



THE VALUATION EXPERTS

How to evaluate biotech companies

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April 2009 | Lugano

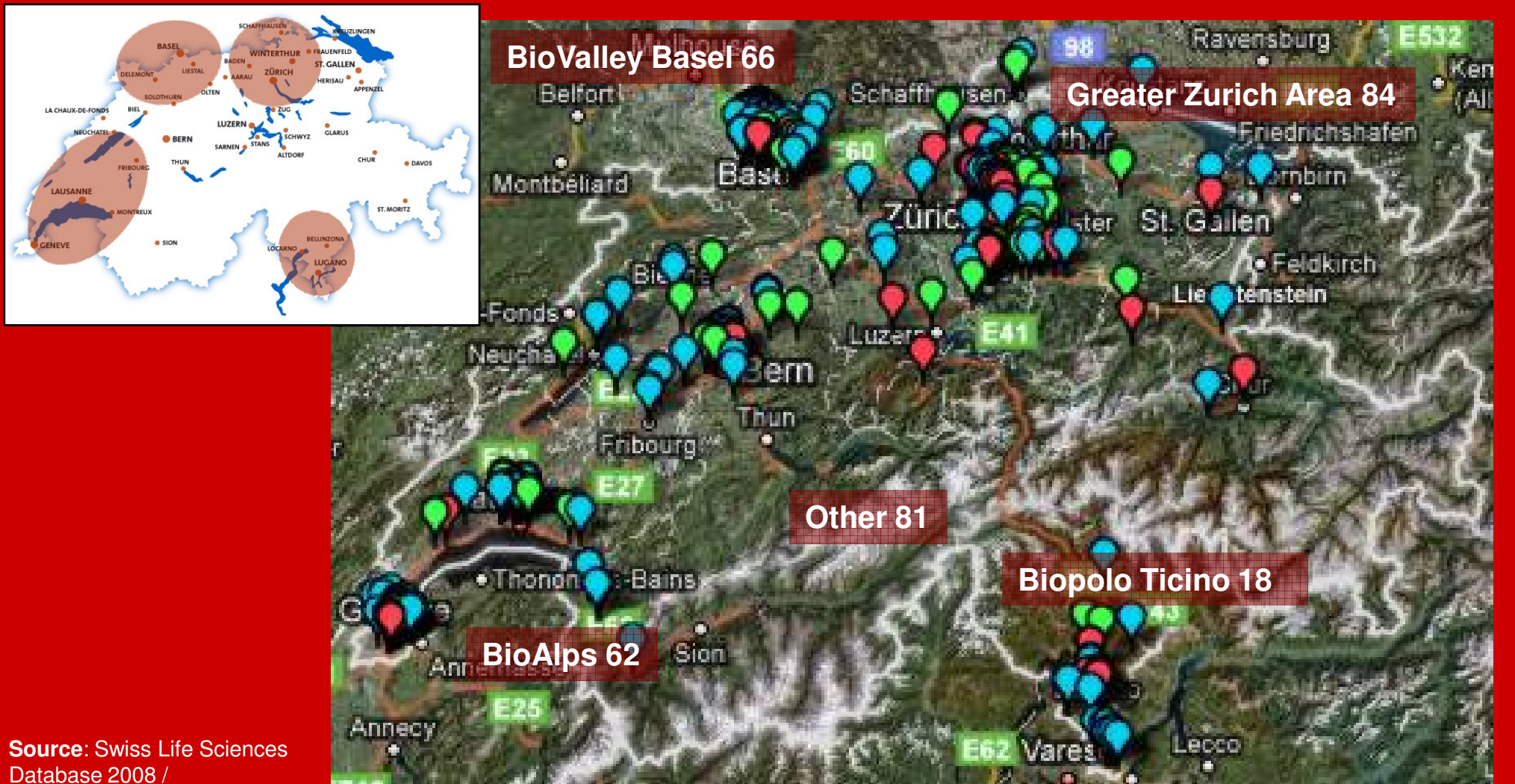
Overview



1. Swiss Biotech Industry

