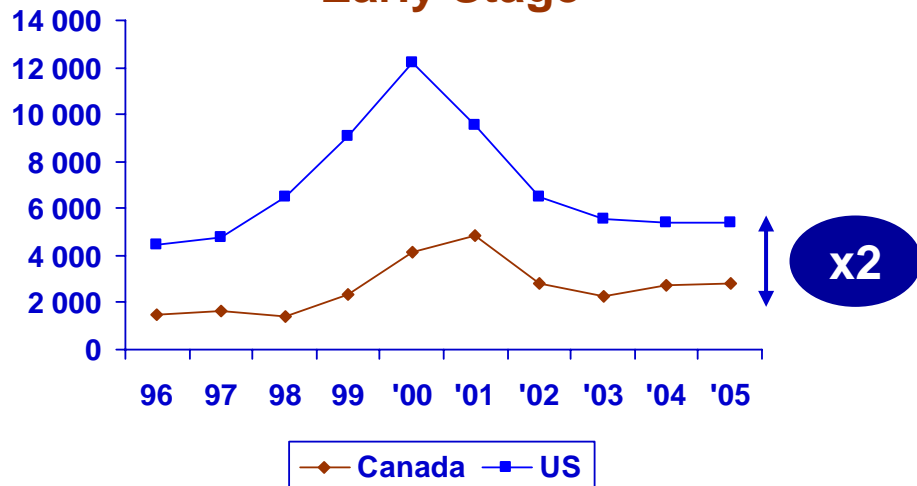


2002-2005 data – Source : Thomson Financial
Values extrapolated from disclosed deals

Something wrong in the pipeline (details)

Average Amount Invested by Deal (C\$'000s)

Early Stage



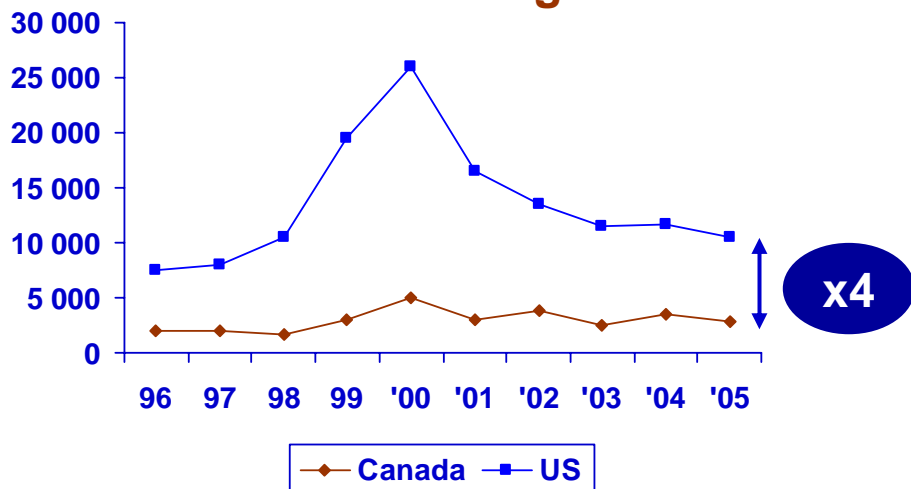
- Canada's GDP represent 8% of the US

Compared to the US:

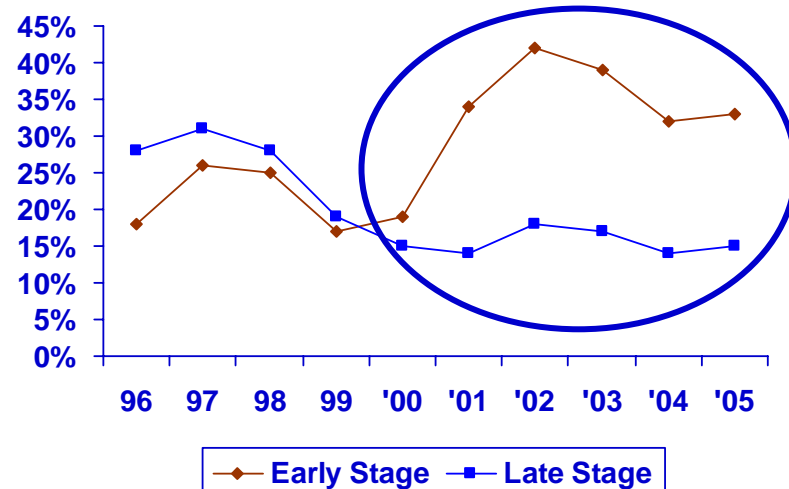
- The number of deals financed during the post bubble era is approx. 35 % for the early stage and 16 % for the late stage
- Comparative levels of \$ invested are 46 % for early stage and 27 % for late stage

Stalled in early stages ?

Late Stage

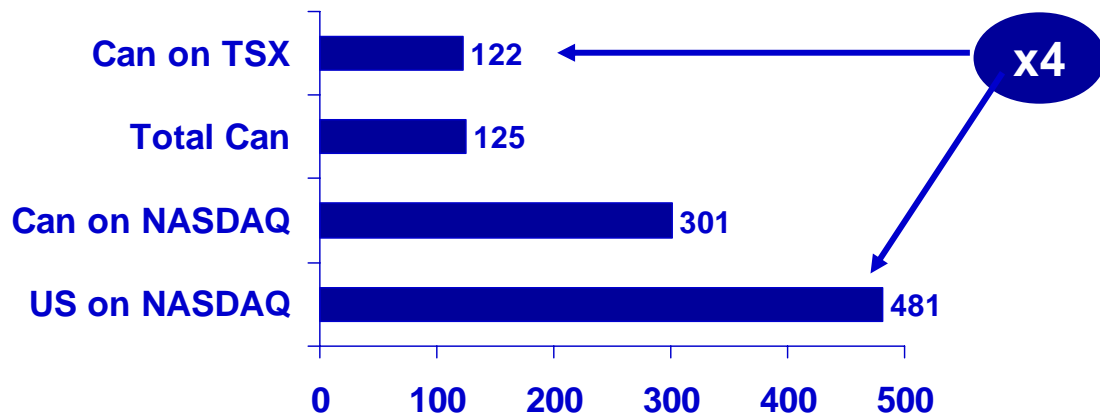


Number of deals in Canada vs US

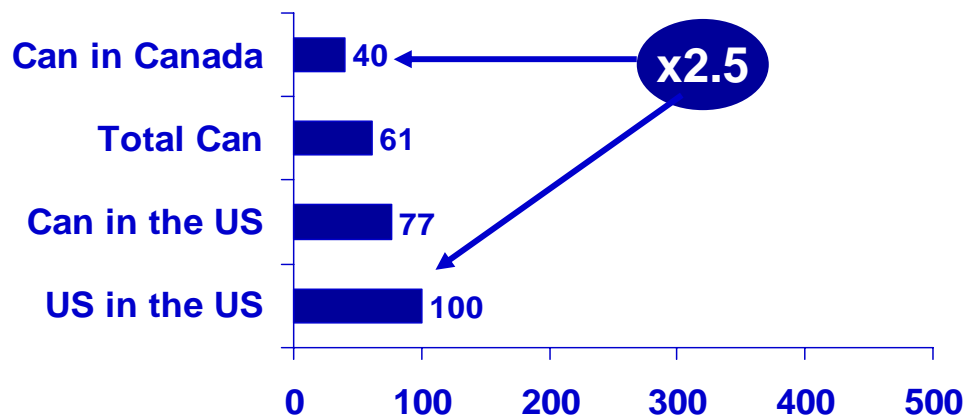


Exit values are much larger in the US

Average pre-money at IPO (C\$M)



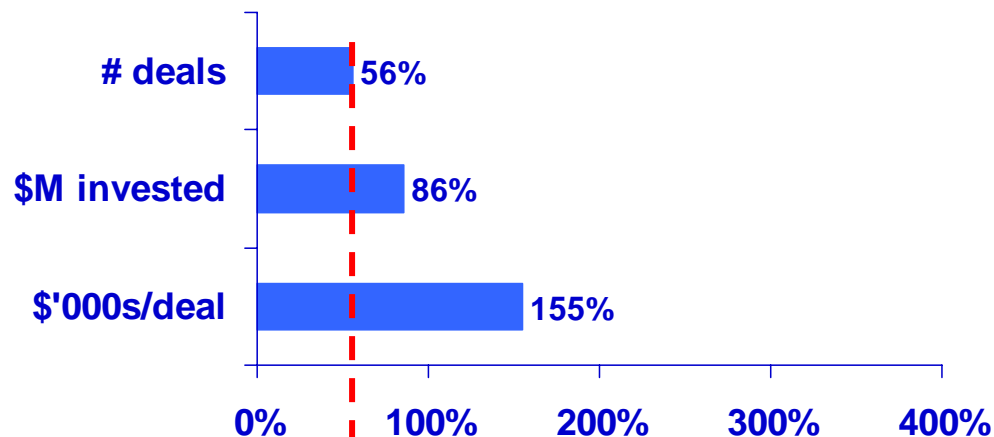
Average purchase price (C\$M)



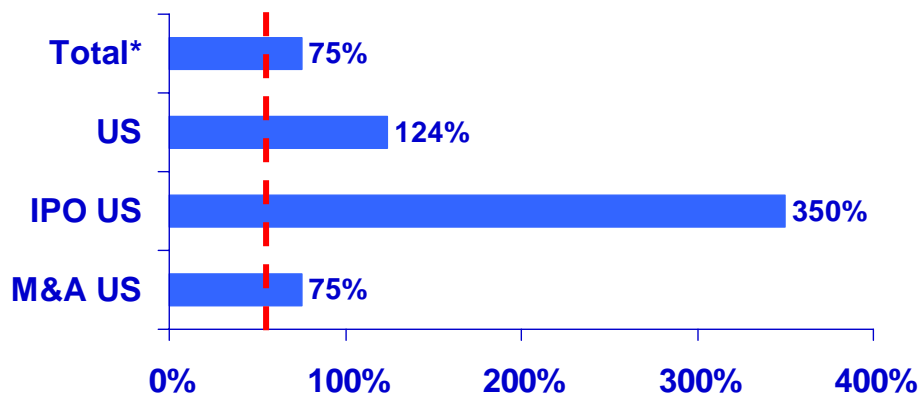
- Exit values in Canada are much lower than in the US
- To find large exits, companies have to meet NASDAQ standards or be of interest for a global buyer
- Canadian exits in the US are somewhat lower than the average US exit value

Part of Israel's success is due to its ability to build exits in the US

Comparison: Israel as a % of Canada VC investments



Number of exits (2002-2005)



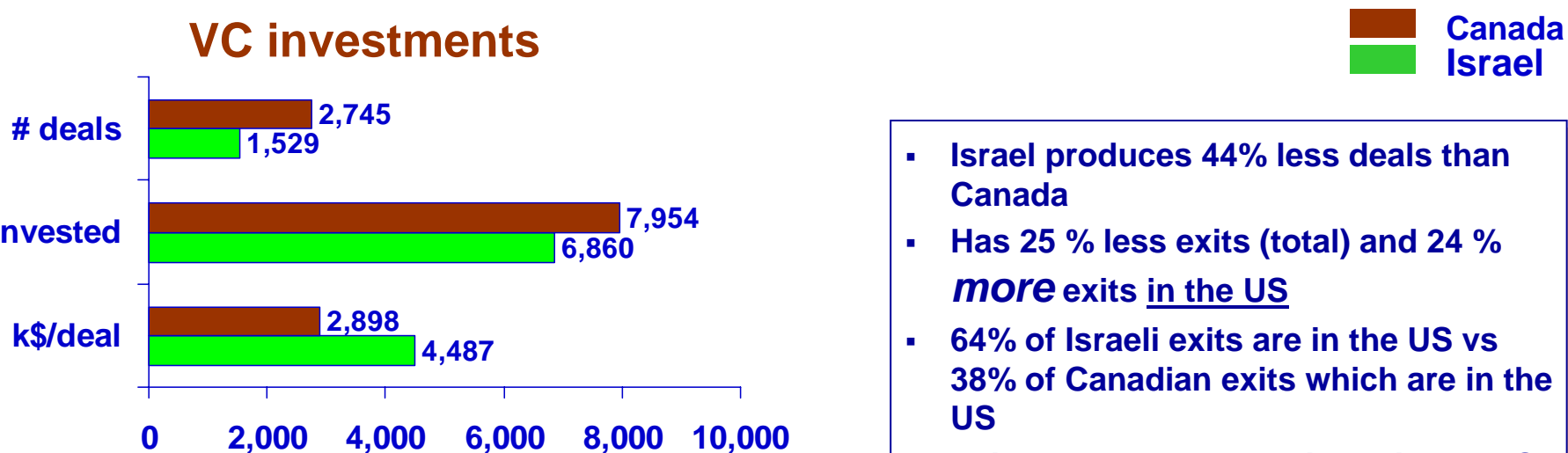
Israel

- produces 44% less deals than Canada
- has 25 % less exits (total) and 24 % *more* exits in the US
- 64% of Israeli exits are in the US vs 38% for Canadian exits

