



THE VALUATION EXPERTS

Valuation of Biotech Companies and Technology

Session 2: New Trends of Investment in Early-stage Technologies

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Overview



- 1. Introduction**
- 2. Valuation approaches**
- 3. Deal vs. Financing**
- 4. Emerging Markets**
- 5. Conclusion**

Venture Valuation



Mission

Independent assessment and valuation of technology driven companies / products in growth industries

Information services / Life Sciences Databases

Offices

Zurich, Europe (Munich, Lisbon, Ireland); North America (Toronto, Halifax); Asia (Singapore, India)

Employees









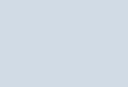
8 people in Switzerland
8+ representatives/partners around the world
Scientists and finance experts
=> Venture Valuation Korea
8 people in JV India Office

Valuation Service



Track Record	Over 180 valuated companies (world-wide)
Clients	Investors, companies, government and academic institutions
Expertise	Finance experts work hand in hand with experienced industry specialists (pharma, biotechnology, medical technology and high-technology)
Products	<ul style="list-style-type: none">- Valuation Reports- Licensing Candidate Search- Portfolio Valuation
Approach	Workshop with company on site



Country	Biotech Therap	Biotech - R&D Ser	Biotech related	Pharma	Med-tech
 www.koreanbiotech.com	22	19	10	37	n/a
 www.Canadianlifesciences.com	172	177	310	61	98
 www.Frenchbiotech.com	78	206	38	21	52
 www.Germanbiotech.com	124	538	141	60	227
 www.Indianbiotech.com	17	162	160	39	12
 www.Italianbiotech.com	52	196	219	82	154
 www.Scandinavianlifesciences.com	157	264	87	60	365
 www.Swisslifesciences.com	73	175	55	57	352
 www.Usalifesciences.com	915	796	146	131	681
Total (www.biotechgate.com)	2009	3317	1376	698	2206

In total there are over 18'000 companies in the database.

