NOVARTIS VENTURE FUND

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The Novartis Venture Fund
- A Model Corporate VC

Innovation
Patient Benefit
Superior Returns

http://www.venturefund.novartis.com

Does One Need a Corporate Venture Fund?

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Not really.

Is It Good to Have One?

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YES !

SO WHY??

Benefits of a Corporate Venture Fund

... Many Pharma/Biotech Have Had or Recently Established One

- **Innovation**
  - Early and forward looking – trends and realities of the future
  - Novel, sometimes provoking ideas, concepts and areas
  - Increasing scope and reach of Research and BD&L
- **Investment**
  - Contrarian approach (when others are put off)
  - Early stage (when nobody thinks of it or takes it seriously)
- **Industry / Strategic**
  - Investing in areas early that become the hot topics of the entire industry maximizes both financial and strategic return
  - Successfully creating these companies will help all of us at the end of the day: Happy investors and buyers
  - Stabilizing effect of corporate VCs in current environment

Novartis Venture Fund – Innovative and Successful

A Decade of Success

- 12+ years as a corporate venture capital firm; inauguration at the formation of Novartis
- CoC & IRR based on realized exits and losses since inception highly competitive (upper quartile)
- Returns driven by forward looking approach in Bio- and Medtech, independent decision making out of Corporate Finance and active management (BoD seat)

Novartis Venture Funds

- Two capital choices
  - Traditional Venture Fund
  - Innovative Option Fund (2007)
- ~60 private companies
- ~3 public companies
- 5 LPs commitments
- ~$500+200m capital base
- ~$10-20m per investment
- 8 MDs in Cambridge/US & Basel/CH

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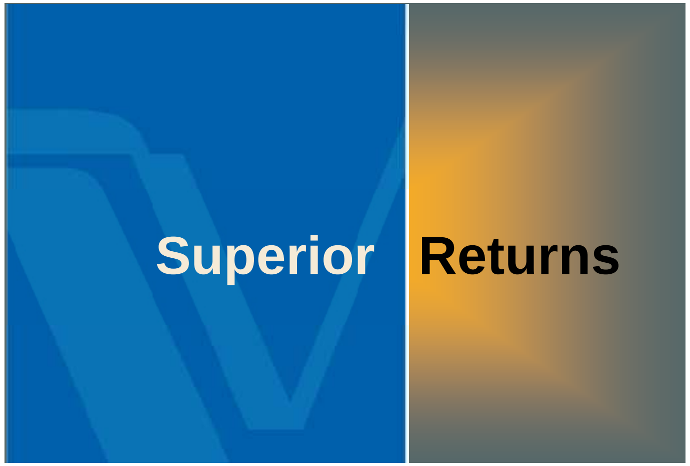
Standard Pillars for Success: Not What But How!

Innovation:

Science, area, IP, MoA

Management:

Team, syndicate, BoD



Patient benefit:

Need, clinical impact

Capital efficiency:

Valuation, cost to exit, exit potential

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Typical Investment Process

- Screen ~1000 company proposals per year: triage early
- Conclude 4+ investments/year
- Multi-stage due diligence process with investment decision vested in the Novartis VC team and external experts; reviewed by proprietary and independent Scientific Advisory Board (SAB)
- (Co-) Lead in strong syndicate; BoD seat
- New investments 15-20% stake, diluted in later rounds
- Follow-on investments dependent on operational performance and financial discipline
- NVF is a long-term partner and enabler in developing the company and finding profitable exit

What Differentiates Us?