2002-2005 data – Source : Thomson Financial and IVC, disclosed deals

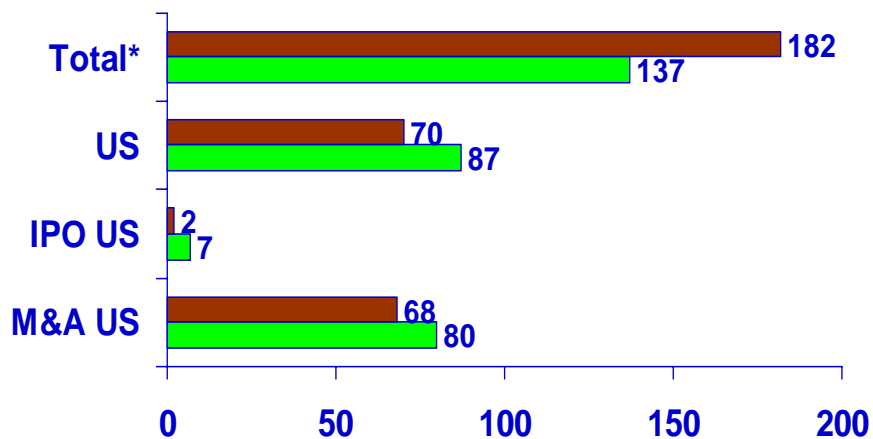
Part of Israel's success is due to its ability to build exits in the US (detailed data)

VC investments

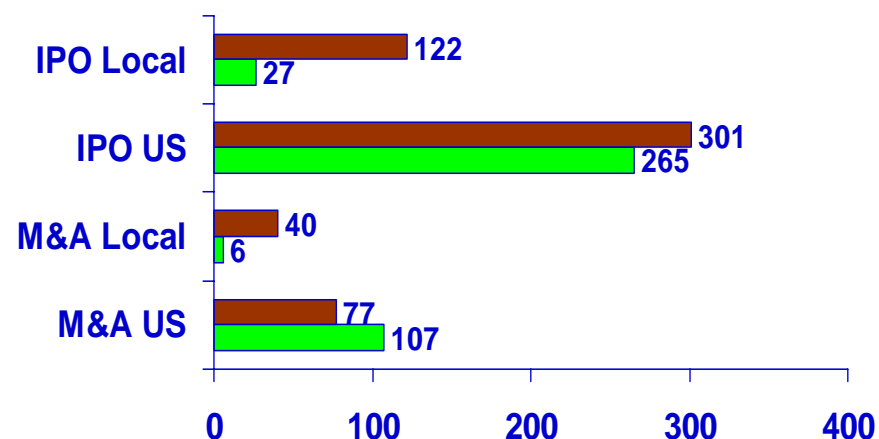


- Israel produces 44% less deals than Canada
- Has 25 % less exits (total) and 24 % **more exits in the US**
- 64% of Israeli exits are in the US vs 38% of Canadian exits which are in the US
- Exit values are much higher in the US than locally

Number of exits (2002-2005)



Avg. value of exits (2002-2005)

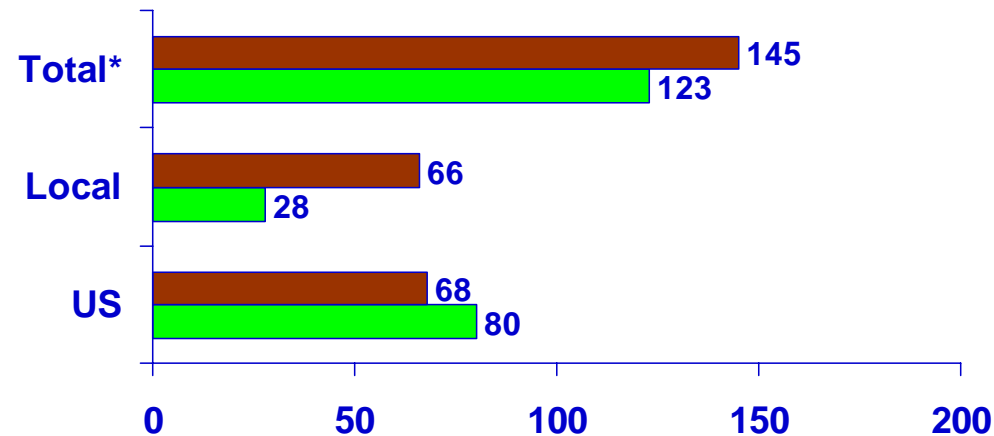


2002-2005 data – Source : Thomson Financial and IVC, disclosed deals

Part of Israel's success is due to its ability to build exits in the US (details on the number of exits)

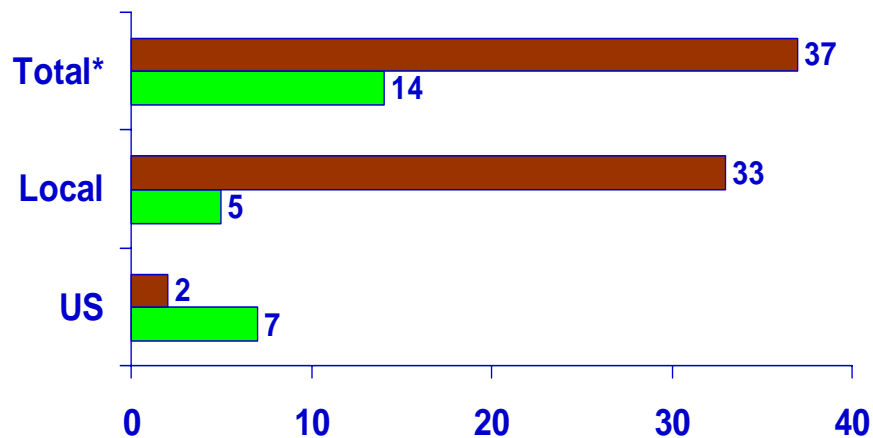
Number of M&As

Canada
Israel



- 65% of Israeli M&As are located in the US vs 47% of Canadian M&As with US buyers
- 50% of Israeli IPOs are located in the US vs 5% of Canadian IPOs which are on US exchanges

Number of IPOs

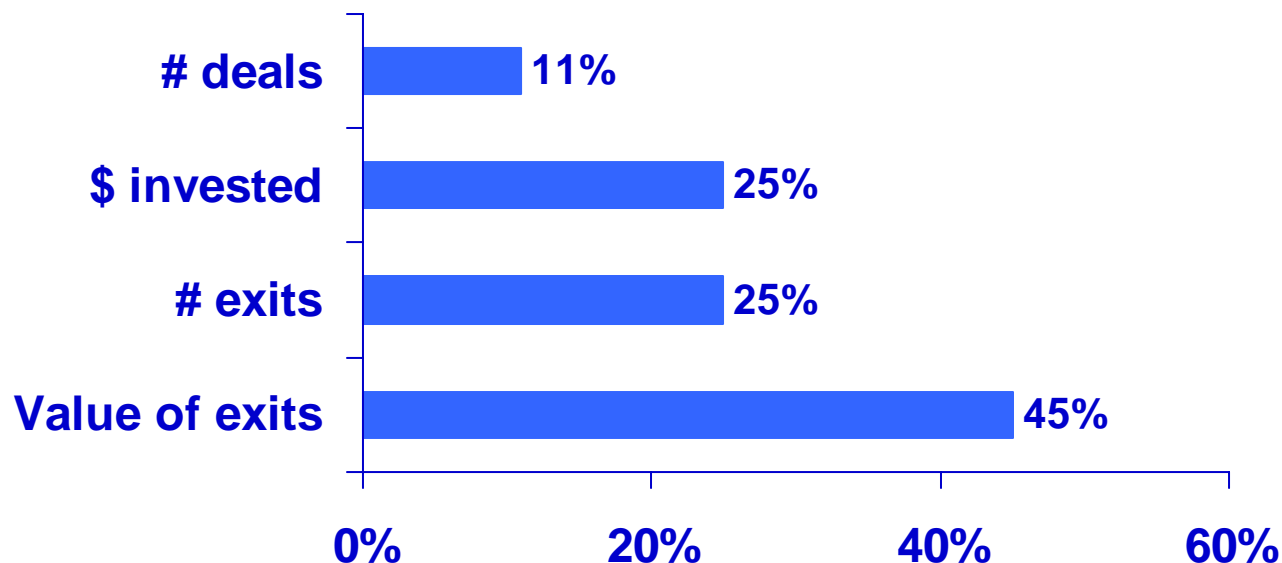


2002-2005 data – Source : Thomson Financial and IVC, disclosed deals

*includes all locations

Foreign (US) investors play an important role in building high exit value in Canadian deals

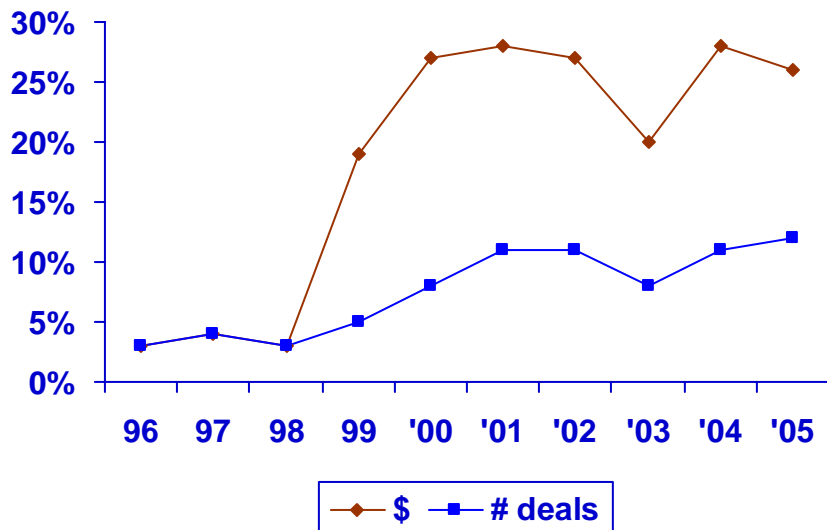
Participation of Foreign investors in investments and exits in Canada



- The average value of an exit for a company which has foreign investors is 2.5 times higher than for companies without foreign investors