2. (E)Valuation Methods

Swiss Biotech Clusters

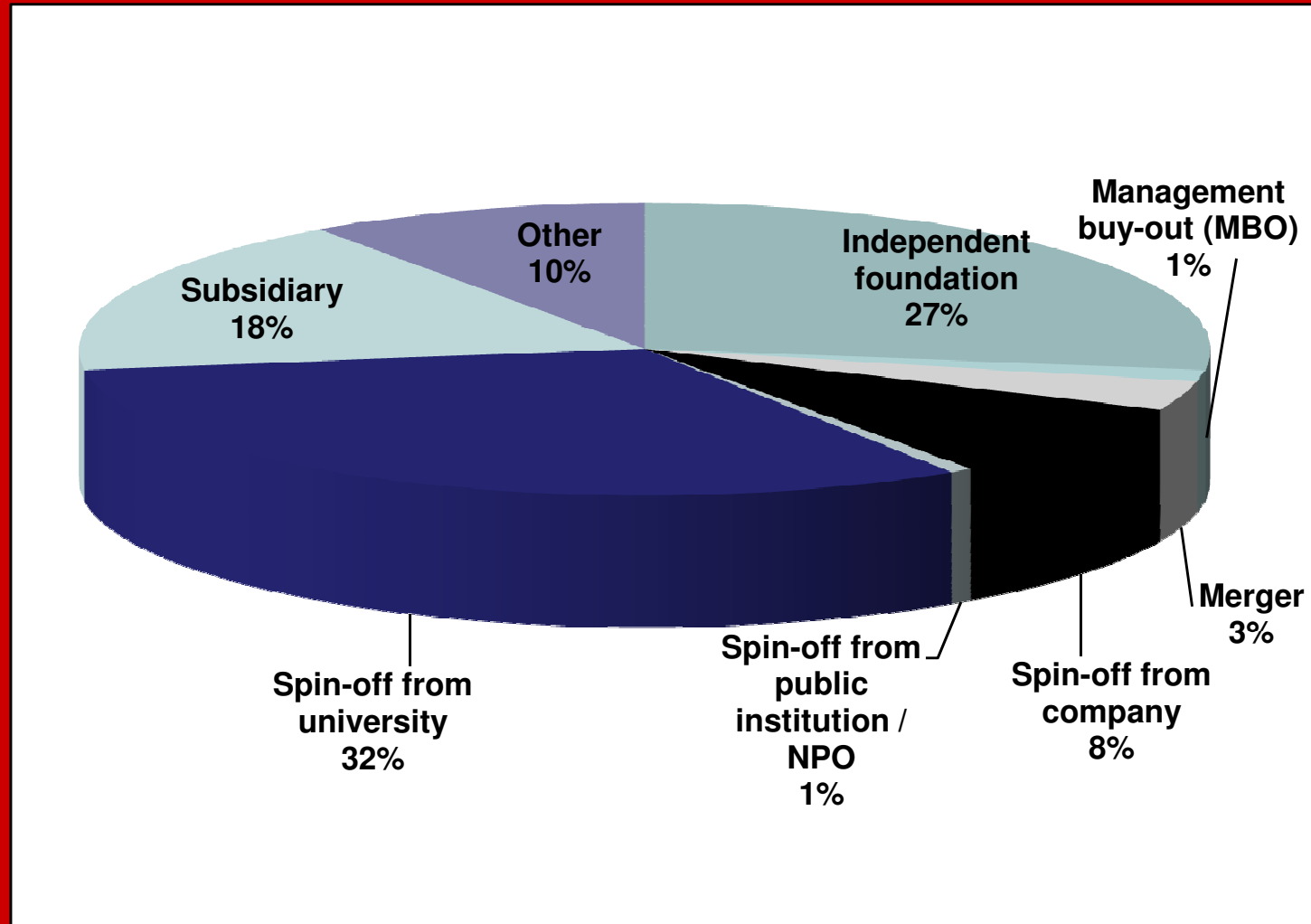


Source: Swiss Life Sciences Database 2008 / (www.swisslifesciences.com)

Comments: Total of 258 companies.

