TVM | Capital

The do's and don'ts when talking to representatives of Venture Capital Funds

New concepts for Venture Capital backed companies"

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Questions

Do you think about creating a biotech company?

How are these companies created and financed?

How do they operate?

Investment strategies in Life sciences (LS) from an investor‘s view point?

How do you address a VC company for financing?

Agenda

- TVM Capital
- Venture Capital
- The ecosystem: pharma – biotech - finance
- Investment strategies in LS
- Introduction to the “Project focused company” (PFC) model

TVM Capital – 30 years in the Business

... today a global player in life science and healthcare investments

TVM Capital History and Track Record

- A life science and healthcare investment firm with global reach
- Life science VC with offices in Montreal (HQ), Munich and in Dubai (HQ; healthcare PE for emerging markets activities)
- Numerous awards, including Red Herring Top VC list worldwide
- TVM Capital founded in Germany by Siemens AG in 1983
- From early generalist focus in the 1980s to highly focused investment strategy in IT and life science (since early 1990s), healthcare PE in emerging markets added in 2010, from 2013 onwards firm is solely focused on life science and healthcare
- Life Science
  - First LS deal: Qiagen (50x multiple on investment)
  - Total of $1.8 bn raised in seven fund generations, of which US$1.2bn for LS
  - More than 120 LS venture and growth investments, 87 total exits
  - 43 IPOs on NASDAQ, London, Frankfurt, Zurich and Vienna Exchanges, 25 significant M&A transactions
  - Life Science VC: Investing from 7th fund generation out of Montreal and Munich, 8 investment professionals, 30 portfolio companies, 30+ advisors
  - Unrivalled deal flow; about 650 deals per year reviewed

Source: TVM Capital

Agenda

Venture Capital

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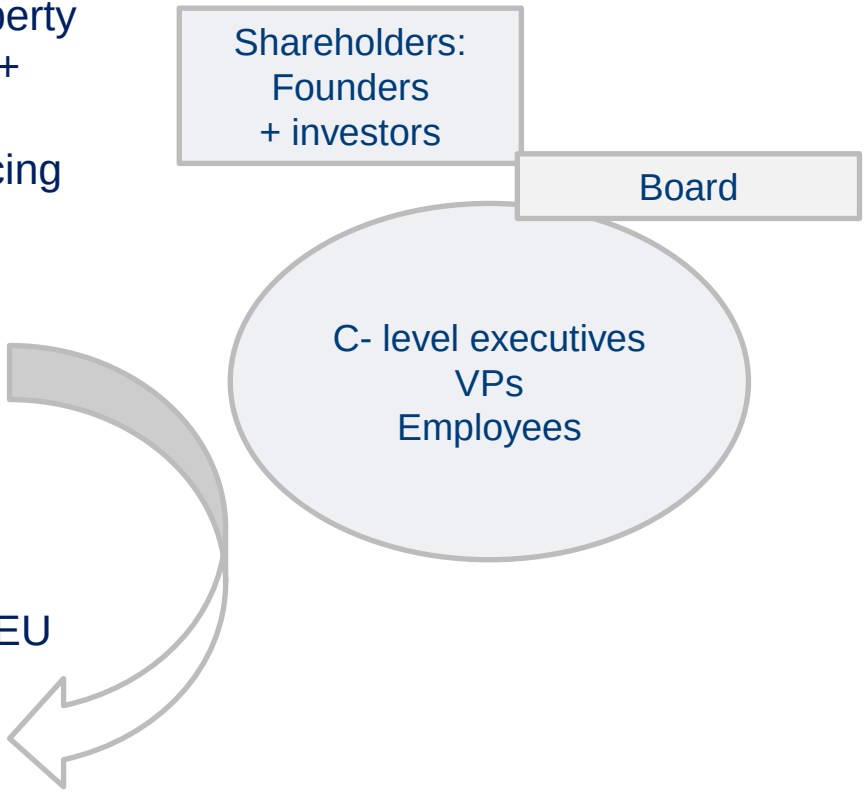
VC fundamentals: how to start?

How to start a (biotech) company?

- Business idea + intellectual property + management and work force, + **money**
- **Business model** dictates financing needs:
  - service company: less €
  - mixed models: €€
  - **development company: €€€€**

- **Sources of capital:**
  - savings
  - Business angels
  - Subsidies from government or EU
  - Corporate partners
  - **Venture capital**



Fundamentals of the VC business

< 5 Y.