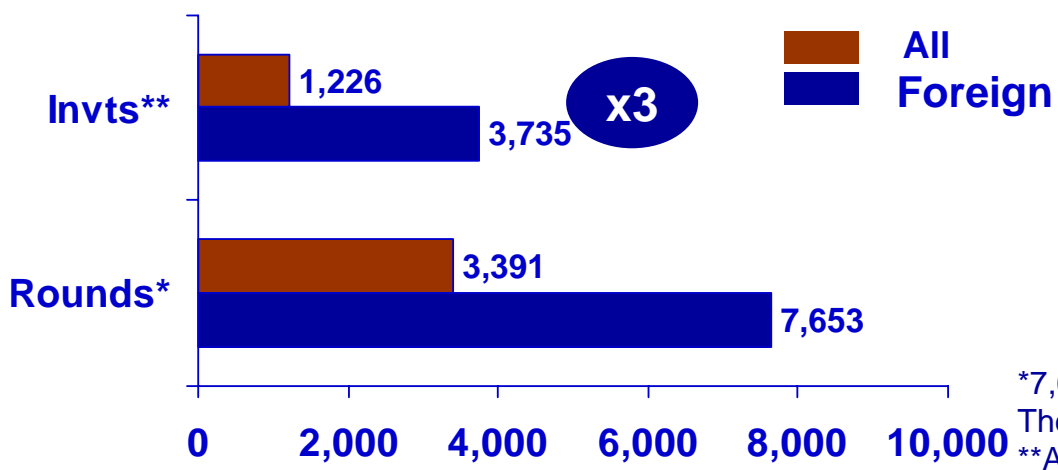
Foreign investors play a very important role in Canada since 1999 (details)

Share of foreigners in VC \$ invested in Canada



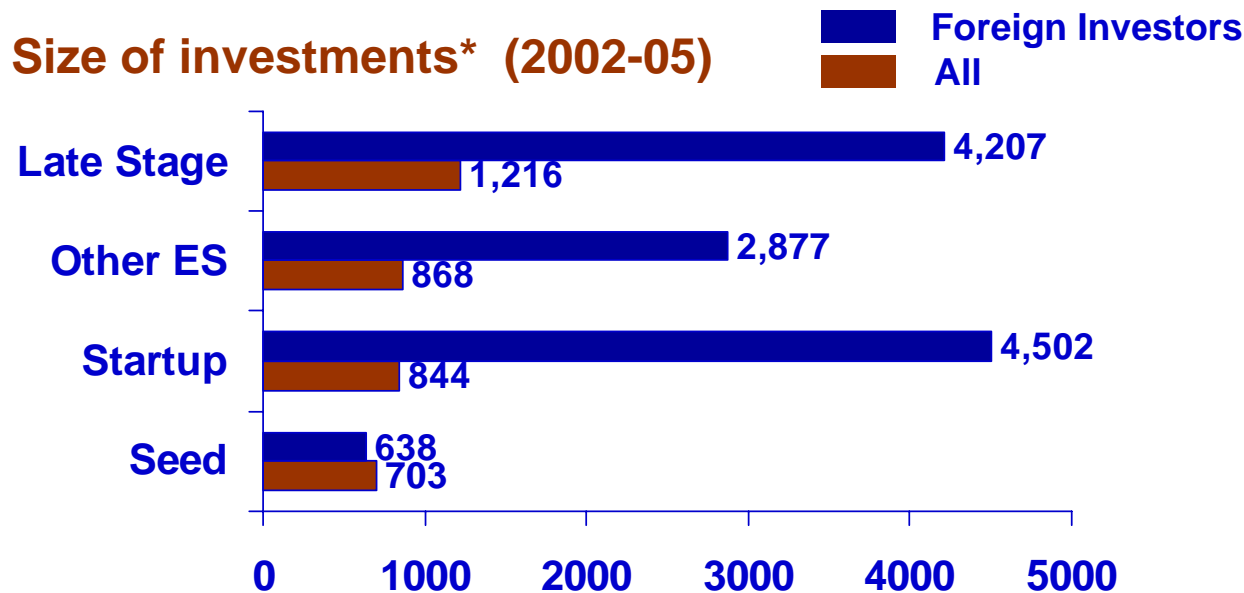
- Foreign investors represent 25% of total \$ invested and 12 % of financings since 1999
- They are less present at the seed and start-up stage and represent around of 30% of dollars invested at the Other Early Stage and Expansion stage
- On average an investment by a foreign fund in Canada is three times larger than an investment by a Canadian fund, at all stages
- When foreigners are present in a round, foreign money alone is twice as large as the average round size in Canada

Size of investments and rounds (2002-05)

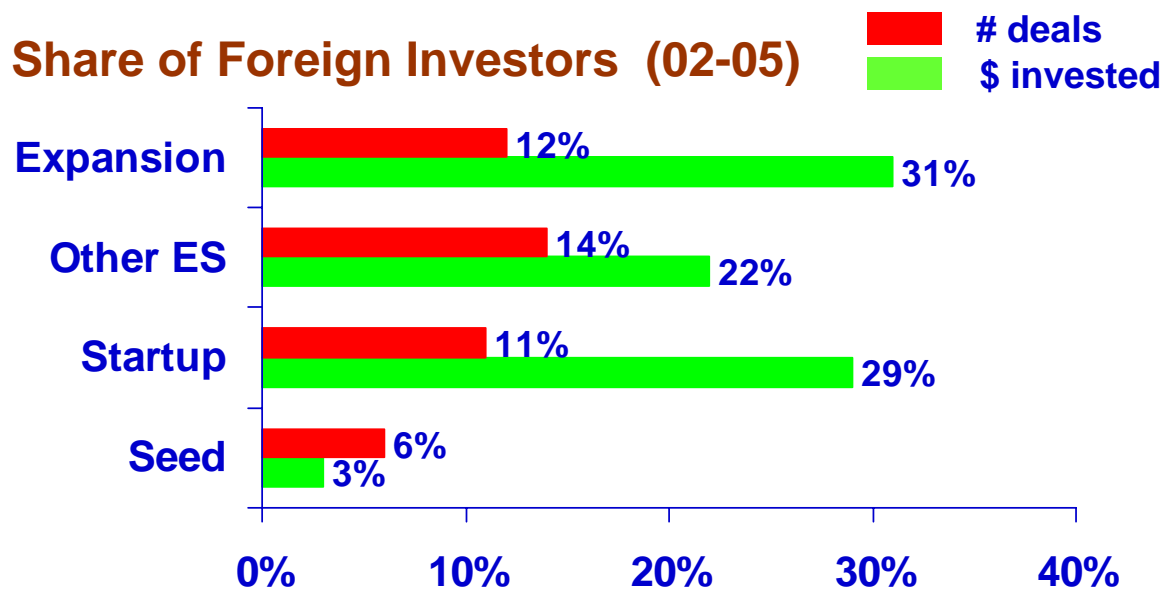


*7,653 is the average amount invested by foreign investors only
 The total round may be larger (data not available)
 **Average amount invested by a single investor

Foreign investors are present with larger investments at all stages except Seed (details)



- Foreign investors are not only present at the late stage
- Between 2002 and 2005, they represent 29% of \$ invested at the Start-up stage vs 31% at the Expansion stage
- 44% of foreign \$ were invested in early stages and 56% in late stages, which is more similar to the overall Canadian pattern than to the US pattern and may reflect the structure of the Canadian deal flow: not very many companies are grown to late stage



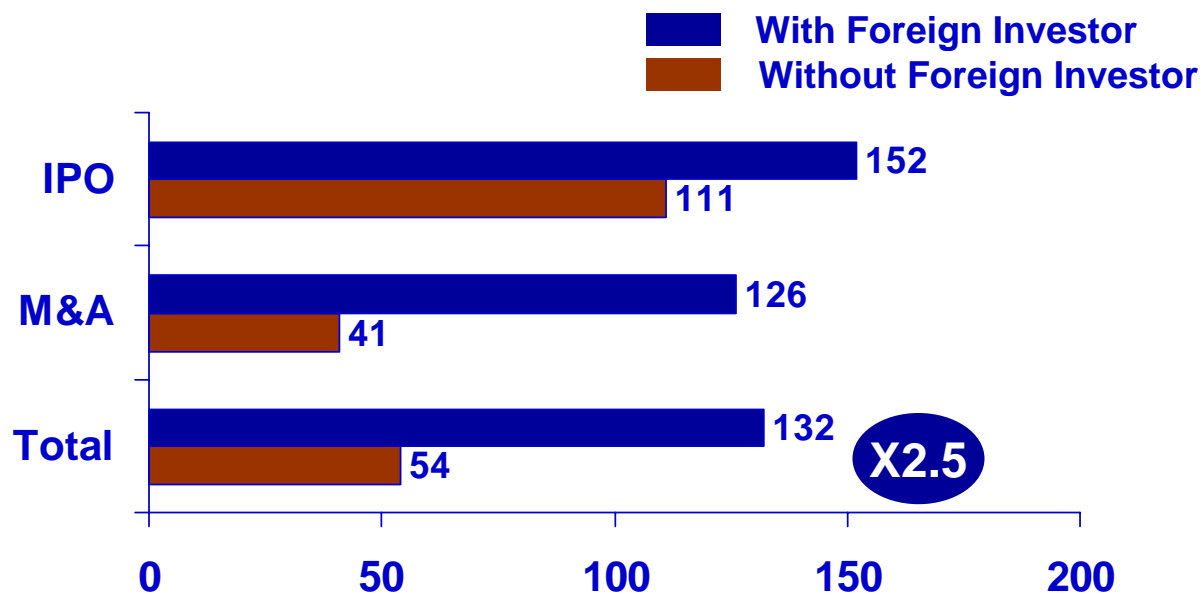
*Average amount invested by a single investor

Foreign investors play an important role in building high exit value in Canadian deals (details)

Participation of Foreign investors in investments and exits in Canada

Numbers of deals	Numbers of Exits	Value of these Exits
11%	25%	45%

Average value at exit (C\$M)



- Foreign investors are present in 11 % of Canadian deals and invest 25% of VC money invested in Canadian deals
- They are present in 25 % of exits which represent 45% of the total exit value of Canadian VC backed companies
- Their average exit value is 2.5 times higher than the average exit value for companies without foreign investors

There are Canadian deals with large exit values

A significant part of the profits they generate goes to foreign investors

2002-2005 data – Source : VentureXpert and Thomson Macdonald
Disclosed deals

M&As with Foreign Investors (details)

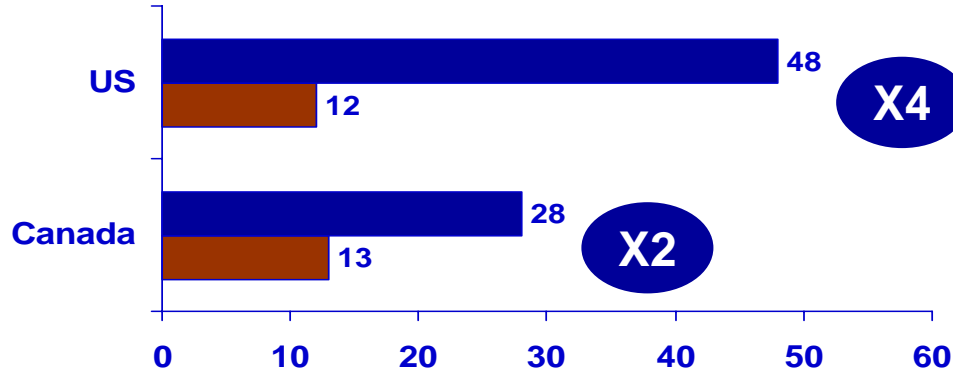
More money invested, Higher exit values

VC backed M&As of Canadian companies

■ With Foreign Investor
■ Without Foreign Investor

Avg. VC Money Invested (C\$M)