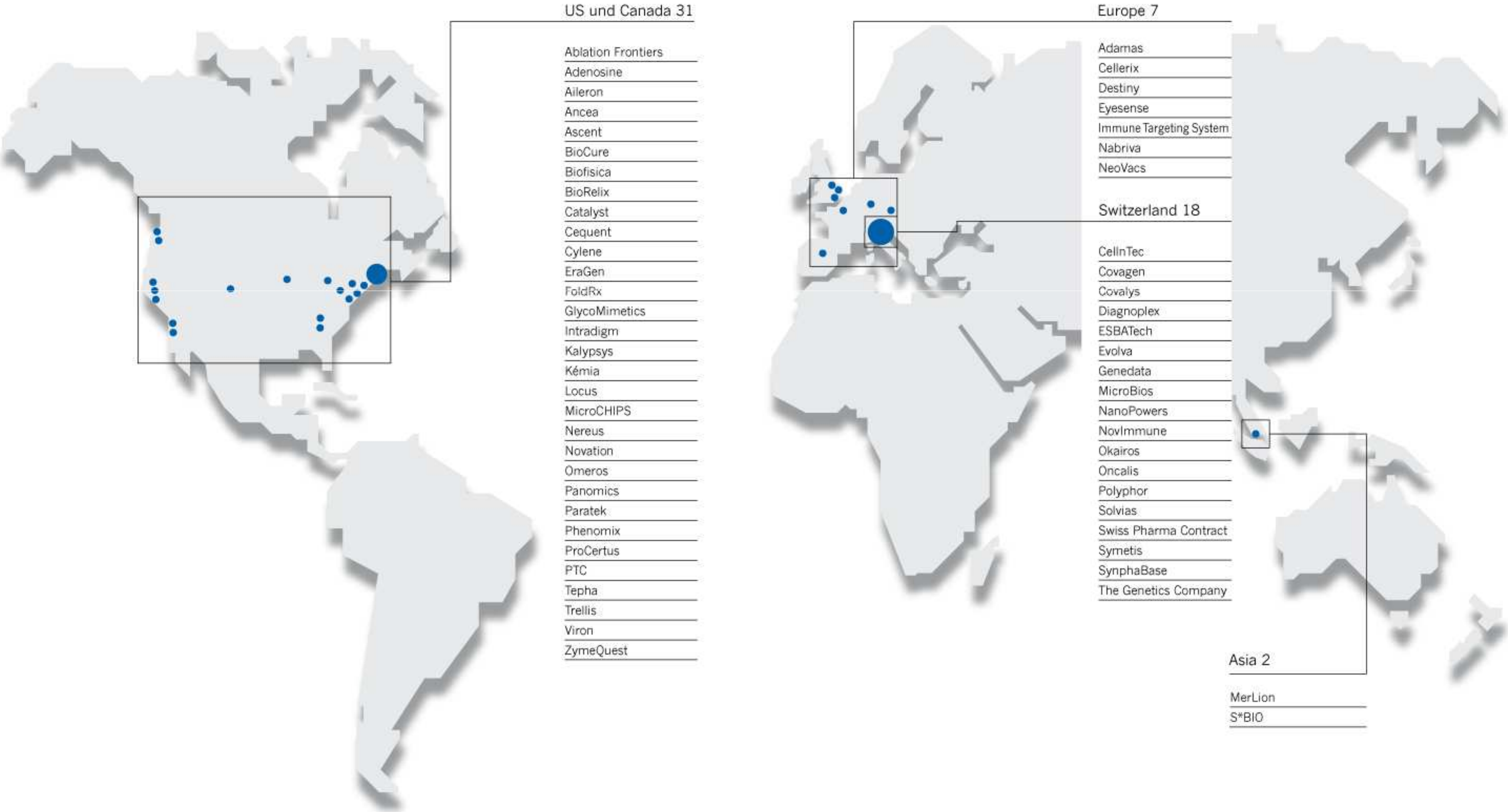
- **Financial return and strategic benefit oriented**
  - Working out of Corporate Finance with well established return goal
  - Different fund concepts
  - Early stage and breakthrough innovation focus

- **Independence from parent organization**
  - DD and decision embedded in management team
  - Proprietary and independent SAB with final decision
  - Not a focus on strategic alignment