Company with commercially viable technology or drug discovery project

Holding period + investment

Company revenues +/- a „derisked“ development candidate

EXIT

Public market

Big Pharma Biotech

€

6 x

₩ ₩ ₩ ₩ ₩ ₩

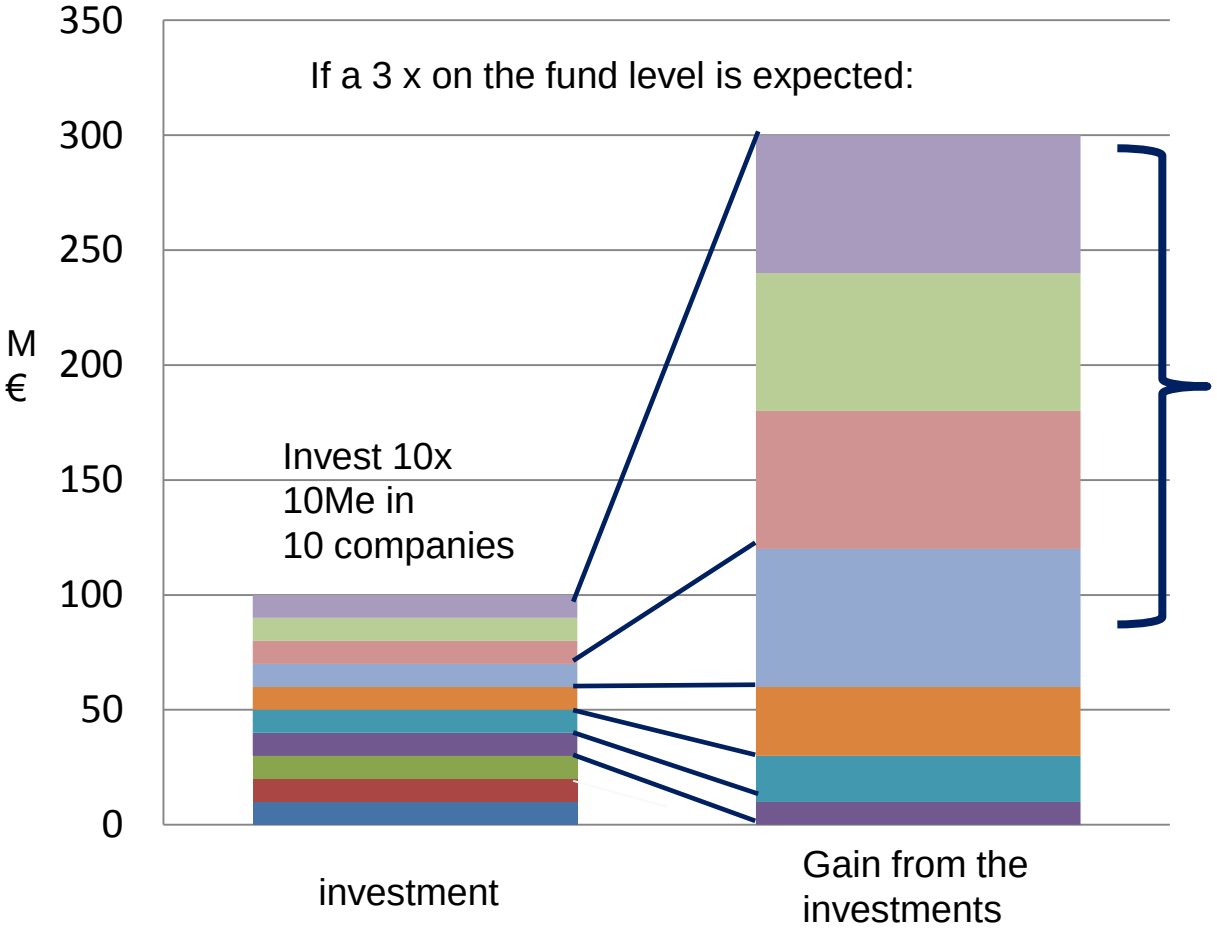
VC company

VC investor (LP)