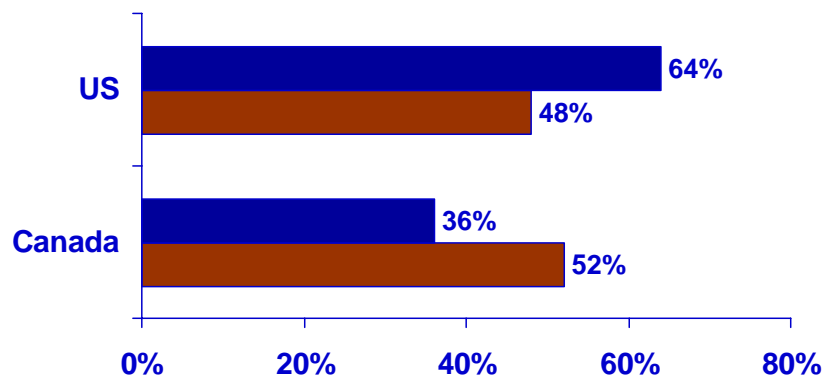
Exit location



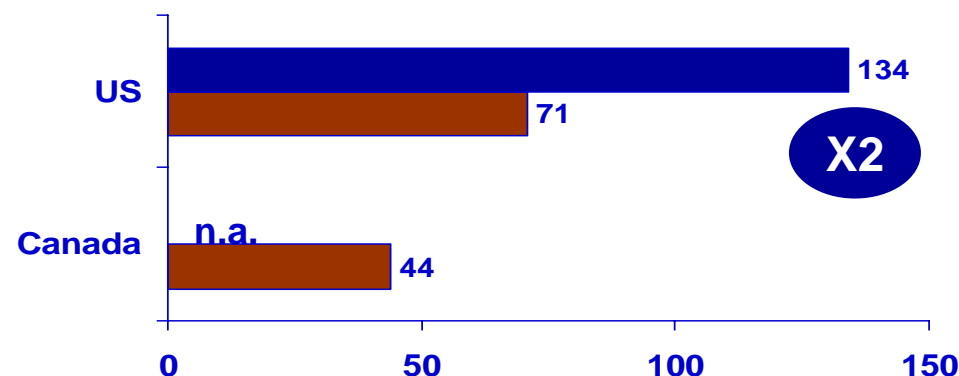
M&As with foreign investors:

- Have received more VC money
- Are more frequently bought by firms located in the US
- Have an higher exit value

Shares of exits by location of the buyer



Avg. Purchase Value (C\$M)



2002-2005 data: 134 M&A of Canadian companies, 66 in Canada, 68 in the US – Source : VentureXpert and Thomson Macdonald, Disclosed deals

IPOs with Foreign Investors (details)

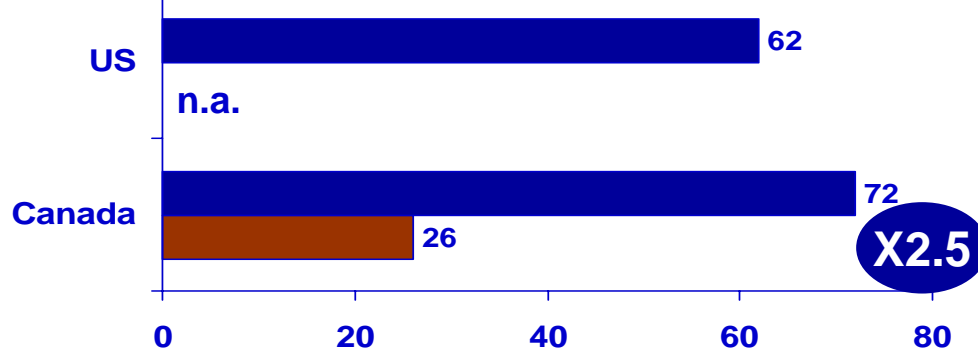
More money invested, Higher exit values

VC backed IPOs of Canadian companies

■ With Foreign Investor
■ Without Foreign Investor

Avg. VC Money Invested (C\$M)

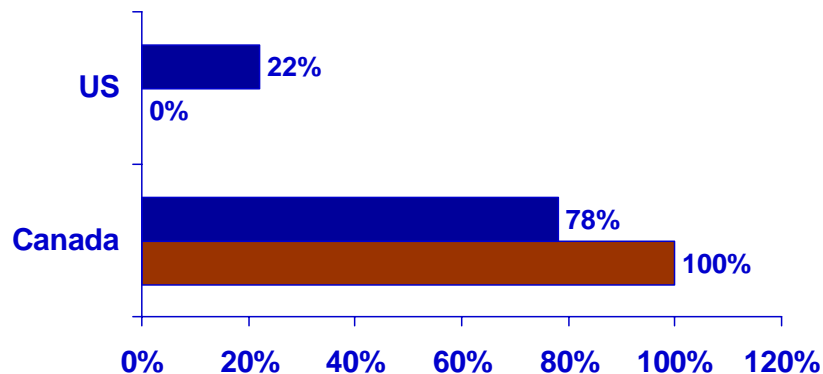
Exit location



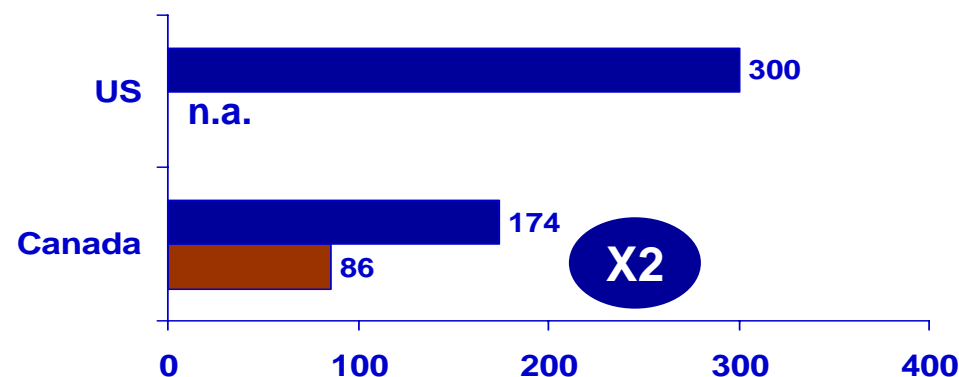
Like M&As, IPOs with foreign investors:

- Have received more VC money
- Are more located on US exchanges
- Have an higher exit value

Shares of exits by location of the exchange



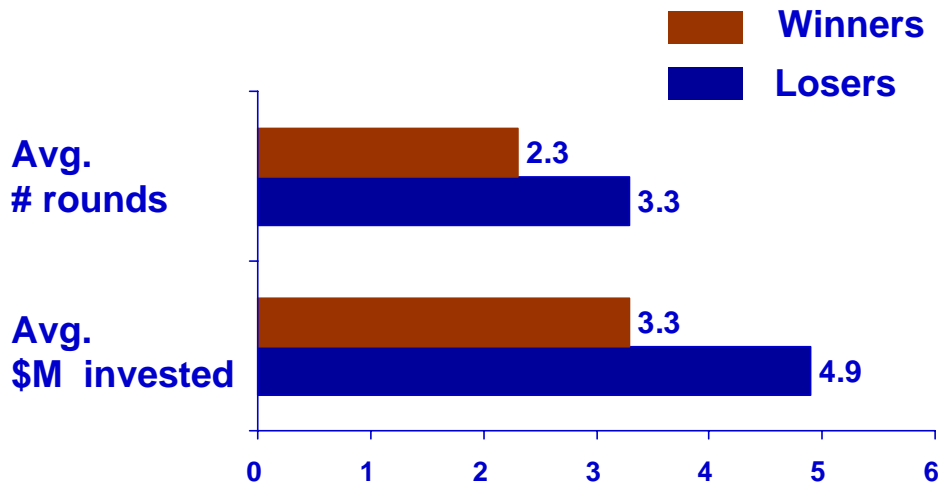
Avg. Pre-Money Value (C\$M)



2002-2005 data: 134 IPOs of Canadian companies, 33 in Canada, 2 in the US – Source : VentureXpert and Thomson Macdonald, Disclosed deals

Based on interviews

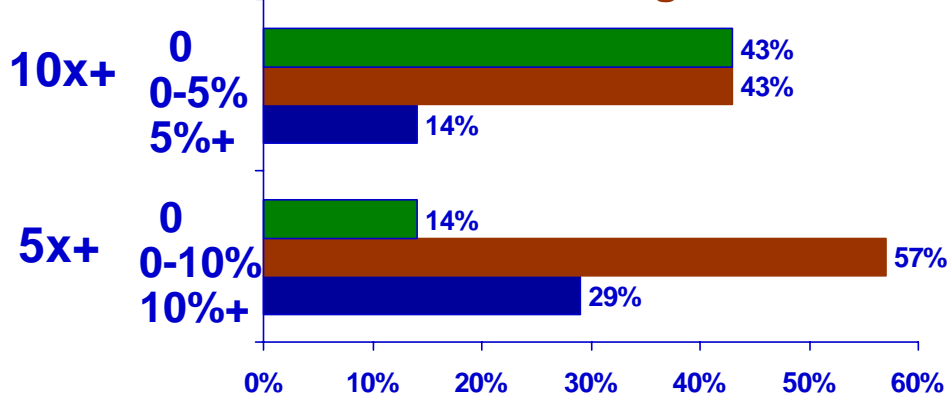
Avg. # of rounds and \$M invested



Graphs illustrate that

- Losers received more money than winners
- Most funds have few big winners in their portfolio

% winners by category of percentage of large winners*



This reads: 14% of interviewees have more than 5% of investments with a multiple larger than 10

Illustrative
Small number of respondents

Canadian investors are less demanding

Source: ghSmart

ghSmart methodology

- ghSmart serves most of the N.American top-tier PE funds
- The firm is the top provider of talent management services to the private equity & venture players (due diligence, coaching and development, growth and M&A)
- Fact-based approach to talent management allows for comparison between US and Canada
- The firm uses the expectations of investors to rate management teams when doing due diligence

Some high-level conclusions

- US investors are more demanding than comparable Canadian investors
- There are some significant talent gaps in Canadian companies in terms of senior management
- There are different mindsets at work in US and Canadian investors

Canadian investors are less demanding

Source: ghSmart

Scorecards

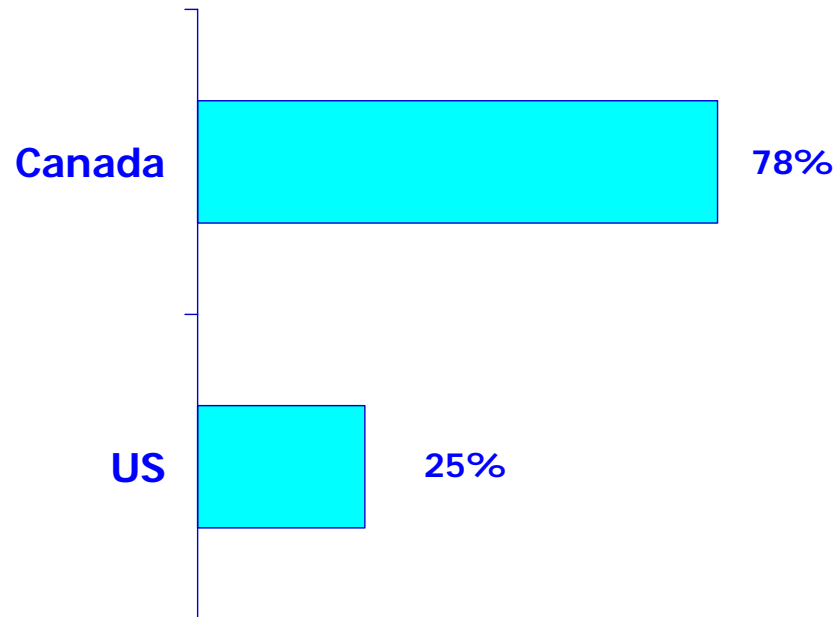
Teams

Due Diligence

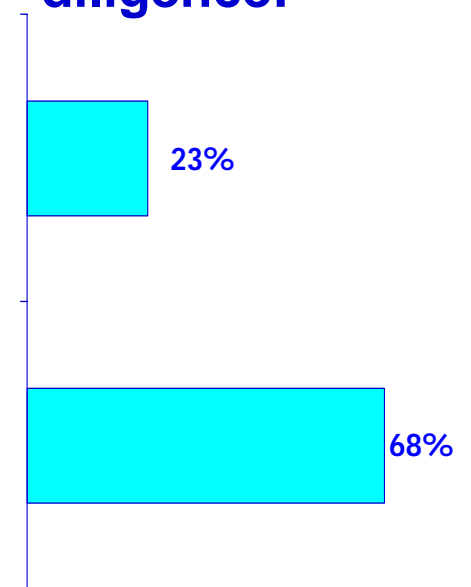
Canadian scorecards are (generally) less ambitious than US counterparts