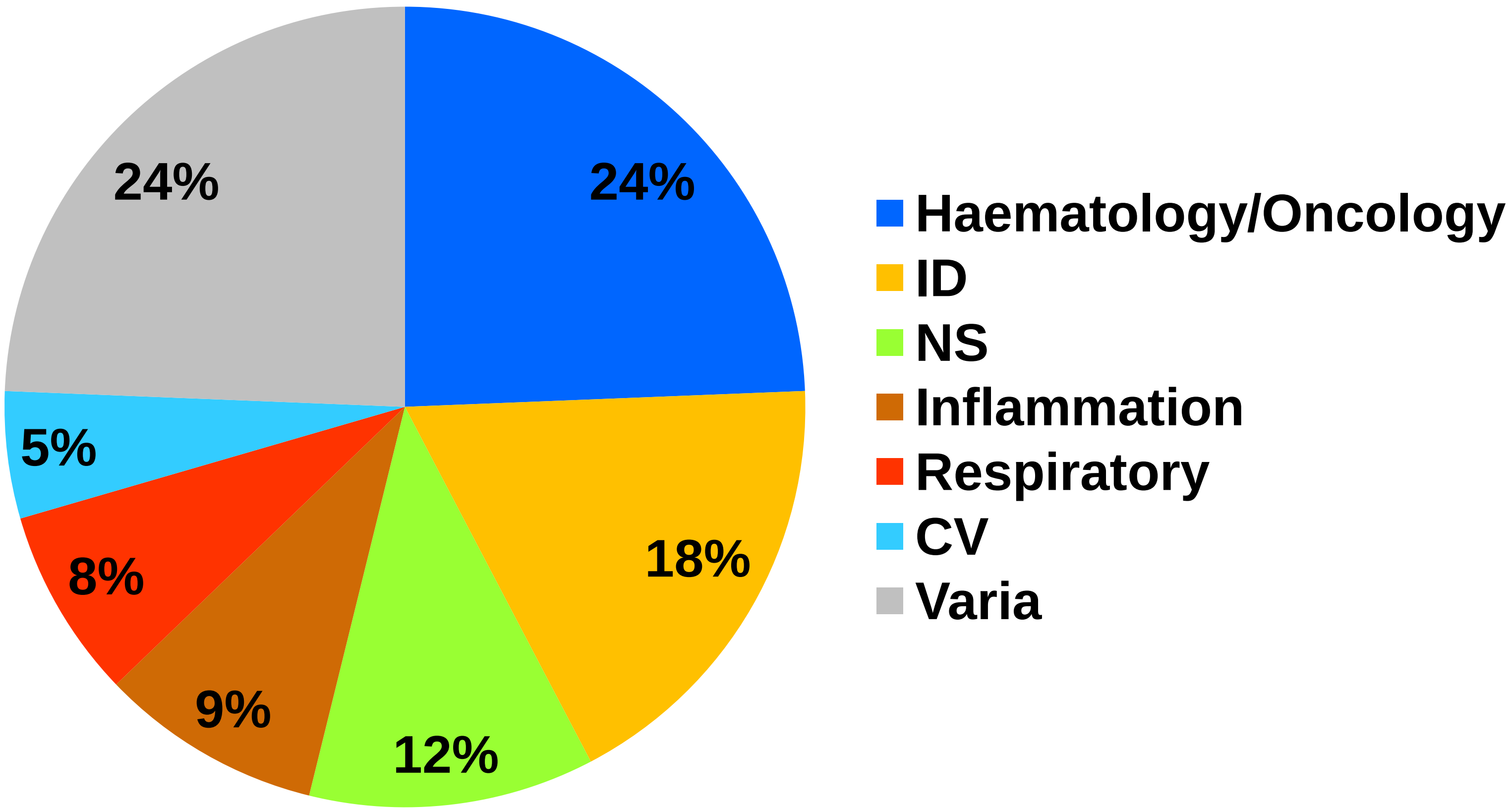
- **Superior returns**
  - CoC and IRR above average and highly competitive