- **Investment amount: 5 – 15 M€**
- **No of investments: 10 - 30**

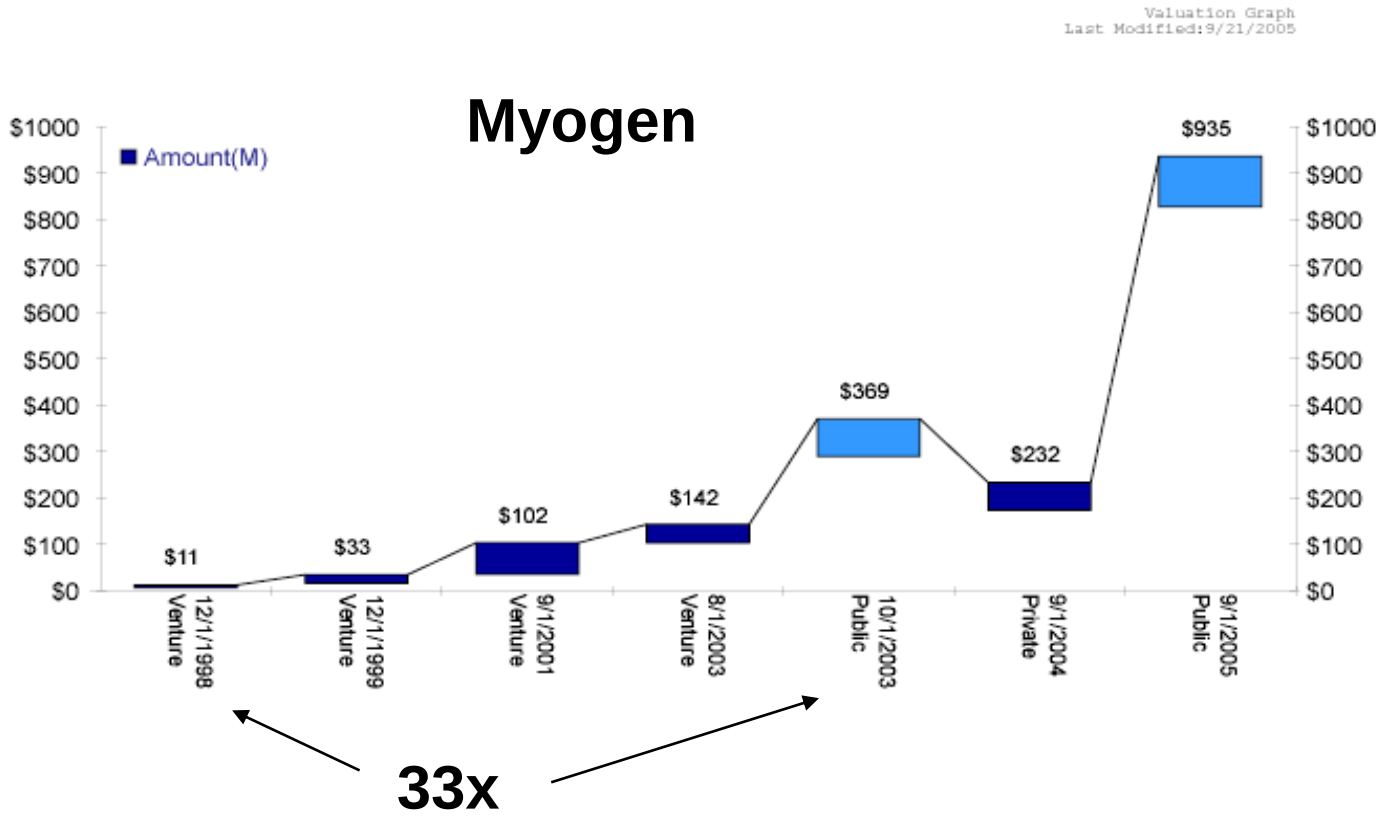
Probability of success

Business model of VC: revenue expectations

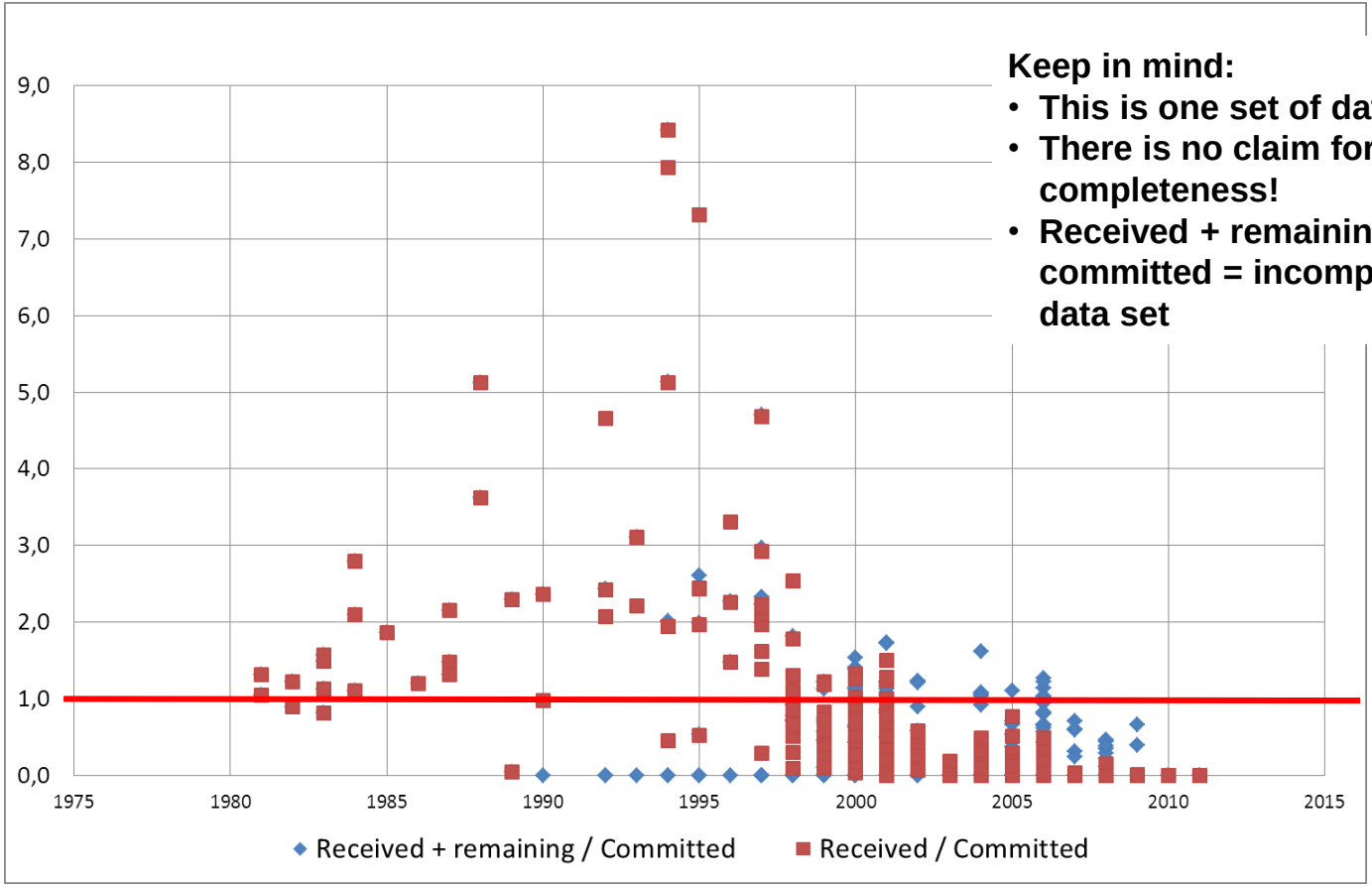


Minimum three Winners (> 5X) needed to balance non-performers and losses

Example of an „ideal“ VC investment in „biotech“



Benchmarking: „returns of >230 VC funds“ reported by US LPs

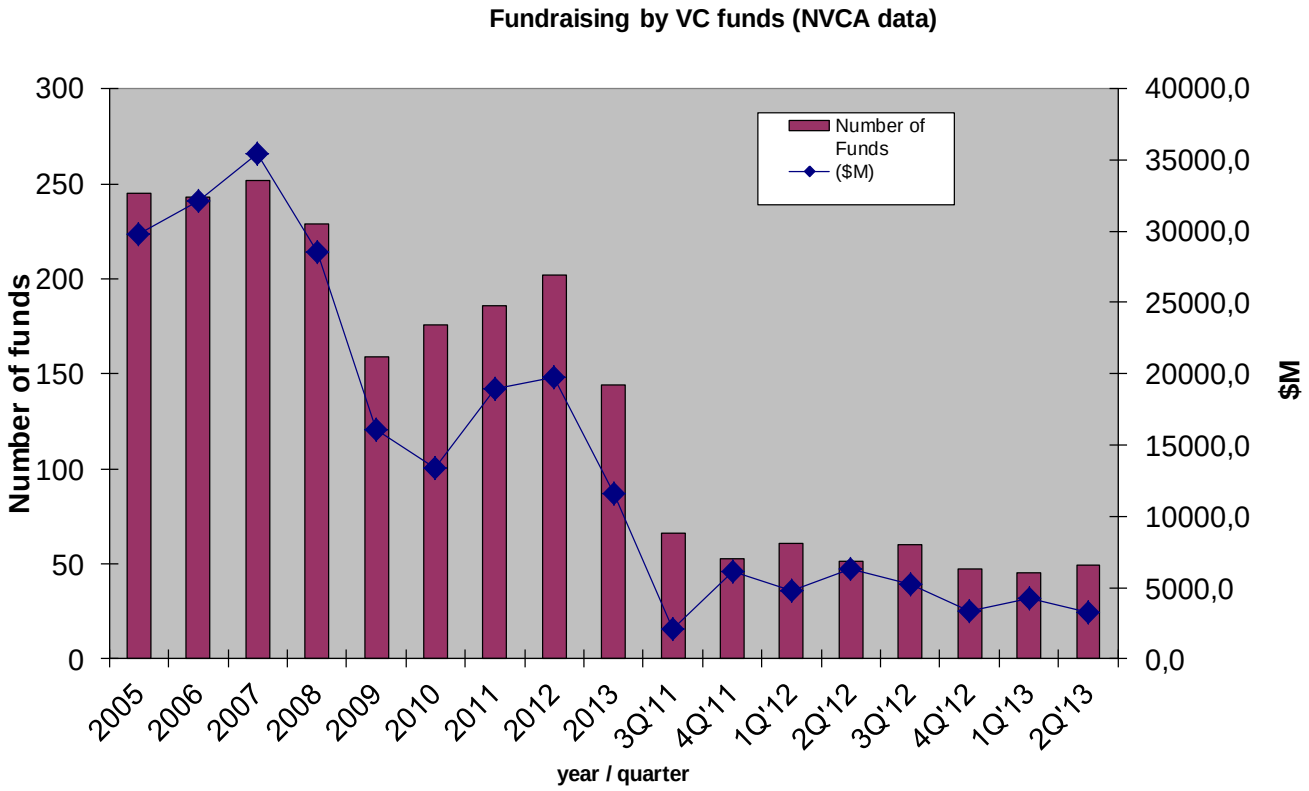


Keep in mind:

- **This is one set of data**
- **There is no claim for completeness!**
- **Received + remaining / committed = incomplete data set**

Source: http://www.sib.wa.gov/financial/pdfs/quarterly/ir093008.pdf; Calpers; SERS;