- Longer timelines
- Lower revenue targets
- Fewer growth targets (expansions, M&A)
- Fewer backup plans

Invest in B teams:



Pre-investment management due diligence:

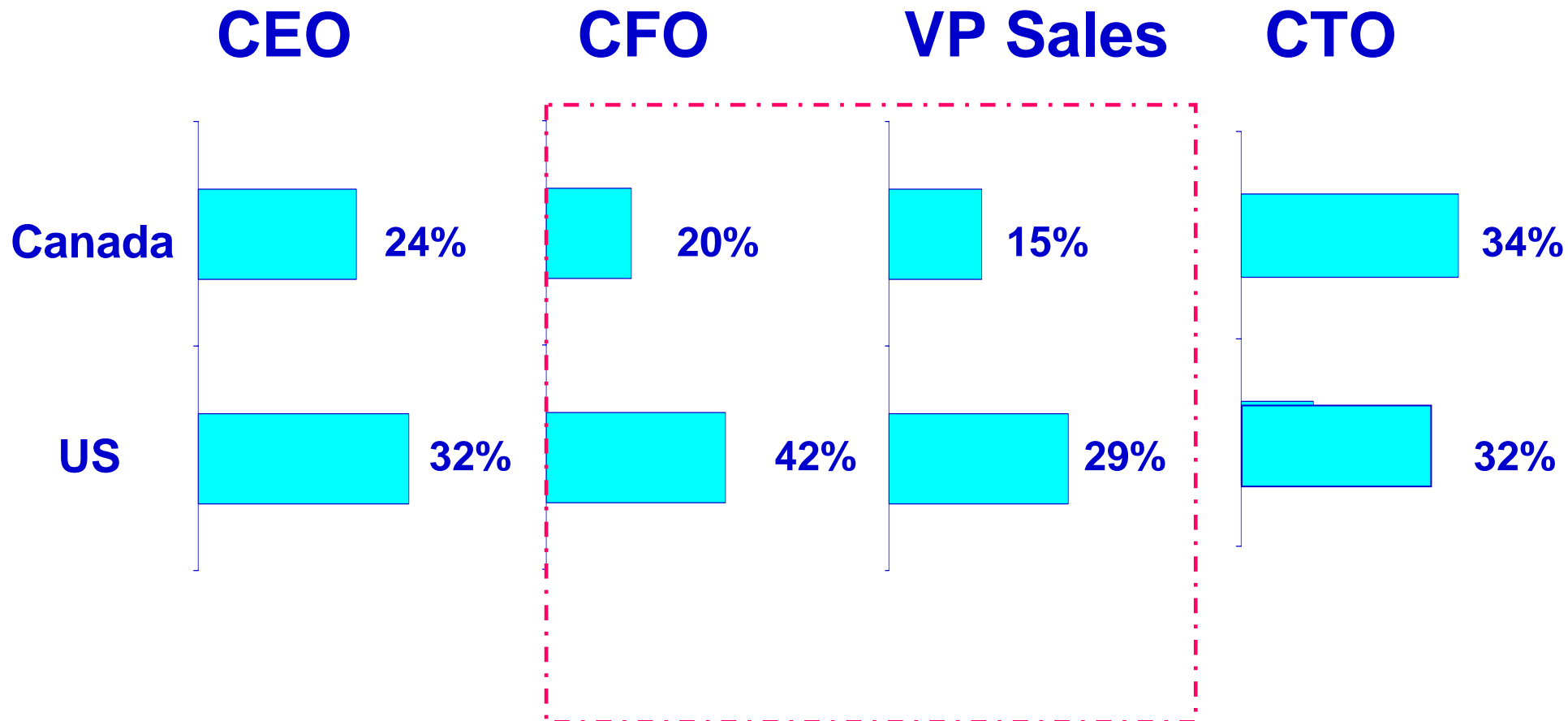


Some key talent gaps In portfolio companies

Source: ghSmart

% of A / A- players

Canadian VC accept more B players, especially for CFO and VP Sales



And this in the context of less demanding scorecards in Canada

Canada VCs

- Very focused on the CEO
- Tendency to deal with companies as if they were public
- CEO / Management change is traumatic
- Board is a watchdog
- Canada centric

US VCs

- Focus on the entire senior team
- Tendency to treat the companies as if they owned / ran them
- CEO / Management change is expected
- Board has to add value
- Global centric

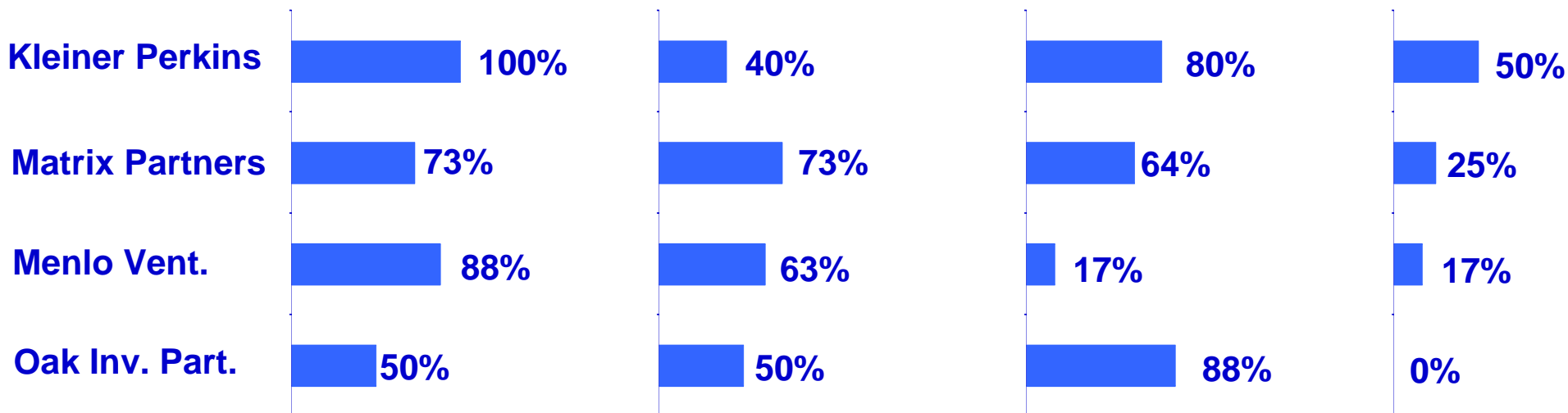
Partners' Profile

Talent, Domain Expertise, Operational Experience, Networks

Best performing funds rely on very experienced partners with deep industry and operational knowledge and far reaching strategic networks

Number of Partners with

	Technical degrees Under grad.	Graduate	Operational experience	CEO/COO experience
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Source: Web sites, McKinsey analysis

Sequoia – Partners' Profile (1) – Details

Talent, Complementarity, Operational Experience, Networks

	Training	Industry /Operations	Finance/VC
Ron Valentine		Founder National Semicond. Fairchild Semiconductor	Founder Sequoia 1972
Pierre Lamond		Founder National Semicond. Fairchild Semiconductor Pdt of Advent and Coherent	Sequoia 1981.
Michael Moritz		Technologic Partners Time Warner	Sequoia 1986
Douglas Leone	B.S., M.S. MIT	Sun Microsystems, HP Prime Computer	Sequoia 1988
Thomas Stephenson	MBA Harvard JD Boston		Sequoia 1988 Fidelity Invts Fidelity Ventures
Mark Stevens	MS Computer MBA Harvard	Intel Hughes Aircraft	Sequoia 1989

Source : web site

Sequoia – Partners’ Profile (2) – Details

Talent, Complementarity, Operational Experience, Networks

	Training	Industry /Operations	Finance/VC
Michael Goguen	BS Cornell MS Stanford	DEC, SynOptics, Centillion, Bay Networks	Sequoia 1996
Sameer Gandhi	MSEE MIT MBA Stanford	Oracle	Sequoia 1998 Broadview
Mark Kvamme	BA Berkeley	CEO CKS/USWeb CEO International Solutions	Sequoia 1999
Greg McAdoo	BSEE Stevens IT	Cisco, Sourcecom, Micom, Datability Systems	Sequoia 2000
Gaurav Garg	MSEE St Louis	Founder Redback SynOptics, Bay Networks	Sequoia 2001
Roelof Botha	BS MBA Stanford	CFO PayPal McKinsey	Sequoia 2003
Jim Goetz	MSEE Stanford	Entrepreneur VitalSigns Lucent, Bay Network, AT&T, DEC	Sequoia 2004

Source : web site

HealthCare Ventures – Partners’ Profile – Details

Talent, Complementarity, Operational Experience, Networks

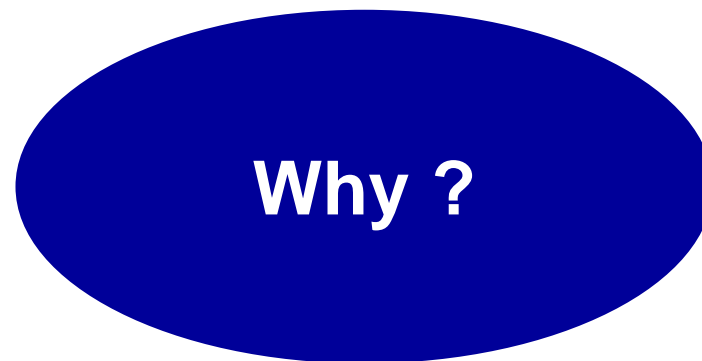
	Training	Industry /Operations	Finance/VC
Harold Werner	MBA Harvard	J & J New Ventures Robert S. First	Co-founder HCV 1985
James Cavanaugh	Ph.D. Iowa	Pdt SmithKline & French Lab US Pdt SmithKline Beckman Clinical Lab Pdt Allergan Intl	HCV 1988
John Littlechild	MBA Manchester	Rank Xerox ICI	HCV 1992 Founding GP Advent Citicorp VC
Augustine Lawlor	M.A. Yale	COO LeukoSite CFO Alpha-Beta Tech, CFO BioSurface CFO Armstrong Pharma	HCV 2000
Christopher Mirabelli	Ph.D. Baylor	CEO LeukoSite Founder Isis Pharma	HCV 2000
Eric Aguiar	M.D. Harvard	CEO Genovo TheraTech.	HCV 2001 Philadelphia Ventures

Source : Web site

Summing up

Building Winners with high exit values

- **Canadian VC are slower to enter new sectors**
- **Canadian VC tend to concentrate on early stages and invest far less in later stages with much smaller amounts of money**
 - **Something wrong with the pipeline**
- **Their number of exits is smaller but, more important, their average value at exit is much smaller**
- **Canadian VC have only a small number of big winners (10x+) and are slower to exit non-performing investments**



- **The preceding slides presented the evidence**
- **This evidence was analyzed and discussed during in depth interviews with Canadian and US GPs and LPs**
- **The following slides present results and recommendations which have been derived from these interviews**

Canadians are slower to enter new sectors

Why?