- **Image and reputation**
  - Top Corporate VC

~70% of Investment in the US (End of 2009)



Around 150 Programs:
A (Midsized) Pharma Company (End of 2009)



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Two Choices for Capital

Novartis Venture Fund

- 12+ year old evergreen fund
- Focus is on early stage (pre-IND, Series A) but stage agnostic
- Biotech (60% with a strong biologics contribution) and Medtech (10+%)
- Typical total commitment $10-20m

Novartis Option Fund

- Established in 2007
- Focus is on seed stage and biotech for initial investment
- Equity plus non-dilutive option cash fee
- First investment typically $2-6m plus option fee
- Only companies with broad technology base to allow limited option

Key Learning for Successful Investments

- **Innovation & patient /physician benefit**
  - Drive attractiveness of business
- **Team continuity & learning**
  - Critical to long term success
- **Relationship & reputation**
  - Invaluable to access deals
- **Board representation**
  - Important to influence company development
- **Syndicate quality and financial reserves**
  - Enable strategic and operational flexibility
- **Valuation and capital efficiency to exit**
  - Determine return
- **The exit in mind**
  - Commercially viable products, exciting to the industry

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Exits: We Invest in Companies Everyone Finds Attractive & We Generate Substantial Returns

Acquisitions

FoldRx	- Pfizer
Ablation F.	- Medtronic
Visiogen	- Abbott
Swiss Ph. C.	- Covance
Theravance	- GSK
Idenix	- Novartis
Syrrx	- Takeda
KuDOS	- AstraZeneca
Glycart	- Roche
Kinetix	- Amgen