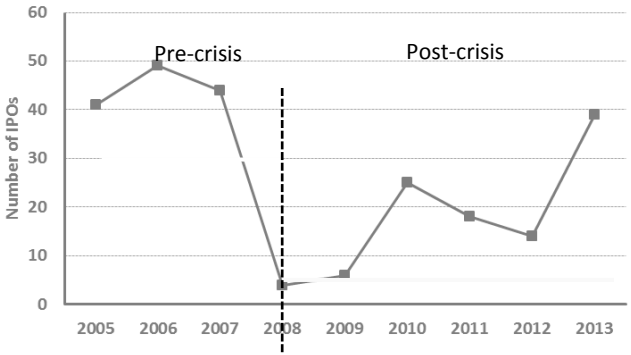
Fundraising by VC funds: stabilized!



Source: NVCA (USA)

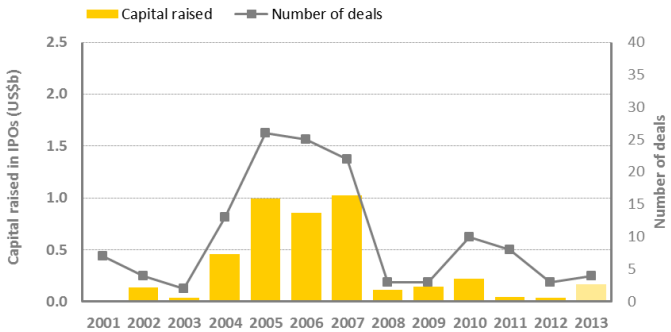
Markets out of Sync: EU versus US IPOs

Number of IPOs by year

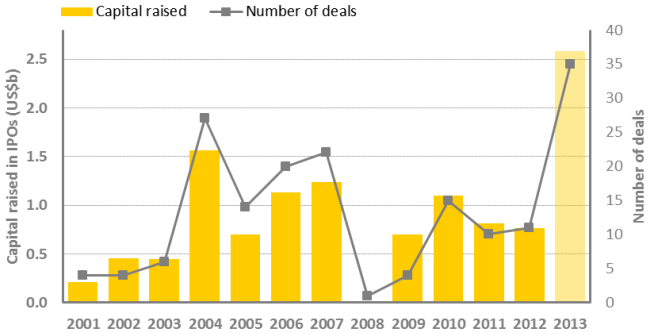


Source: Ernst & Young, Capital IQ, Biocentury, Medtrack and Venture Source. 2013 data from Elsevier Business Intelligence.

European biotechnology IPOs by year



US biotechnology IPOs by year



TVM's IPOs in 2013

- Enanta
- Bluebird Bio

Source: Ernst & Young, Capital IQ, Biocentury, Medtrack and Venture Source, Elsevier Business Intelligence.
2013 figures correspond to data available until October 31st.