Partners Biotechgate.com



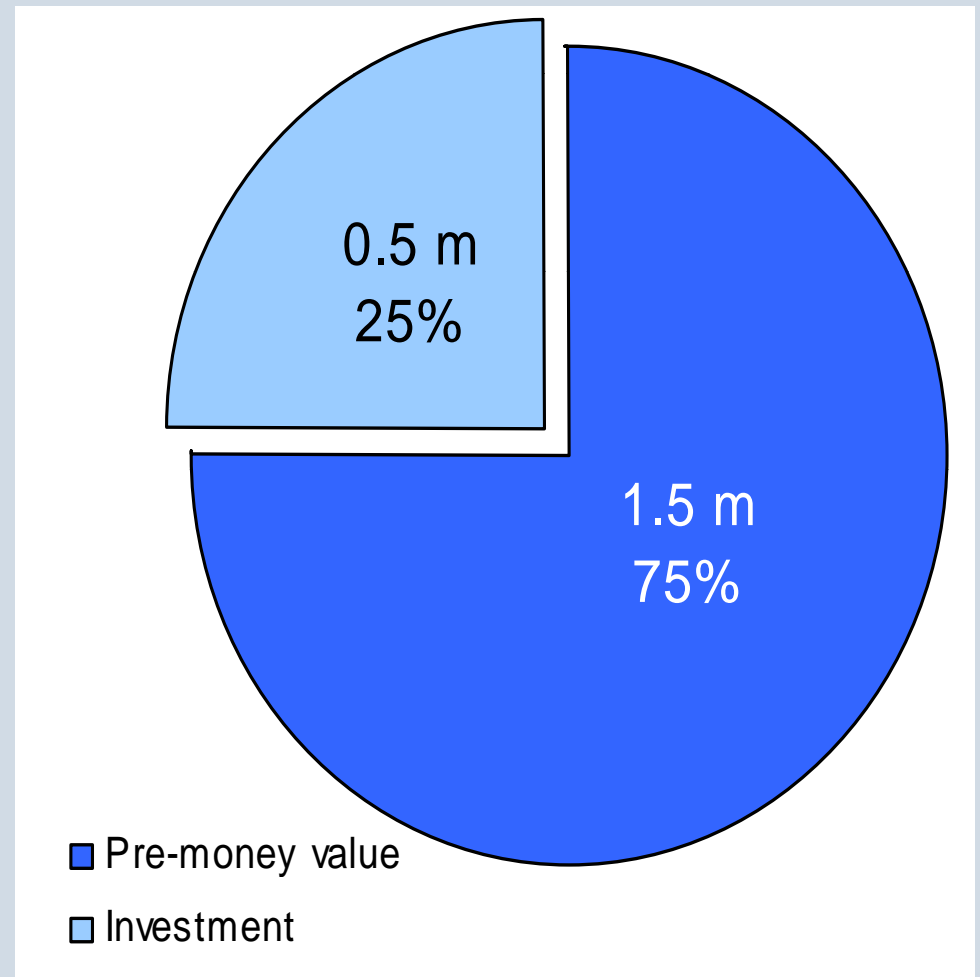
BaselArea



Why Valuation



- Value before investment (pre - money value): EUR 1,5 m
- Investment: EUR 0,5 m
- Value after investment (post-money value): EUR 2,0 m
- Share Investor:
 $0,5 \text{ m} / 2 \text{ m} = 25\%$



Why Valuation



- Out-licensing of a pre-clinical product
- Deal terms:

up-front	CHF 5 m
milestones	CHF 60 m
royalties	7%
- rNPV of product ?
- rNPV of deal ?

- ⇒ rNPV of product: CHF 30 m
- ⇒ rNPV of deal: CHF 10 m
- ⇒ Splitt Biotech / Pharma: 33% / 66%

rNPV: risk adjusted net present value

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



When do a Valuation?



- Think ahead
- Be prepared for negotiations
- Know the fundamentals
- What assumptions have been used
- Out-licensing or financing round?

=> On going exercise

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

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Valuation Approaches



- Discounted Cash Flows (DCF)
 - rNPV* Method
 - Real Options
 - Venture Capital method
 - Market Comparables
 - Comparable Transactions
- } Operations methods
⇒ Mixed method
} Market methods