IPOs

- Xenoport
- Eyetech
- Speedel
- Cytos
- Idenix
- Sirtris
- Acorda

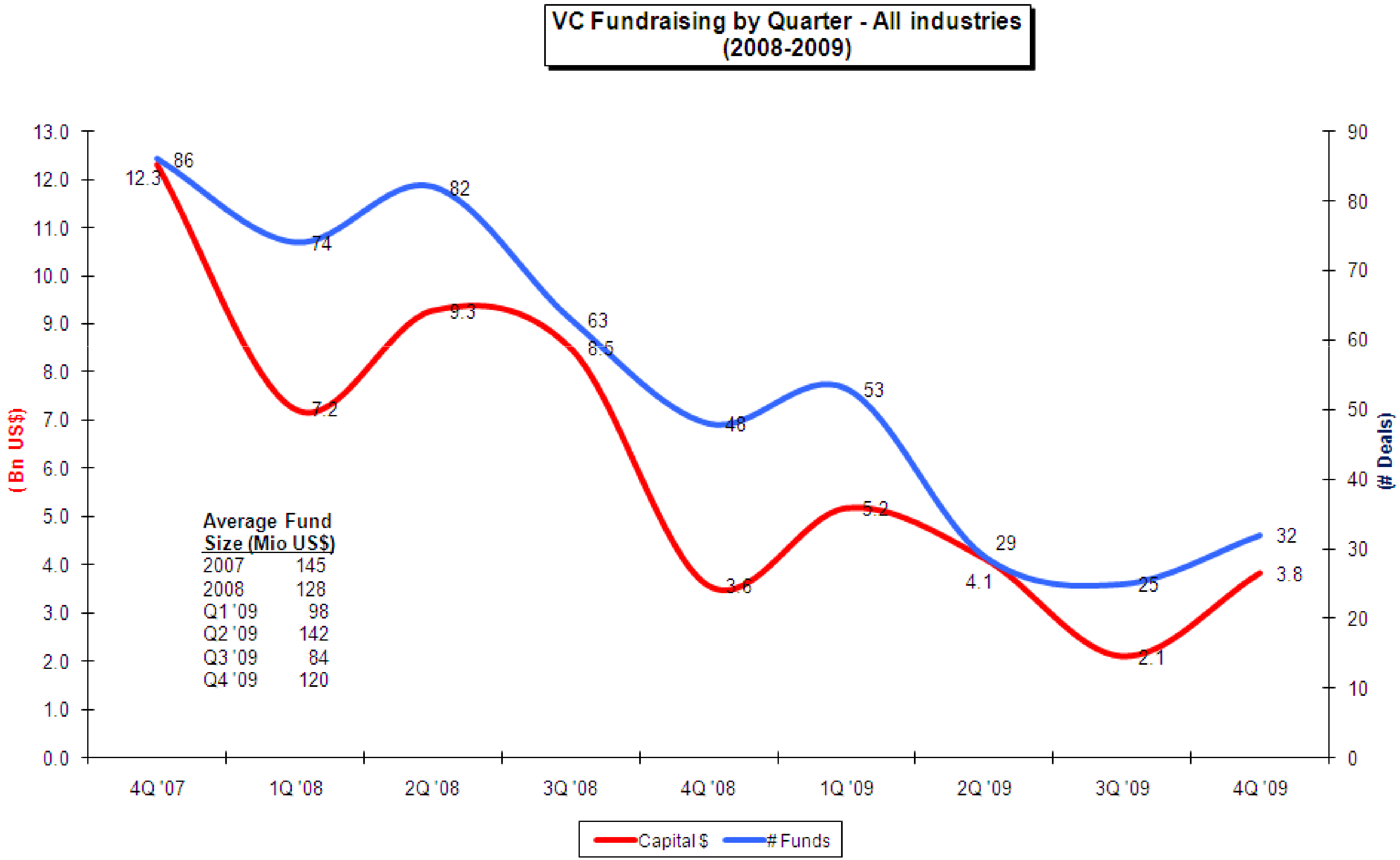
The Current Challenges for VCs

- **The VC world is becoming very competitive**
  - New investors are highly selective and diligence levels have grown
  - Fierce competition for the best opportunity/risk-mitigated companies
  - VCs without critical mass get squeezed out of deals and the market

- **More quality resources required to exit**
  - Higher funding requirements, delayed returns, reducing both CoC and IRR
  - Need to be an active investor to drive focus and keep companies funded is paramount
  - Everybody looks for top management, syndicates, and BoDs

- **The market environment is harsh**
  - No IPOs; immense regulatory and pharma demands
  - More and more back loaded deals; low up-fronts and minimized exit values; shift from M&A to BD&L

Fund Raising Going Down;
Same for VC Investments (follow-ons more important than new investments)



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M&A Increasingly Unattractive; Same for BD&L

- **M&A for PE/VC backed companies**

# Deals	US	EU	Other	WW
2007	17	15	1	33
2008	16	9	2	27
2009	10	8	1	19

- **Upfront as % of Total M&A Value**

($ bn)	Up-Front	Total Value	Up-Front %
2007	6.4	6.8	94%
2008	2.2	3.1	70%
2009	2.2	5.9	45%