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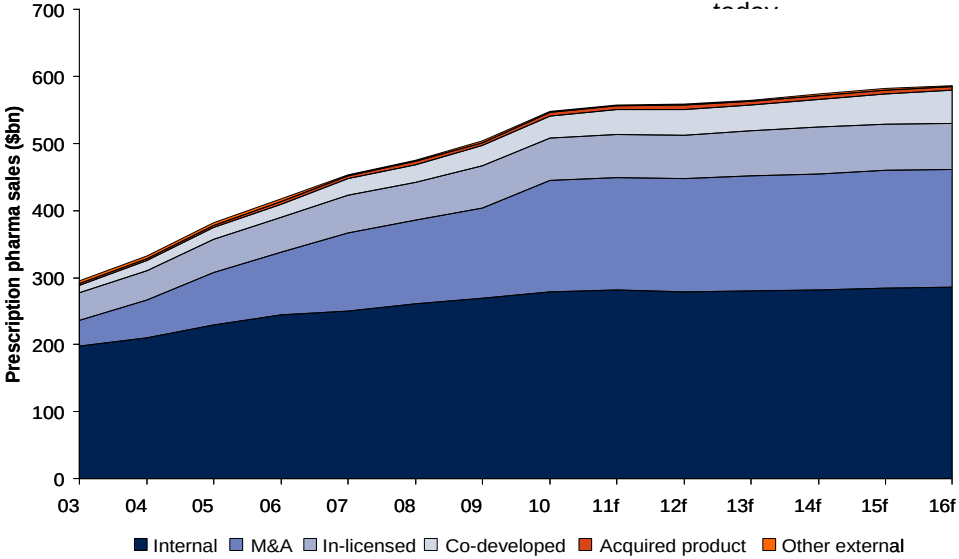
Pharma Sales: Driven by External Product Sourcing
… more than 50% expected to come from young biotech companies

Combined global sales for the top 50 pharmaceutical companies



f = Datamonitor forecast

Source of products:

- Co-development
- In-licensed
- Acquired through M&A

>50%

- Internally generated

Pharma companies will grow only through aggressive M&A and in-licensing strategies!

Source: Datamonitor, PharmaVitae Explorer, May 2012; company-reported information

Situation analysis – 2013

The fundamentals have not changed:

- **Our Customer Big Pharma aggressively looks for innovation, while**
  - facing the „three-headed monster" of **patent expiries**, **insufficient internal R&D productivity** and increasing difficult political and **regulatory environment**
  - **getting involved early through options:** early-stage option deals shift risk onto biotechs but also give access to non-dilutive capital and a clear exit perspective.
  - Preferring **license deals** instead of acquisitions
- **Our Supplier Academia**
  - continues to produce highly innovative science waiting to be translated
  - recognizes the need to take their innovation one step further to ensure successful tech transfer
- **Venture Capital**
  - has not delivered (yet) as an industry according to the expectations raised 10 years ago
  - has to re-focus and adapt to the changing environment
  - th**e recent IPO window might help to change this!**

New business and financing models are needed !