Based on interviews

Why?	Proposed Solutions	Obstacles
<ul style="list-style-type: none"> ■ Smaller technology communities in Canada ■ Smaller deal flow in any given segment ■ Weaker domain expertise among VC managers <ul style="list-style-type: none"> ■ industry knowledge ■ networks ■ Geographic focus vs sector focus 	<ul style="list-style-type: none"> ■ Specialized teams (even within diversified funds) <ul style="list-style-type: none"> ■ Recruit partners with operational experience, domain expertise and networks ■ Invest in building domain expertise and networks ■ Concentrate \$ in specific domains and invest globally ■ Target domains and clusters with Canadian expertise and deal flow ■ Team with specialized resources or funds <ul style="list-style-type: none"> ■ North American scope 	<ul style="list-style-type: none"> ■ Small funds ■ Larger funds are often generalists ■ Geographic limitations <ul style="list-style-type: none"> ■ Restrict access to specialized resources ■ Absence of reciprocity ■ Many managers' profiles are financial ■ Networks and focus are too local and unspecialized

Something wrong with the pipeline

Why?

Funding many ES Co's

- Small funds concentrate on Early Stage (ES)
- Some funds have a mission to “spray” and stimulate company start-up

Weaker Mgt Teams

- Less experienced and connected
- Less aggressive
- Fewer repeat entrepreneurs
- Fewer A teams

Slower to build companies

- Investing small amounts
- Limited skills and resources

Looking for early exits

- PI funds are small
 - Lack of money to build winners
- PI funds are young
 - Look for early exit to raise new fund
- The Canadian VC ecosystem is more risk averse
 - VC managers
 - Entrepreneurs
 - Company managers

Proposed solutions

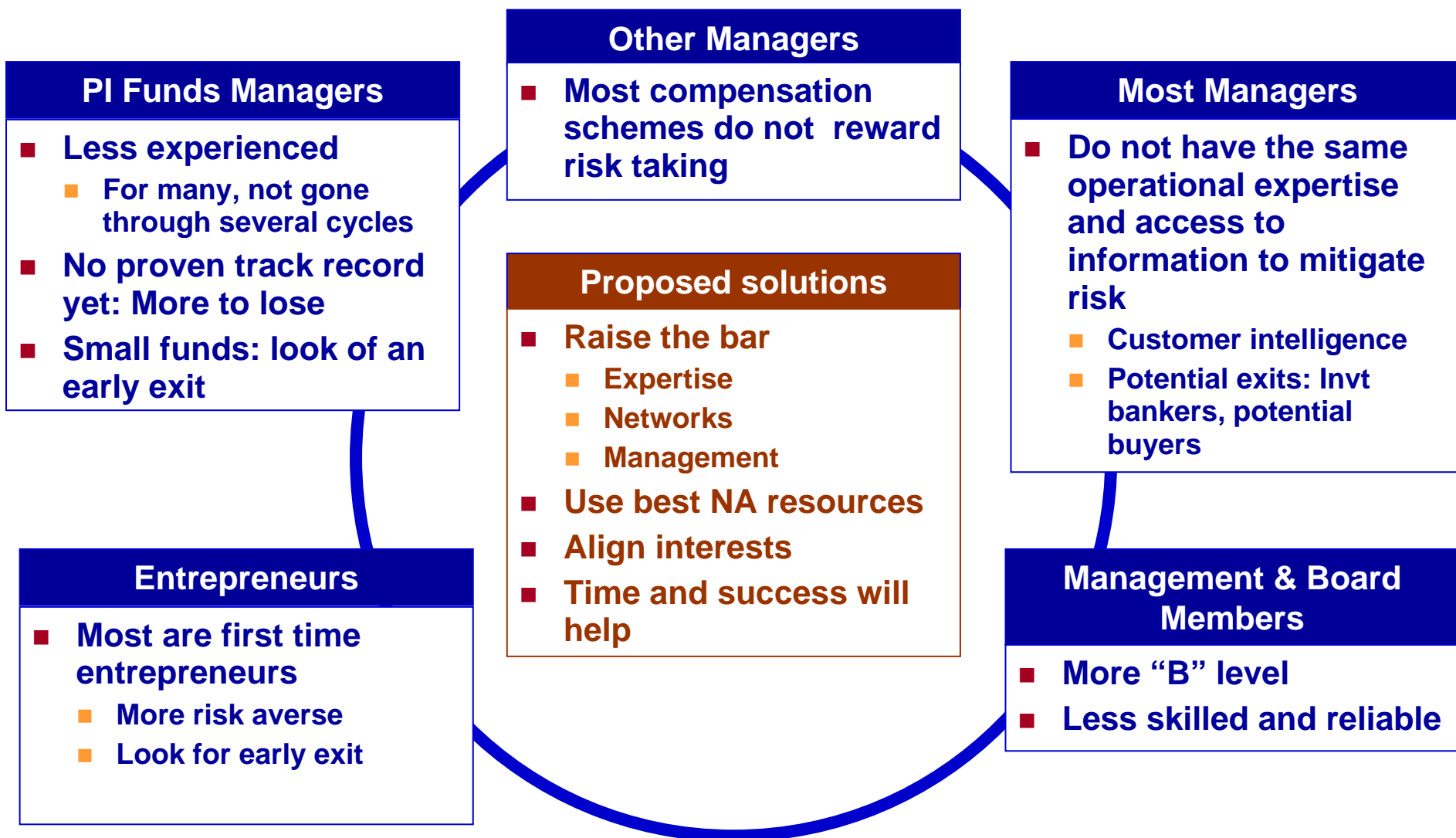
- Fund larger funds
- Take more risk
- Concentrate, fully fund and build winners
- Revisit the positioning of non PI funds
- Attract good US funds

Lack of later stage money?

- PI funds too small
- Other funds:
 - Less equipped to take the lead
 - For some: not in their mission
- US Funds
 - Need to build the company to attract good ones

A more risk averse ecosystem than in the US

Why? (Details)



Limits the amount of money by company

■ Impact on returns

- Limits the amount of money invested in big winners and the ownership at exit
- Look for early exits with lower multiples

■ Impact on the investee

- Look for early exit
- Implies large syndicates: takes longer, more difficult to manage

Limits the resources of the team

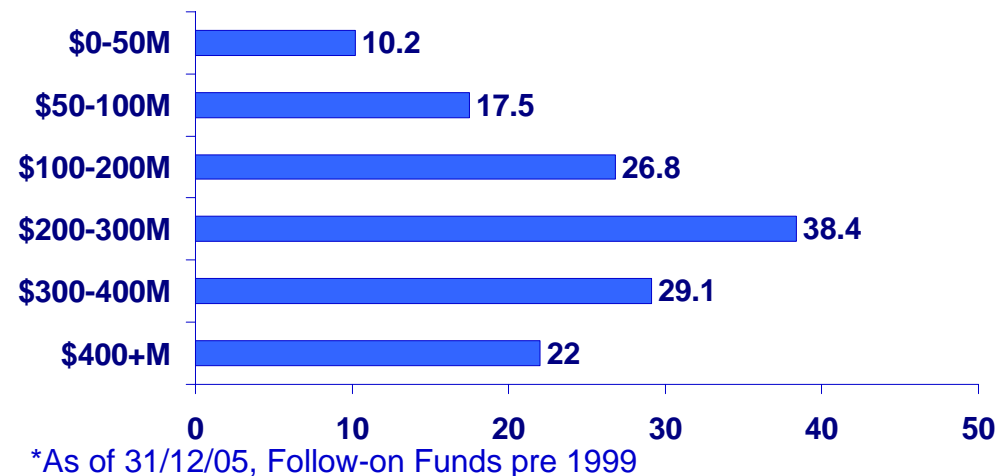
- Expertise
- Networks

Fund larger funds

- GPs: Present stronger teams
- LPs: Develop skills to select emerging managers, be selective and take larger bets
- Enlarge the base of Canadian LPs committed to VC
- Unite forces – GPs and LPs – to raise money outside Canada

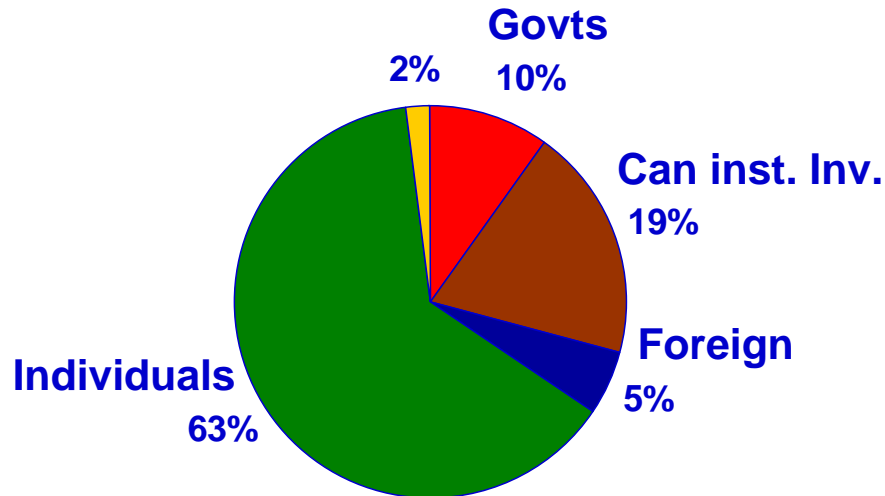
In the US, over the long term, highest returns are with \$200-300M funds
(Follow-on pre 1999 funds to control for the first time fund and J curve effects)

US 20 Year Horizon returns by size*

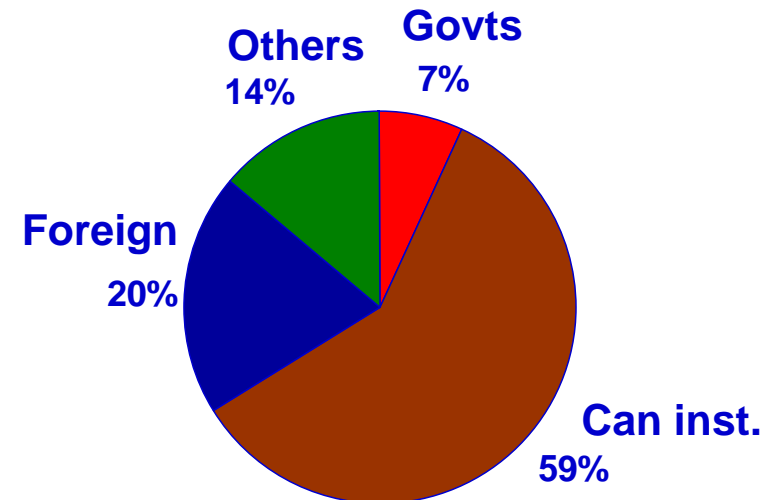


Present financing structure by source of funds (2002-2005)

All Funds



PI Funds



- It would not be wise to advise Canadian institutional investors to invest more than 15-25% of their Private Equity allocation in Canada
- Therefore, all things being equal, they will not finance more than 20-30% of our industry (their outflow should be compensated by foreign inflows or other sources)

- If the financing by individuals (LSVCCs) were to decline and PI funds to take more space, their increased funding would have to come from :
 - Foreign sources
 - Governments (?)
 - and (to a lesser extent) from an enlargement of the Canadian institutional investors base

Funds raised by type of funds (2002-2005)



- **Non PI funds: Represent a very important source of \$**
- **Most large funds are non PI funds**
- **Overall returns are comparable to the other funds**
- **However, with nuances according to provinces and types of funds, they have:**
 - **Geographic limitations**
 - **Economic development missions which lead them to spray more than concentrate on winners**
 - **Risk averse compensation schemes**

Should they

- **Evolve towards the “ blueprint”?**
 - **Some are moving into this direction**
 - **To which extent is it possible within their existing mandate and constraints?**
- **Explicitly look for a complementary positioning?**
 - **Which some funds are already doing**

Exiting with lower valuations

Why?