Source of Foundation

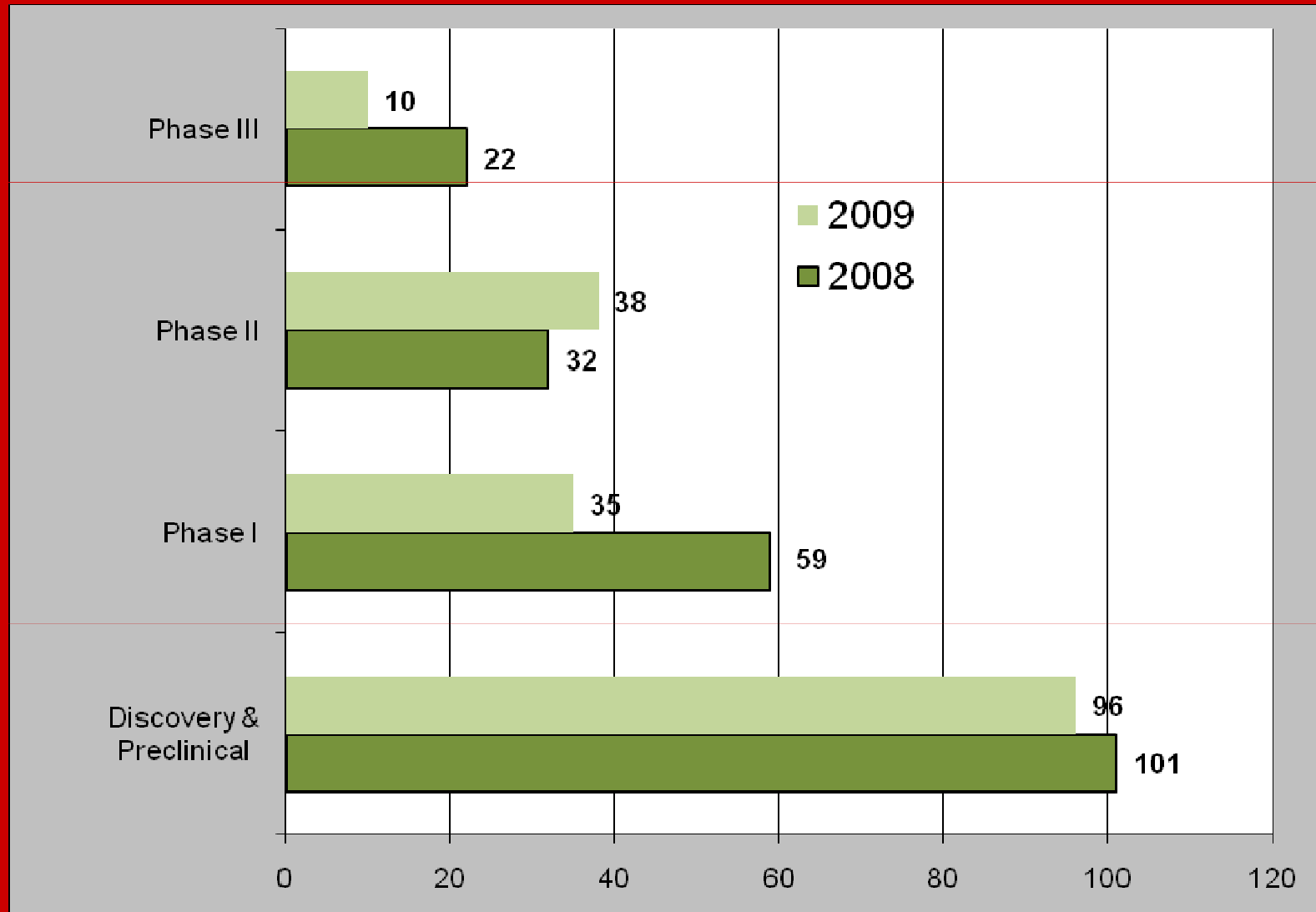
Source of Foundation Swiss Biotechnology Companies



Source: Swiss Life Sciences Survey 2009 / 2008
(www.biotechgate.com
www.swisslifesciences.com)

Comments: Data available for 159 companies.

Swiss Products in Development



Source: Swiss Life Sciences Survey 2009 / 2008
(www.biotechgate.com
www.swisslifesciences.com)

Comments: Based on the company profiles categorized as „Biotechnology - Therapeutics“ (72 companies).

1. Information Services: Biotechgate Database

- Database for over 25 countries
- 13'000 company profiles
- Manage database for Canada, San Diego, Maryland, Medicon Valley, Switzerland, etc.