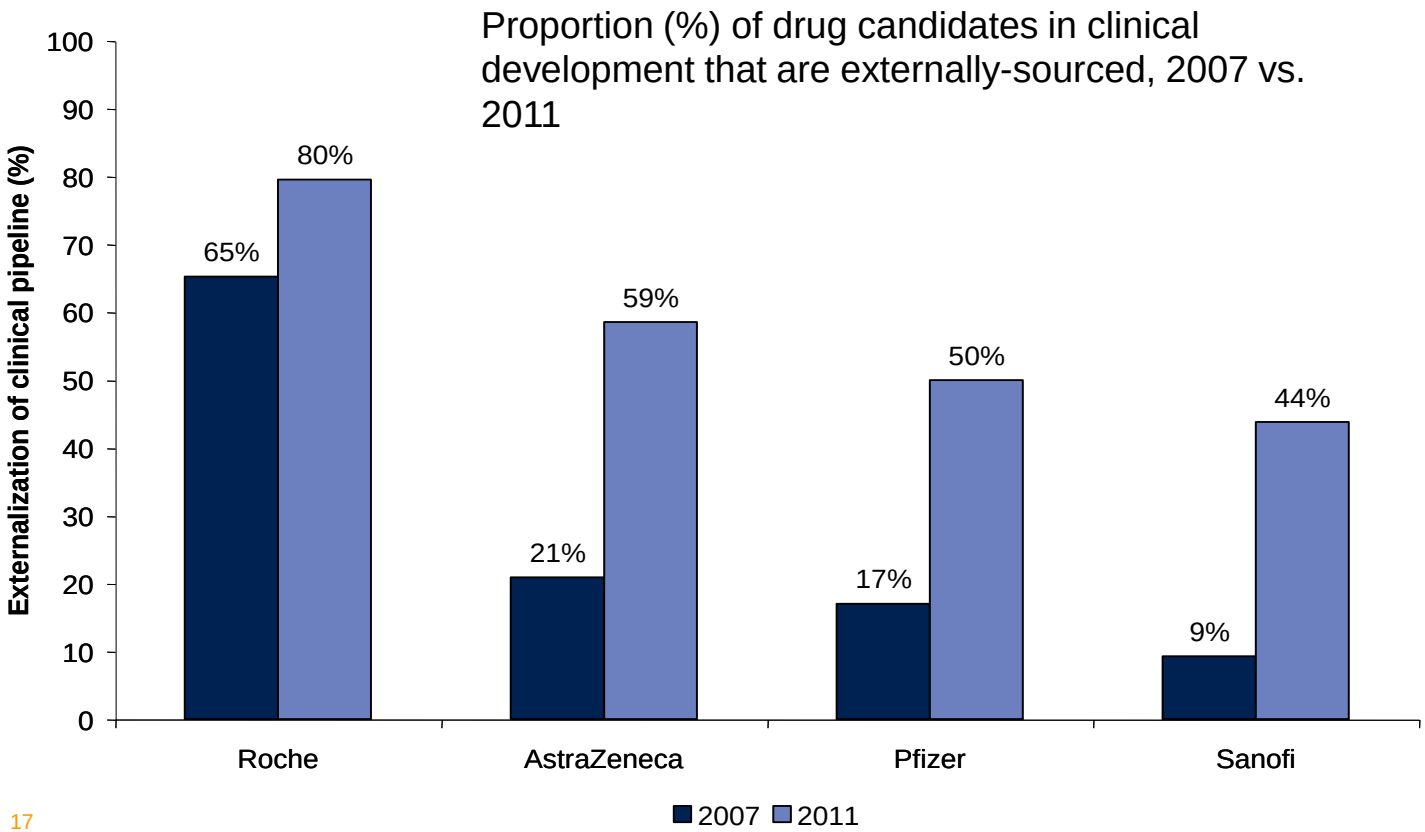
Source: TVM Capital

Research Spending Per New Drug

Company	Number of drugs approved	R&D Spending Per Drug ($Mil)	Total R&D Spending 1997-2011 ($Mil)
AstraZeneca	5	11,790.93	58,955
GlaxoSmithKline	10	8,170.81	81,708
Sanofi	8	7,909.26	63,274
Roche Holding AG	11	7,803.77	85,841
Pfizer Inc.	14	7,727.03	108,178
Johnson & Johnson	15	5,885.65	88,285
Eli Lilly & Co.	11	4,577.04	50,347
Abbott Laboratories	8	4,496.21	35,970
Merck & Co Inc	16	4,209.99	67,360
Bristol-Myers Squibb	11	4,152.26	45,675
Novartis AG	21	3,983.13	83,646
Amgen Inc.	9	3,692.14	33,229

Sources: InnoThink Center For Research In Biomedical Innovation; Thomson Reuters Fundamentals via FactSet Research Systems from Forbes Magazine 2_2012

Externalization has become the mainstay of R&D



Source: Datamonitor, PharmaVitae Explorer, May 2012; company-reported information

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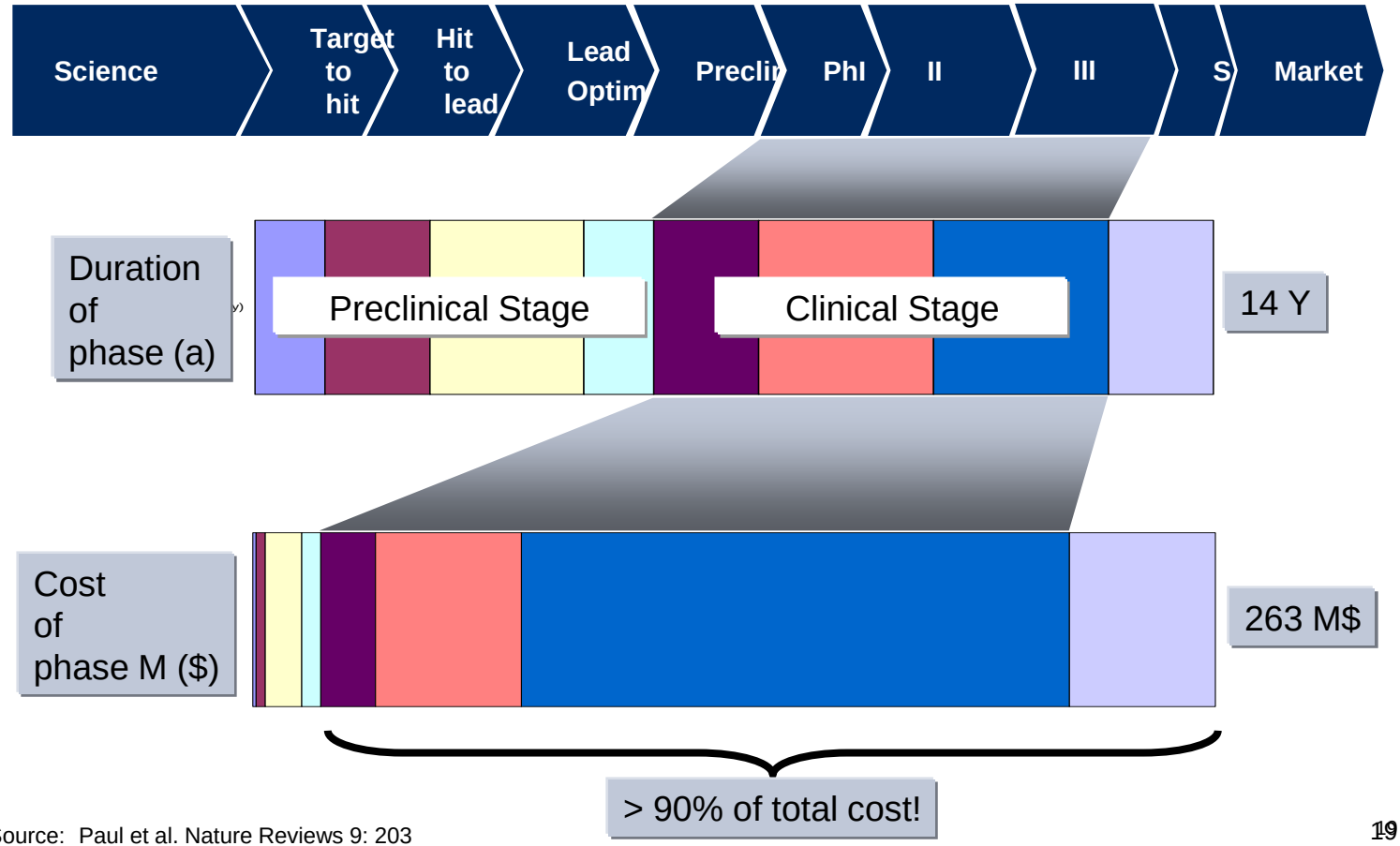
Investment strategies in LS