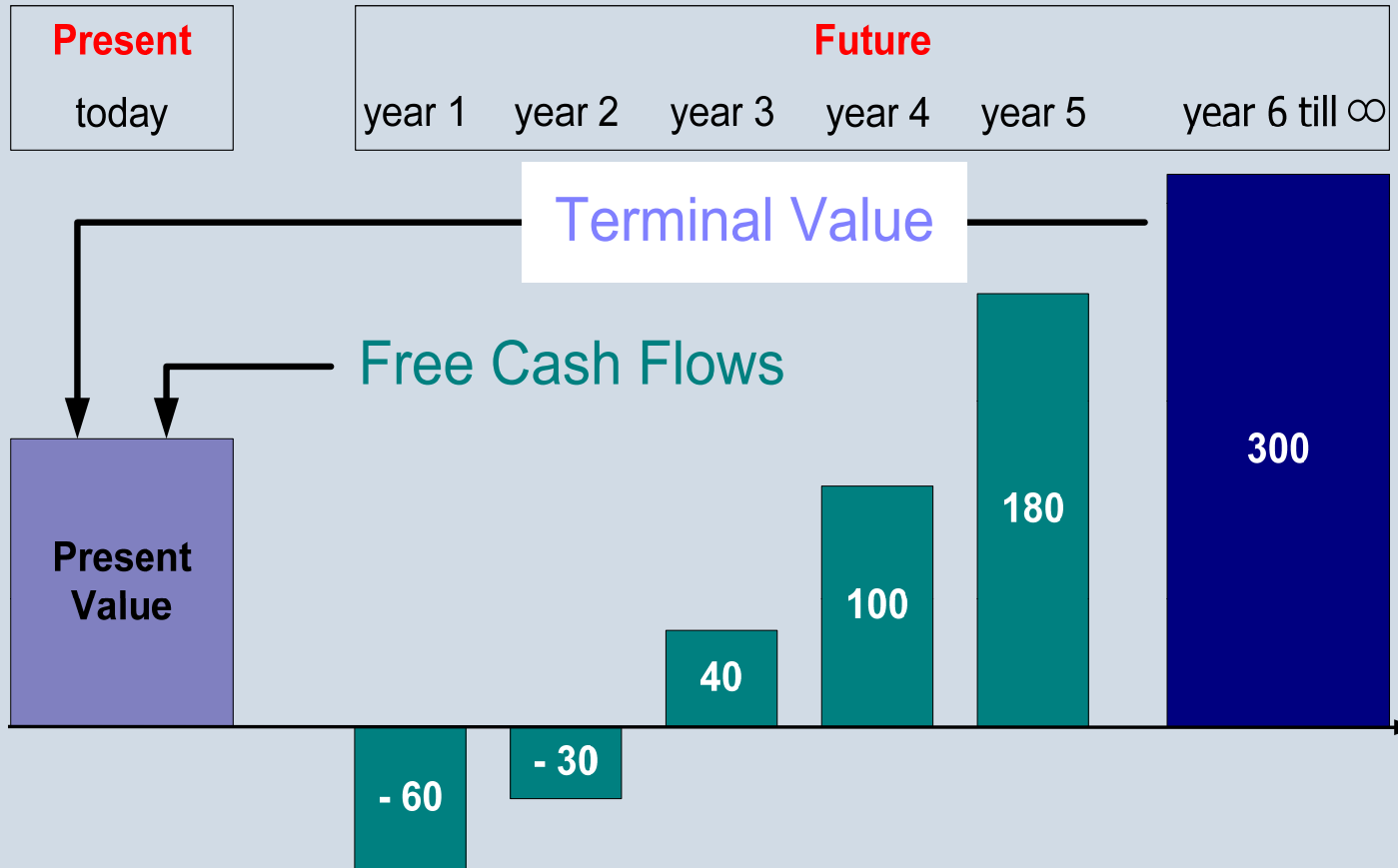
* rNPV: risk adjusted net present value

⇒ there is no “the right method”