Why?	Proposed Solutions	Obstacles
<ul style="list-style-type: none"> ■ High exit values are linked to : <ul style="list-style-type: none"> ■ NASDAQ ■ Interesting a global buyer ■ Building this requires: <ul style="list-style-type: none"> ■ Money and risk taking ■ Talented management and board ■ Access to NA/global customers and exits ■ Depending on sector, some of these resources are not yet available in Canada 	<ul style="list-style-type: none"> ■ Adopt NA standards in our practices <ul style="list-style-type: none"> ■ Managers' profile ■ Risk taking ■ More demanding ■ Company building ■ Access best NA resources <ul style="list-style-type: none"> ■ Attract 1st tier VC funds ■ Attract US management: mixed results ■ Move part of the company to the US: better track record 	<ul style="list-style-type: none"> ■ Embracing a NA scope is not yet totally mainstream in the Canadian VC industry (as it is in Israel) ■ Credibility needed to attract best NA resources ■ Fiscal barriers ■ Fund's geographic limitations ■ Particularities of the Canadian VC industry

- **Build strong GPs**
 - Experienced managers
 - Operating experience
- **Improve the allocation of money to GPs**
 - Direct the money to performing managers
 - Both new funds and re-ups
 - Both PI and Evergreens
 - Fund larger funds: Canadian and Foreign LPs
- **Build strong companies**
 - Invest larger amounts and take more risk
 - Bring in best North American Resources
 - “A” management teams
- **Focus on winners and exits – large size and short time**
 - Cut off non performing companies quickly
 - Funding size comparable to US companies
- **Raise the bar at all levels – adopt best practices in all areas**

There is a lot to be done

However our industry is already moving in the right direction

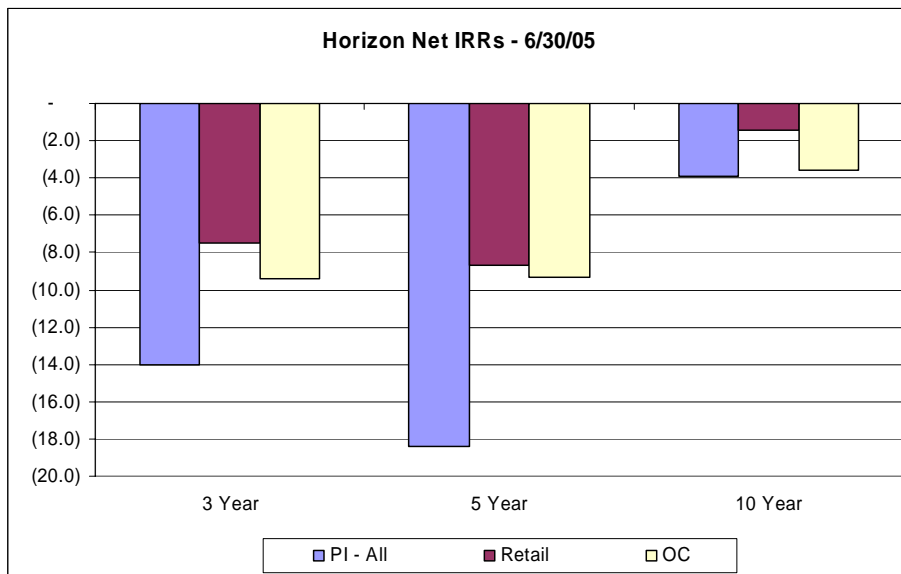
- **In a little more than a decade a sizable VC industry has been built**
- **There are performing managers and profitable deals in Canada**
- **Canada is recognized as a low cost high quality development location and an underserved, under priced and very capital efficient VC market which has attracted many foreign investors**
- **Some Canadian investing teams are gaining credibility in the US**
- **The “blueprint” is now mainstream**
- **The NA paradigm is progressing among Canadian VC managers, LPs and government officials**
 - **The question of fiscal barriers is high on the agenda**
 - **There is a learning curve in collaborating with US resources**
- **There is a dramatic change in Quebec to make the province more open to PI funds and North American resources**
- **CVCA Institutional Committee is working to enlarge the base of Canadian institutional investors and attract foreign LPs**

ANNEX : DETAILS ON PI FUNDS PERFORMANCE

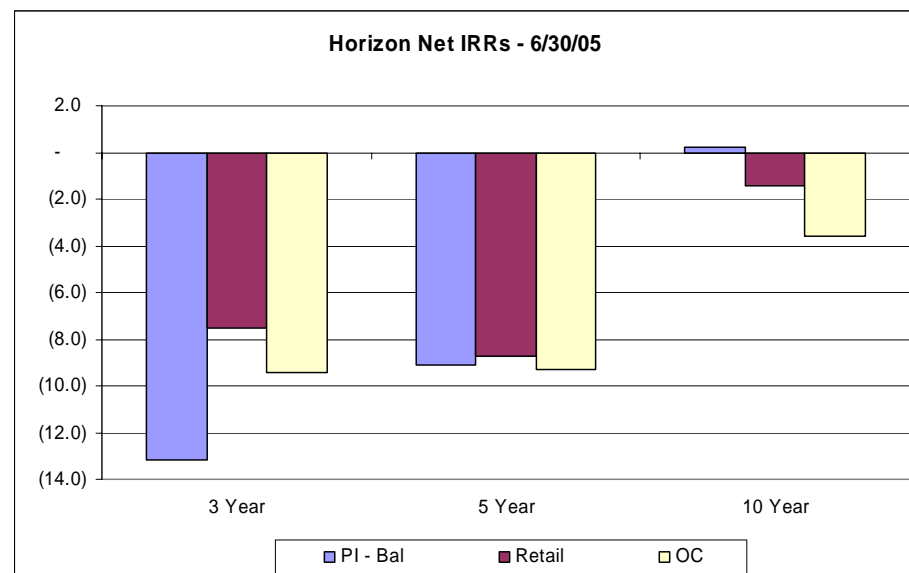
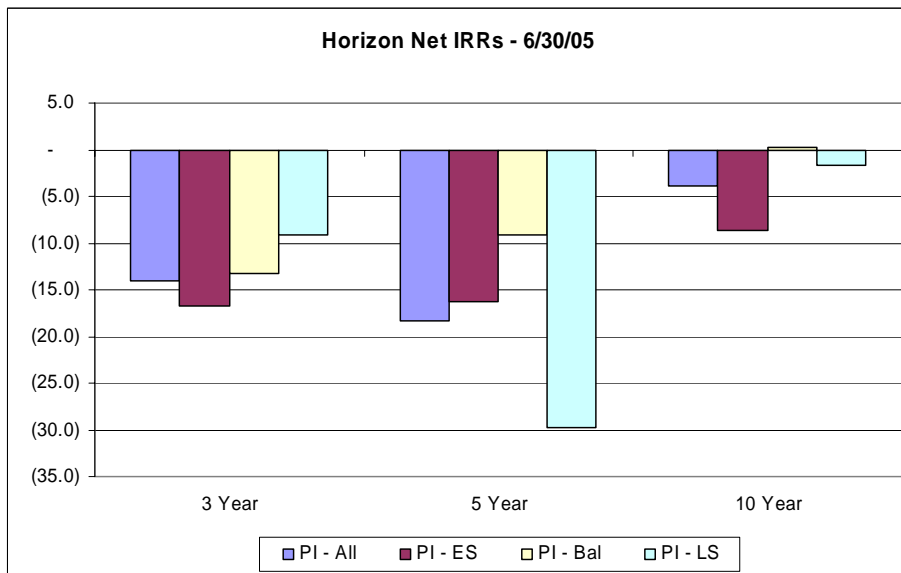


- **Overall PI Funds tend to be lower than the rest**
- **This is mainly due to seed and early stage funds**
 - On a 10 year horizon, PI balanced funds perform slightly better than the Retail and OC funds
- **The lower limit of the PI first quartile slightly over-performs the other type of funds**
- **Timing is less favourable for PI funds. Only 28 % of PI funds (38 % of \$) were raised before 1999 vs 50 % and 44 % for all funds**
- **Data suggests that the beginning of good selection process is at work with PI funds**
 - The spread for PI funds is higher than other funds and similar to the US
 - PI funds show positive asymmetry to the upper quartile – like the US
 - Contrary to the other types of funds, the pooled average of PI funds is slightly above the median
 - However, the money is not yet directed to the first quartiles (see slide 37)

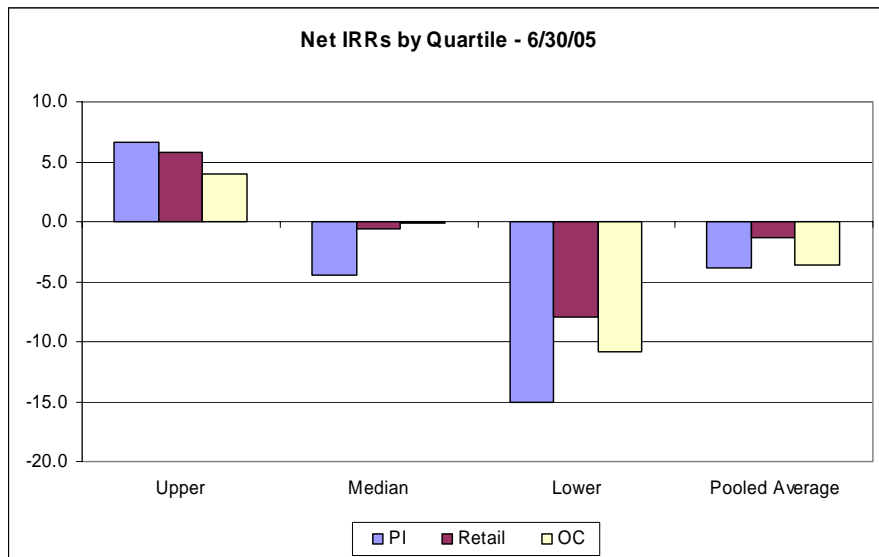
Retail Outperforms on Average, PI Depends on Stage



- Retail has highest long-term avg
- PI depends on stage
 - Early Stage lowest
 - Balanced highest
- PI Balanced highest overall and only positive return

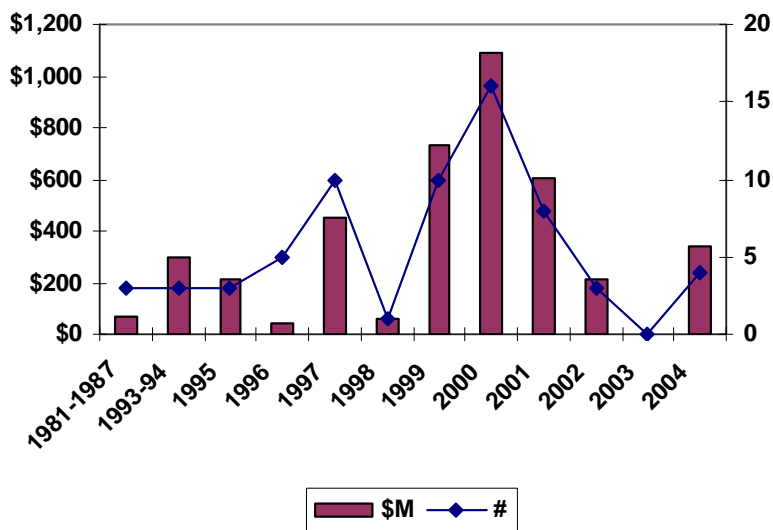


PI has Highest Top Quartile Timing less favourable for PI Funds

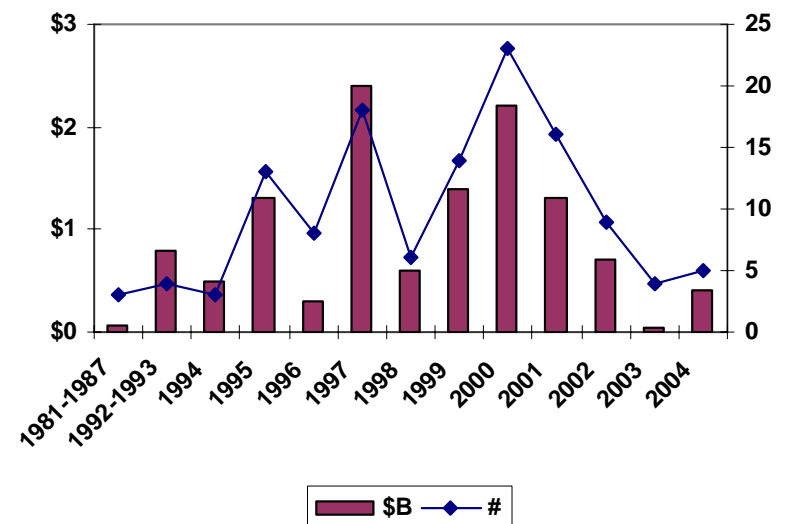


- PI has highest top quartile and lowest bottom quartile
- Timing is less favourable for PI funds : more funds raised after 1998 which is the last positive vintage in the US