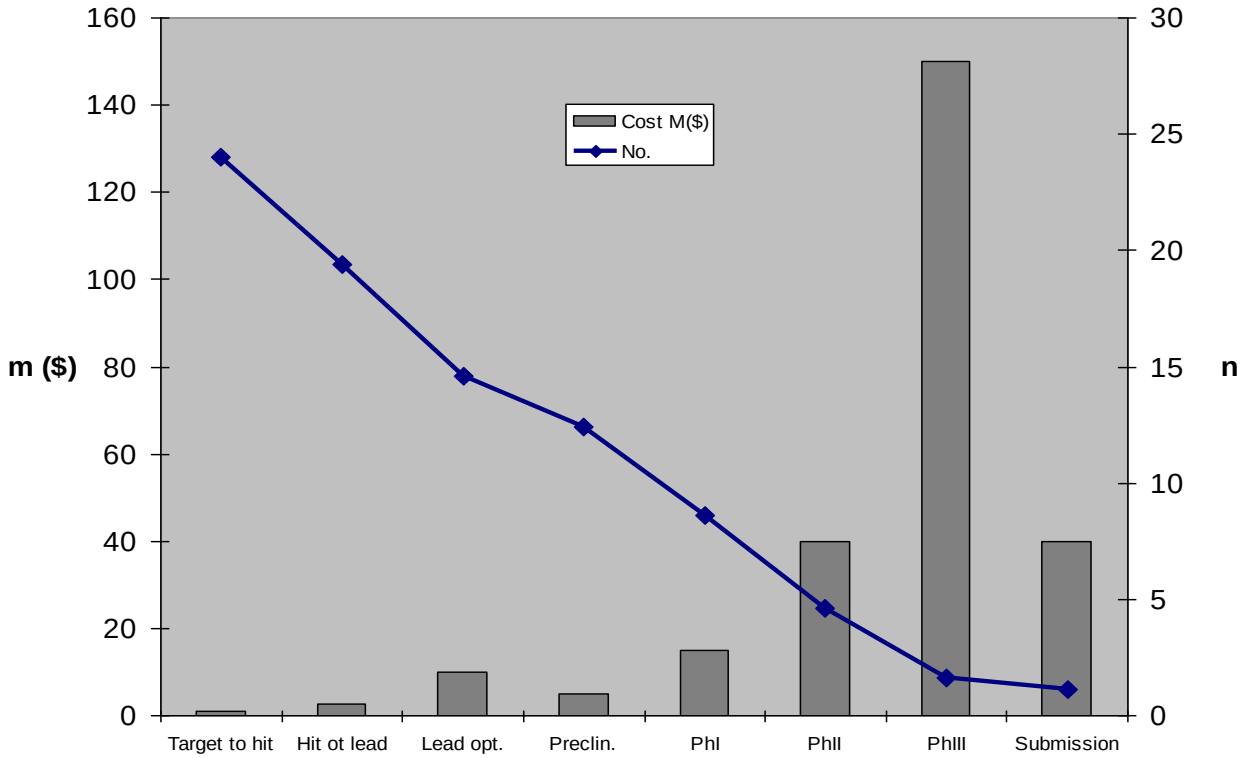
- Drug discovery process
- Business models to finance this process
- Introduction to the “Project focused company” (PFC) model

Time and cost of the different stages of drug discovery and development



Source: Paul et al. Nature Reviews 9: 203

R & D productivity: 24 programs have to be started in order to get one product to the market



The blue squares indicate the number of programs per stage and The grey bars the average cost per program per stage.

Source: Paul et al. Nature Reviews 9: 203

Agenda

Investment strategies in LS

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VC backed business models

Platforms

- Expensive
- „brick and mortar“
- If successful Incredible profitable

Project focused Companies (PFCs)!

- Small, fast
- Lean and mean and virtual
- Low investment
- High multiple!

Products: development candidates, medtech, diagnostic, technologies, lab supply, ….

Platform Technologies (“early stage”)

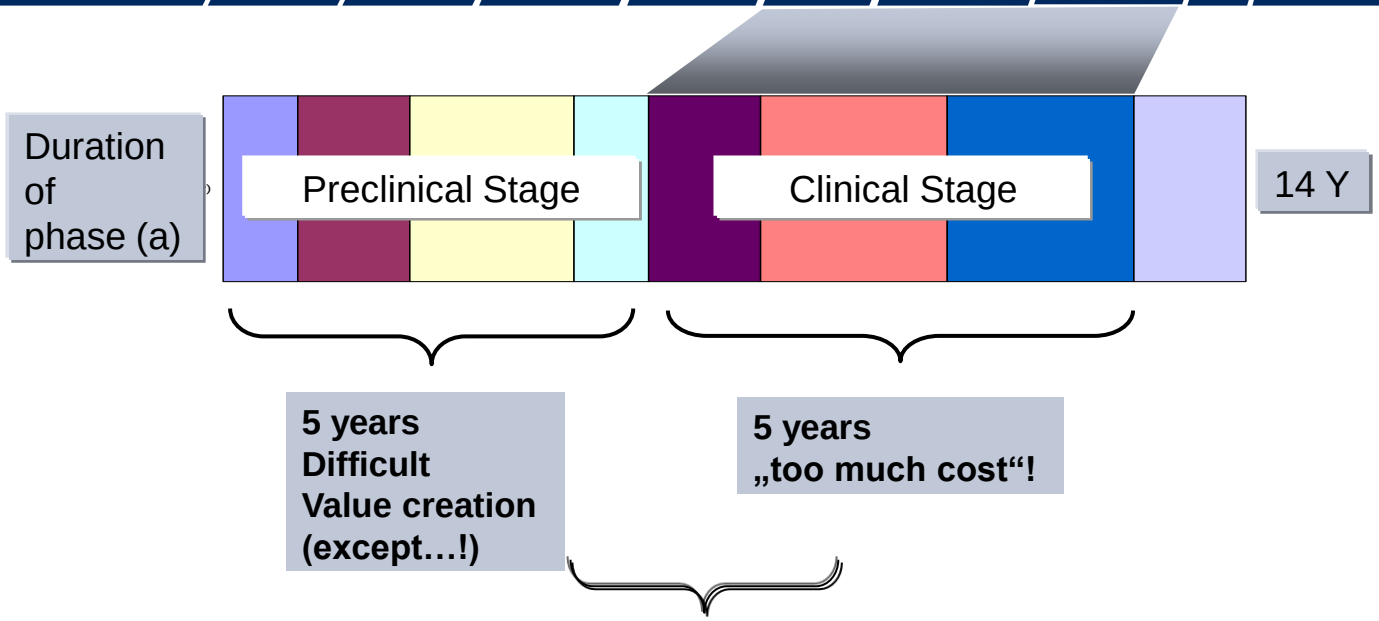
Definition
- Disruptive, highly IP protected technology that allows the development of multiple product opportunities
- Full-fledged company with management team & facility
- Minimal outsourcing
- Strong investor syndicates with ‘deep pockets’ to ensure maturation of platform as well as critical PoC.