2. Independent, third party Valuations

- Not a venture capitalist
- Experts Finance & Biotech/Pharma Industry
- International experience
- Track record of over 140 valued companies
- Clients such as Novartis Venture Fund, Fraunhofer Gesellschaft, European Investment Bank; VCs

Overview



1. Swiss Biotech Industry

2. (E)Valuation Methods

Valuation of what?



1. Valuation of a product
 - ⇒ Licensing deal
 - ⇒ Strategic development decision



2. Valuation of a company
 - ⇒ Investment / Financing round
 - ⇒ Merger / Acquisition
 - ⇒ Measure success of company development



Definitions



- Value: implies the inherent worth of a specific thing
- Price: depending on the market (supply / demand); whatever somebody is prepared to pay

“Price is what you pay. Value is what you get.”

By Warren Buffett

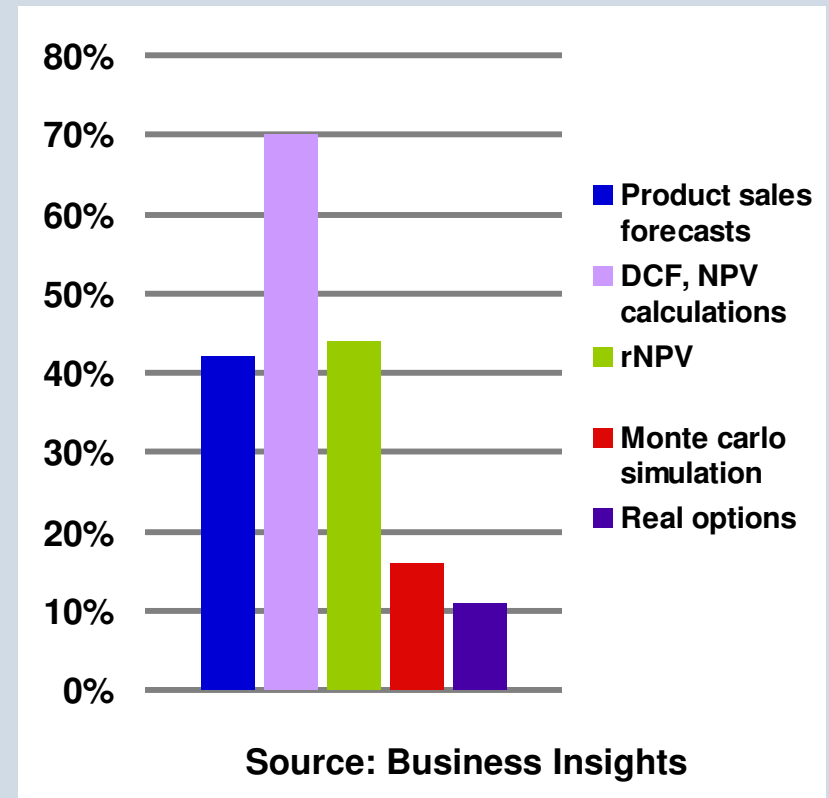
Valuation Methods

complexity ↓

- Simple sales forecasts
- Discounted cash flows
- rNPV (eNPV)
- Real options

- Monte Carlo Analysis

Industry use

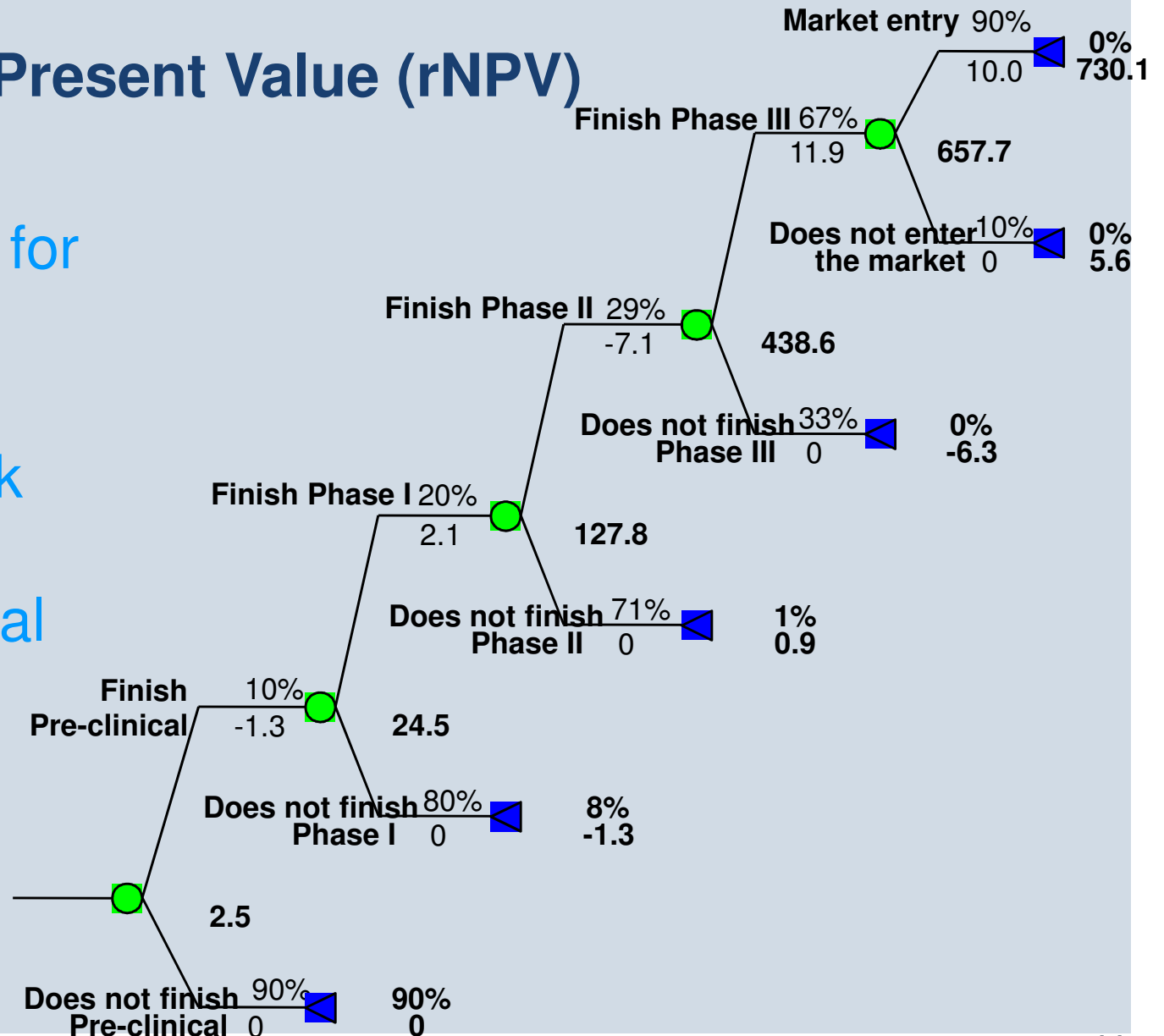


Risk-adjusted NPV

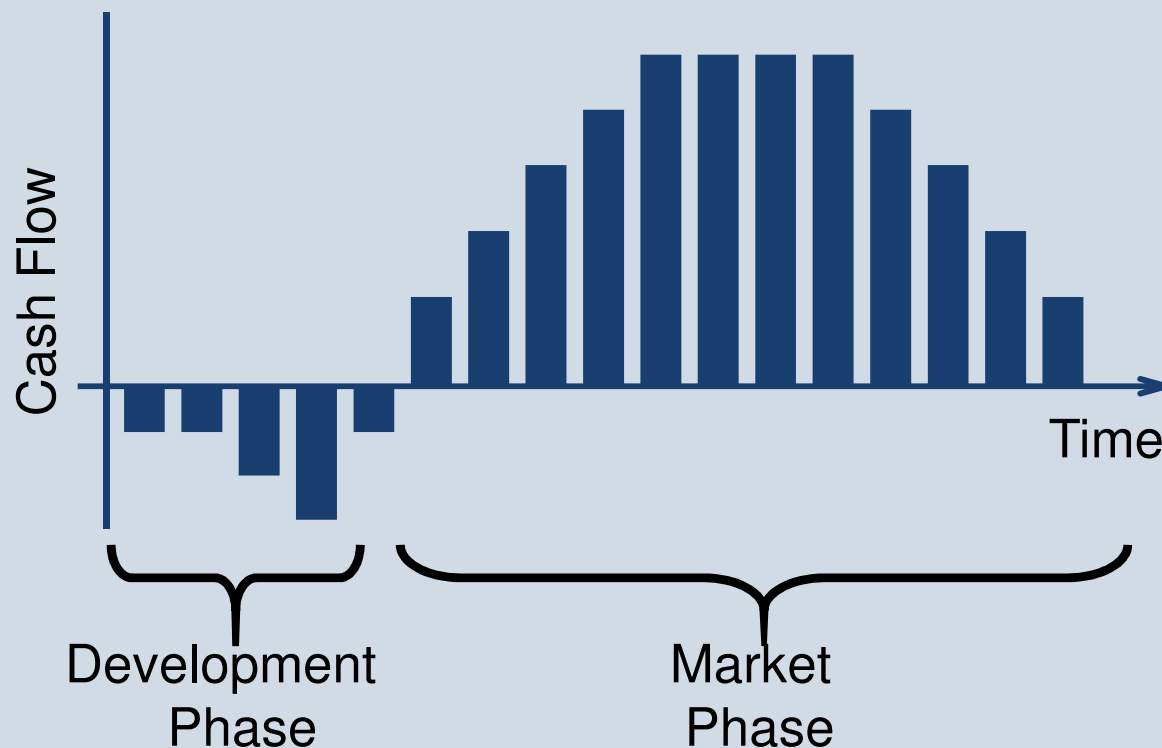


Risk adjusted Net Present Value (rNPV)

- Method of choice for Big Pharma
- Adjusts value for Development Risk (attrition rate) and Cost of Capital



Valuation components



- Determine timelines and cash flows in each phase
- Develop solid assumptions for all key variables

Five Step Process



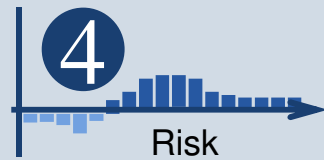
Determine Cash Flows in **Development Phase**



Determine Cash Flows in **Market Phase**



Discount rate



Adjust for **Risk**



Sum cash flows

Enhancing Deal



- Front / back-loading a deal can heavily influence deal structure
- Deal terms dependent on needs of both parties

In USD m	Payment of	rNPV (or up-front)
Up-front	1 m	1 m
Finish Pre-clinical	1 m	0.44 m
Finish Phase I	1 m	70'000
Finish Phase II	1 m	17'000
Finish Phase III	1 m	8'000
Approval / Enter market	1 m	5'000
Royalties	1%	0.70 m