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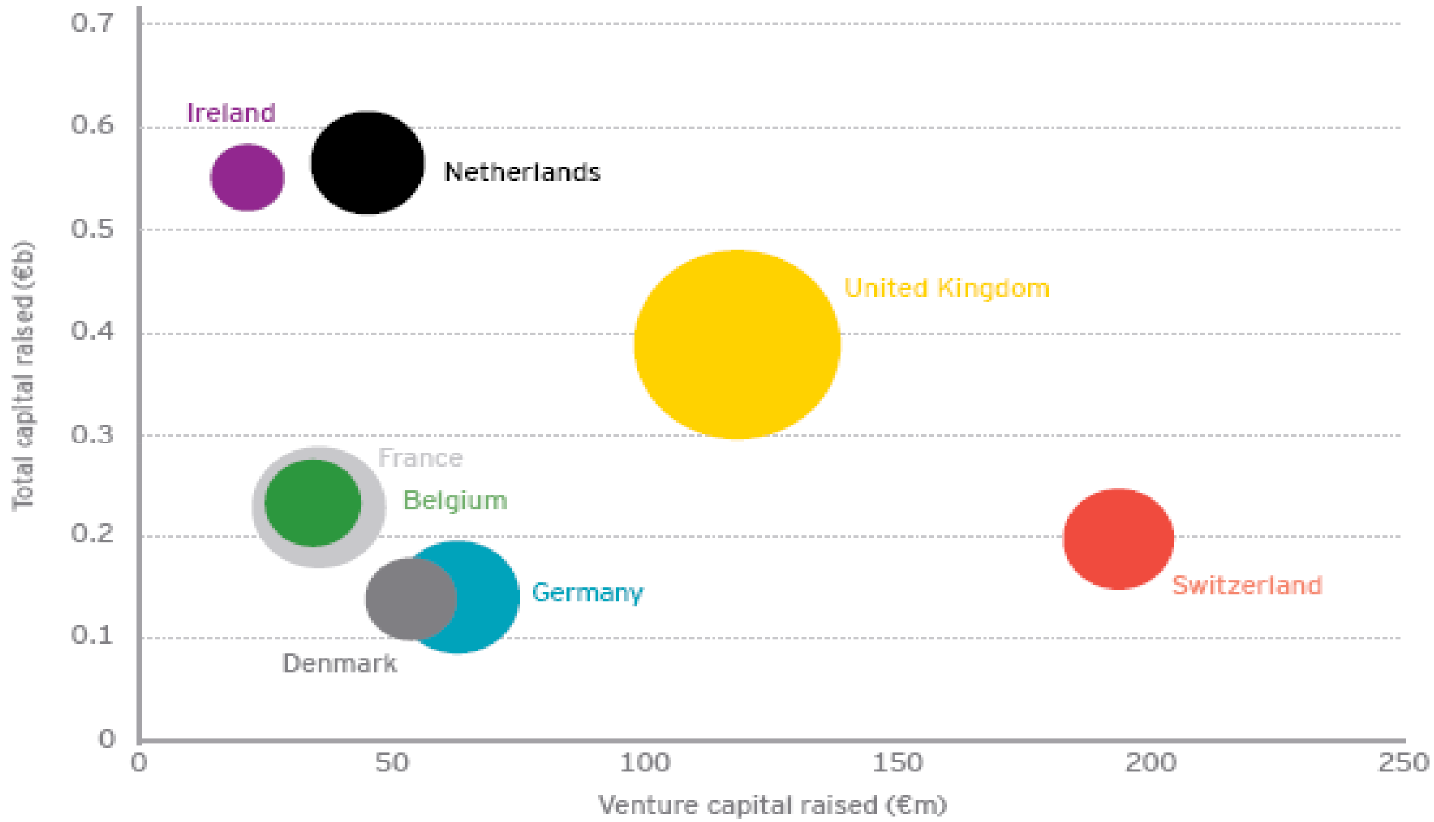
What Does It Mean? – Still a Time for VCs?

- **Company value $10m (IND stage)**
- **Investment to exit at Phase IIa: $50m**
- **Company value: $10m+$50m+15% options = $69m**
- **Exit value: $250m = $50m up-front, $200m back loaded milestones**
- **RoI/CoC: $250/69m = 3.6x – good, very good!**

<u>However, not so quick:</u>

- **Secure CoC: $50/69m = 0.7x – bad!**
- **Risk adjusted CoC: ($50m + $200m*10%)/69m = 1.0x – still not good enough!**

Just Hard or Impossible to Invest in Europe!?



Source: Ernst & Young, BioCentury and VentureSource
Size of bubbles shows number of financings per country

- **Capital raised in the EU in 2009 is only 15% of the US!**
- **E.g. Germany, given its size and pharma history a far cry from the UK and CH - VC being neglected**

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