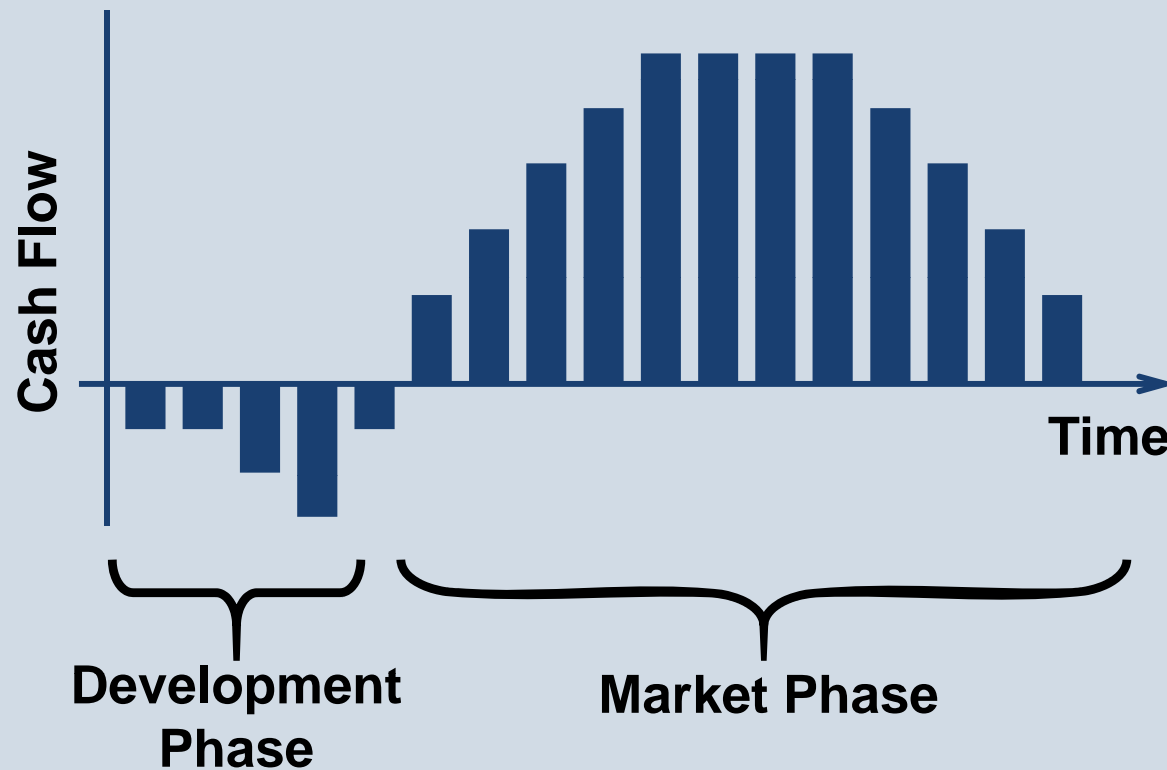
⇒ combination of different methods

⇒ Different methods for company / product valuation

Basic DCF



rNPV Valuation components



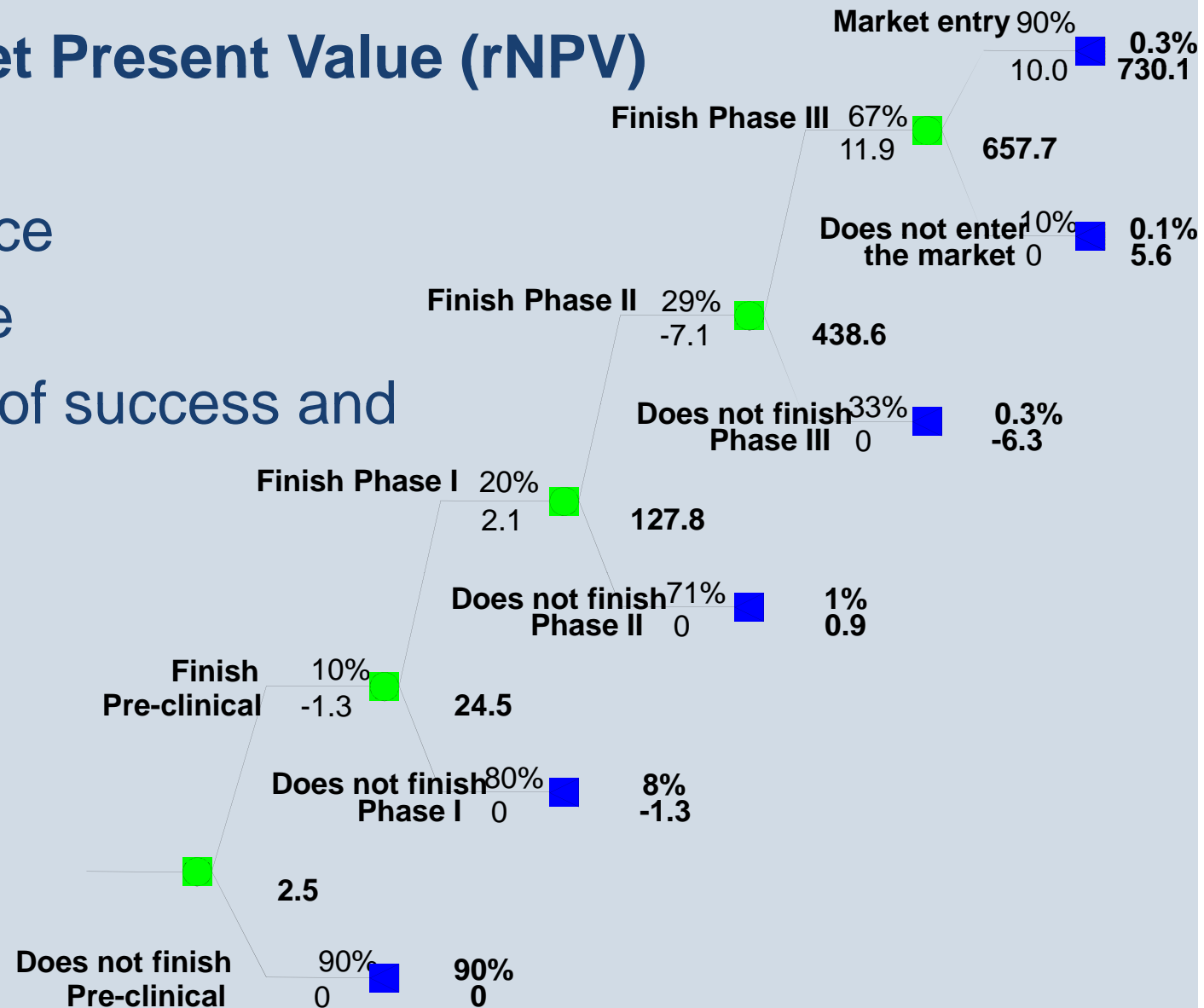
- Determine timelines and cash flows in each phase
- Risk in two parts:
 - 1) General risk (according to DCF)
 - 2) Development risk (attrition rate)