Why Valuation

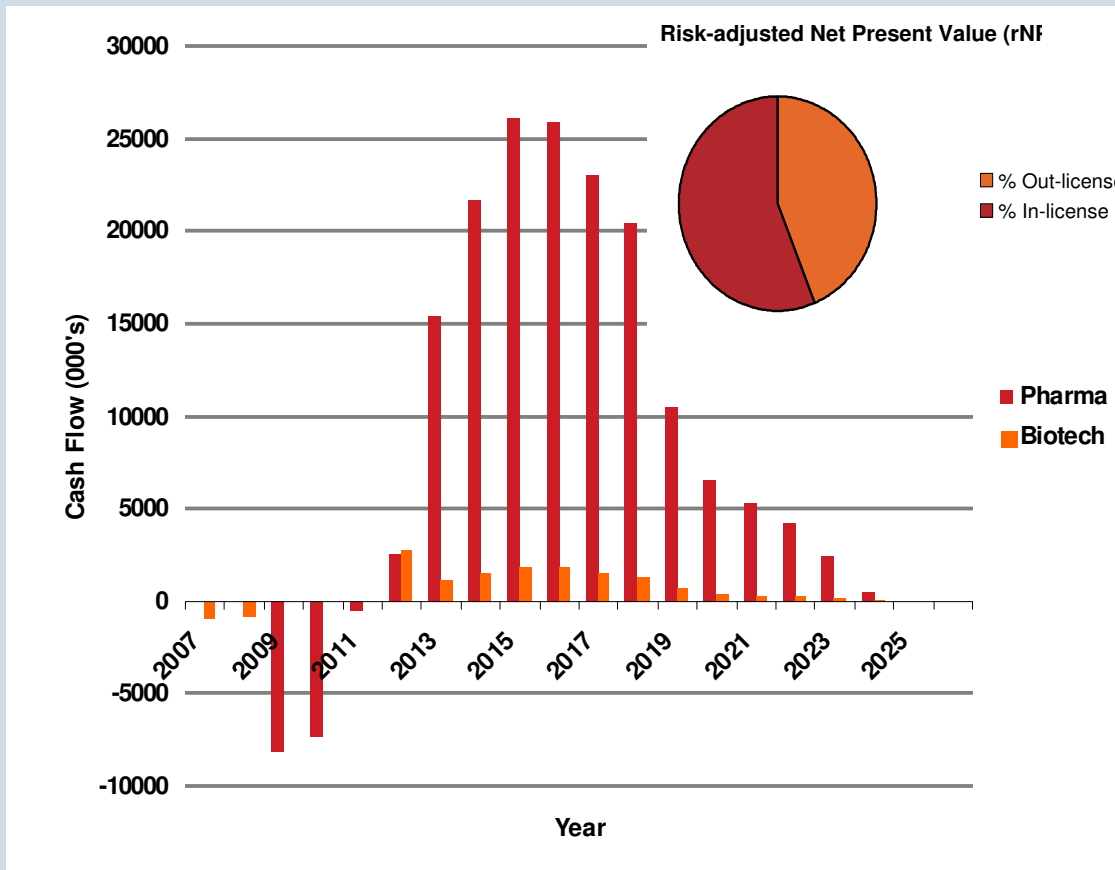


- Out-licensing of a phase II product
- rNPV CHF ? m
- Deal: up-front CHF 1 m
 milestone CHF 20 m
 royalties 7%
- => rNPV of deal: CHF 10 m
- Splitt Biotech / Pharma: 33% / 66%

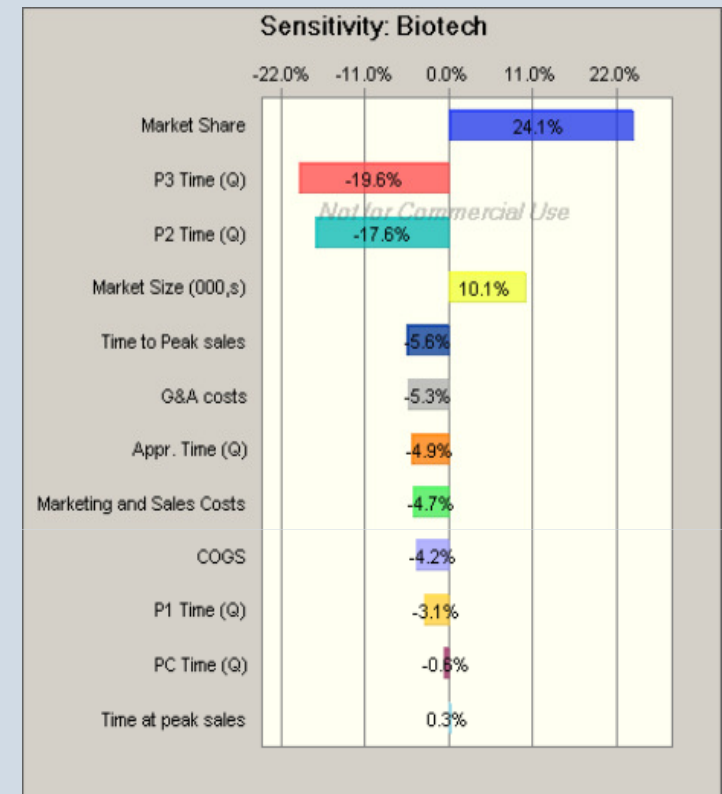
Deal Terms / Sensitivity



Product Valuation



Cash flow splits for license negotiation



Monte Carlo based-risk analysis

Summary



- Valuation is **difficult**, but you have to do it
- **Price** is different from **value**
- Valuation is all about the **assumptions**
- Use **Independent** and **unbiased** models
- Provide **simple** and **clear** valuations to understand costs, risks and revenues



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Thank you!

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