Success Factors
- Strong business development resulting in multiple partnerships which facilitate stepwise validation and application of the concept
- Balance between in house proprietary projects and partnered programs
- Exit: **IPO** or trade sale

Examples from the TVM portfolio
- Direvo, Sirna, Sirtris, Intercell, Coley, Bluebird Bio, Enanta

Source
- Academia and biotechnology visionaries

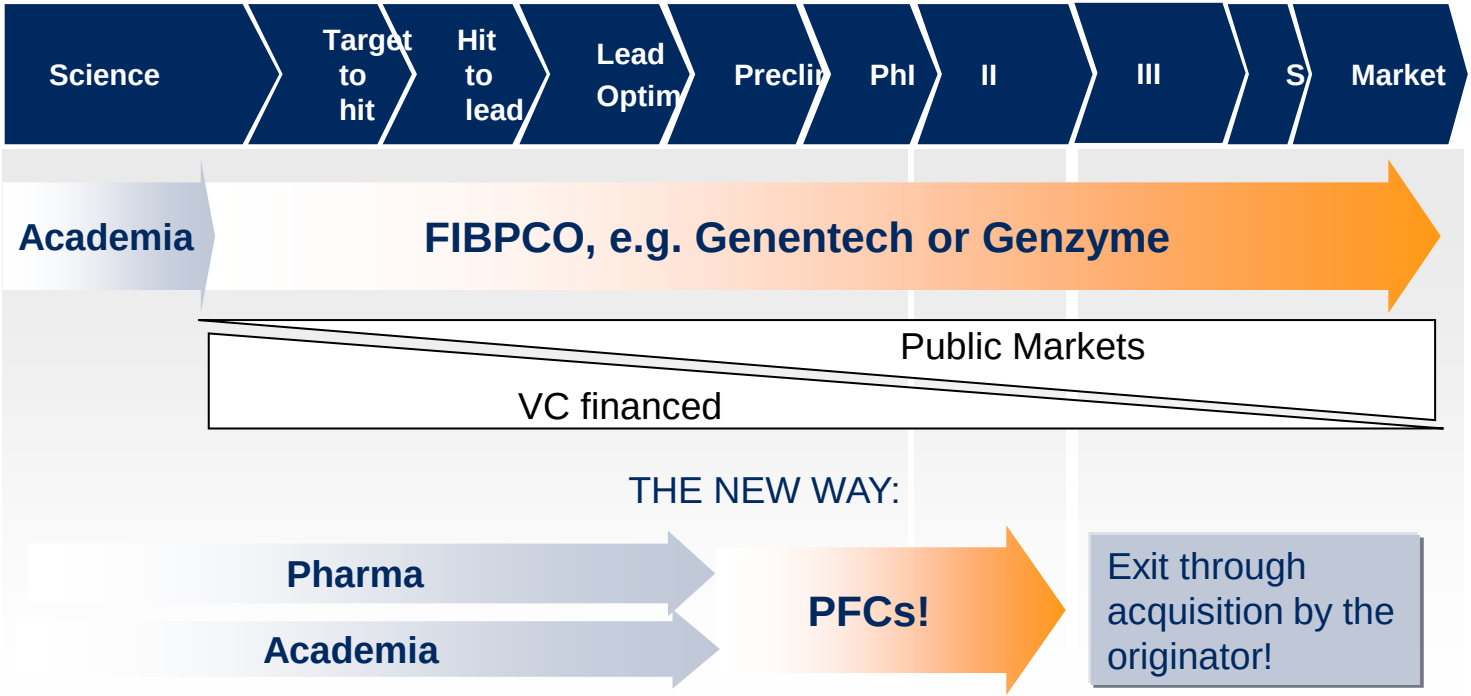
Potential for optimisation: where and when to play?



Feedback from LPs:
Investment periods are too long!!

Source: Paul et al. Nature Reviews 9: 203

Project focused companies (PFCs): a new model?



- One investor (max 2)
- One asset
- Virtual set up: externalized R&D
- Focus on No-go-decision points!

Source: TVM Capital

FIBPCO: fully integrated biopharmaceutical company

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Take home messages "do's and don'ts"

- **Megatrends**
  - Pharma needs products from the biotech industry
  - Pipelines are increasingly externalized
  - The investor universe is changing: VC – Pharma partnerships, corporate VC, family offices looking for direct investments
  - IPOs: possible in the US, not (yet?) in Europe.

- **Funding of high growth / high tech companies at the premarketing stage:**
  - Less money for start up companies than in the past
  - Why: mediocre returns, mediocre performance by the VC industry
  - blocked IPO path (EU!)

- **Consequences for the entrepreneurs**?

  Do's:
  - Find out what the VC you are addressing is interested in!
  - Listen! (VCs, Pharma, experts, …)
  - Tune the business model to lower capital intensity!
  - Stay longer within universities, Partner early; Use all subsidies
  - **Be exit minded from the beginning**

  Don'ts:
  - burn your business model too early!
  - Bet only on success (attrition hits all!!)
  - Empire building

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Thank you for your attention

www.tvm-capital.com