Risk-adjusted NPV



Risk adjusted Net Present Value (rNPV)

- Method of choice
- For each phase
 - 1) Likelihood of success and
 - 2) costs
 are estimated



Deal terms



- Front / back-loading a deal can heavily influence deal structure
- Its important to understand the valuation metrics of a deal

	In USD m	Payment of	rNPV (or up-front)
Up-front		1 m	1 m
Milestone	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

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Licensing vs VC Financing



VC Financing

- Venture Capitalist/Investor
- Dilution / valuation
- Enough to get to next value creating milestone
- Risk / reward remains with shareholders
- Know-how for M&A deals
- Portfolio

Licensing Deal

- Pharma
- Deal terms / value preservation
- Collaboration model
- Milestone payments must fund development
- Risk / reward sharing
- Up-side capped
- Know-how for development
- Single product

Impact of success / failure



VC Financing	Licensing Deal
<p>Failure:</p> <ul style="list-style-type: none">• Full impact• Possibly further funds required	<p>Failure:</p> <ul style="list-style-type: none">• Up-front / milestone payment received
<p>Success:</p> <ul style="list-style-type: none">• Requirement for more funds• Better licensing terms	<p>Success:</p> <ul style="list-style-type: none">• Shared profit through royalties• Income from milestone payments

Licensing vs. VC Financing VENTURE VALUATION

	VC Financing	Licensing Deal
Earlier Stage Products (products 3, 4, 5)	(-) <ul style="list-style-type: none"> • Funds raised on later stage products • Price: low / none within portfolio 	(++) <ul style="list-style-type: none"> • Interesting for pharma • Limited value to VC / analyst
Lead Products (products 1 & 2)	(++) <ul style="list-style-type: none"> • Preserve potential within company • Creates main value for investors 	(+) <ul style="list-style-type: none"> • Reduces burn-rate • Provides Cash • Depending on Deal terms / value

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European View



- Far away
- China and India have been in focus
- Europe has similar challenges with US
- Financing: very difficult to find lead investors
- Partnering: easier, as big pharma are active worldwide

Challenges



- Have local VC / corporate backing
- Need to have certain size for international fundraising
- Licensing / Partnering is easier
- Meet / find the right licensing partner / investor

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Summary



- Focus on lead products with portfolio approach
- It's always a question of price and value
- Be more visible internationally
- Use conferences BIO / BIO Europe to network
- Always keep different (financing) options open



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Thank you!

=> Presentation available on www.venturevaluation.com

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