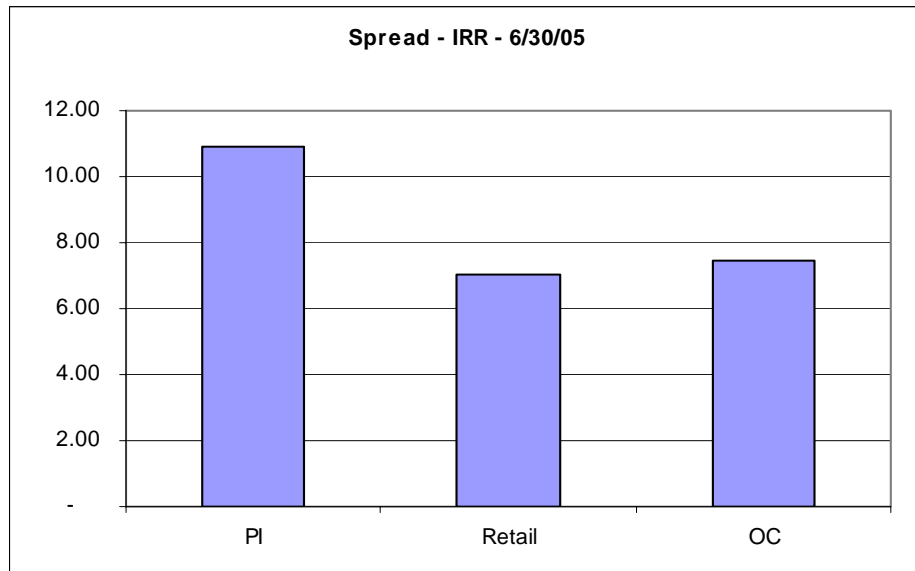
PI Funds Sample by year



Total Canadian Sample by year

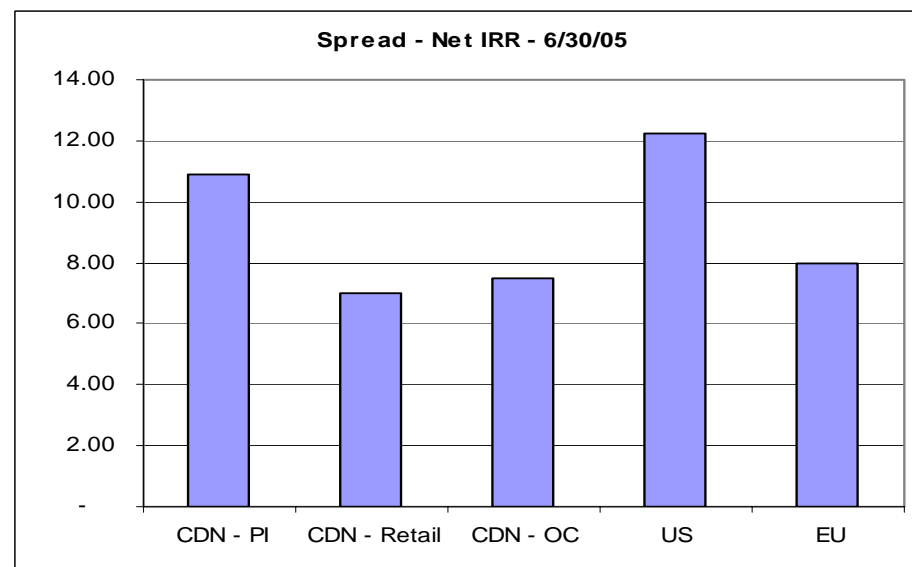


PI Spread Largest in Canada and Most Similar to US

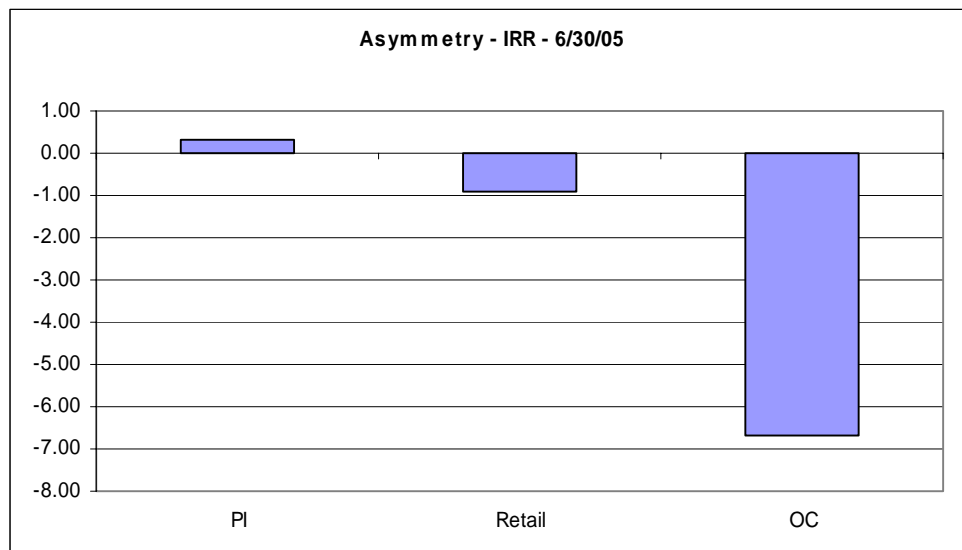


- Spread demonstrates the variation between funds
- US has high spread which shows big difference between the quartiles
- Canadian PI funds have significantly higher spread
 - Comparable to US funds
 - Manager has significant impact on IRR
- Retail has the lowest spread
 - Less variation on returns by manager

Spread is the average amount the upper and lower quartile boundaries differ from the average – similar to std deviation

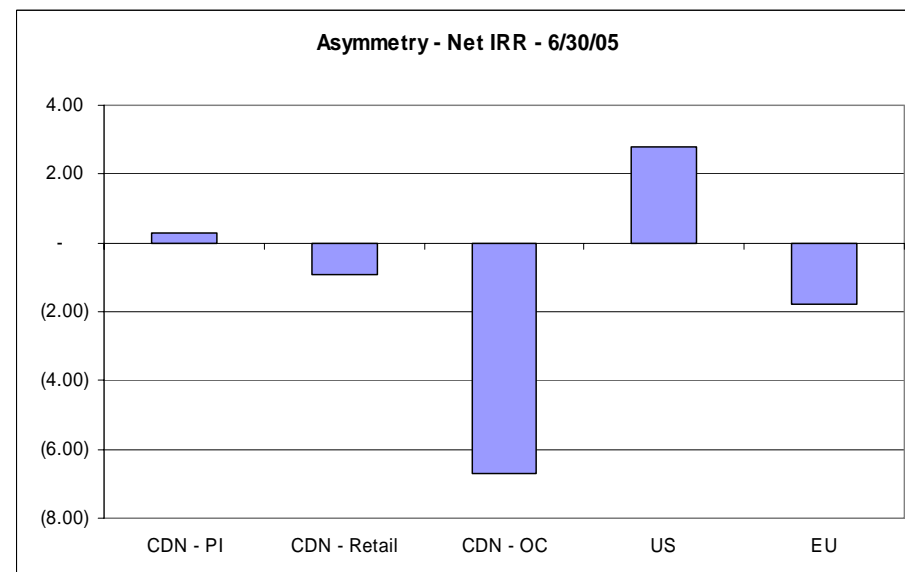


PI Only Positive Asymmetry in Canada and Most Similar to US

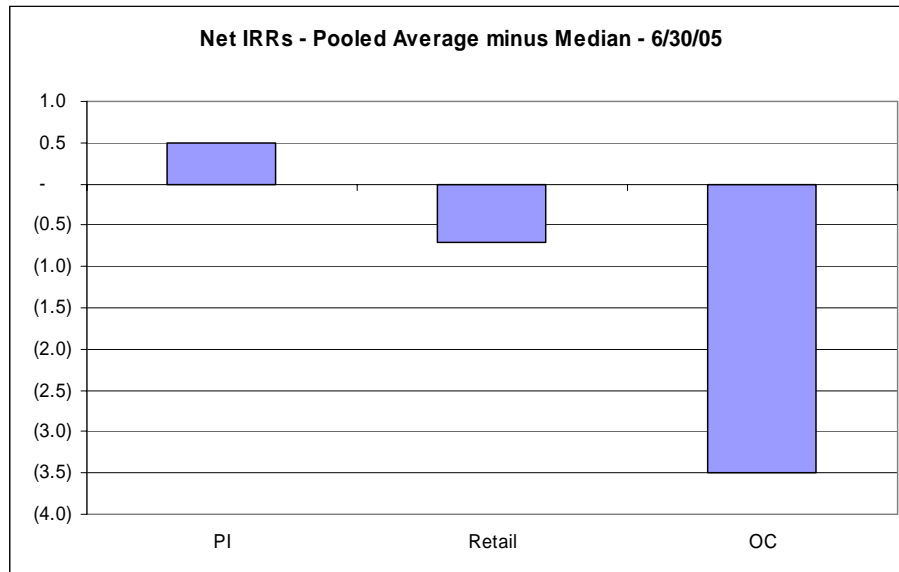


- Asymmetry shows whether the upper quartile is further out from the median than the lower quartile
- Positive asymmetry suggests super performing funds exist in sample
- US has high asymmetry which suggests better top quartile returns
- Canadian PI funds have higher asymmetry than other Canadian types
 - Only positive asymmetry other than US
 - Better returns above the top quartile boundary
- OC has the lowest asymmetry
- EU has negative asymmetry

Asymmetry is the difference between the amount the upper and lower quartile boundaries differ from the average. Positive asymmetry means the distance from the upper quartile boundary to the median is greater than the distance from the median to the lower quartile boundary



PI Funds Weighted To Better Performing Managers



- For PI funds, the pooled average is above the median
 - This is due to the positive asymmetry
 - Despite the fact that first quartiles are not yet the largest (see slide 37)

- Positive value indicates Pooled Average above the Median
- Negative value indicates Pooled Average below the Median

- Robin Louis – Ventures West (Chair)
- Stuart Angus – McLean Watson
- Jim Charlton – Growthworks
- David Folk – Jefferson Partners
- Bernard Hamel – GTI Capital
- David McDonald – Deloitte & Touche
- Bernard Paradis – Desjardins Capital de risque

Director of the project

Gilles Duruflé

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Collaborators

David McIntyre – Ventures West

Gabriel Youssef – Consultant (Montreal)

Biography

Dr Gilles Duruflé

Dr Gilles Duruflé is presently an independent consultant advising venture capital and private equity funds, institutional investors and governments.

He was until 2004 Senior Partner at CDP Capital Technology Ventures, the venture capital subsidiary of the Caisse de dépôt et placement du Québec, in charge of the Funds of Funds portfolio, investing in North American and European. In parallel, he has been in charge of the fund raising process in Canada and Europe and of the service to investors for CDP Capital Technology Ventures US Fund 2002, a venture capital fund investing in the US and managed by CDP Capital Technology Ventures.

He was previously Head of strategic studies at the Caisse de dépôt et placement du Québec. From 1979 to 1991, he worked as senior consultant in strategic consulting firms in the CDC Group (Caisse des dépôts et consignations, Paris) in Europe and North America.

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.