Startup valuation
Agenda

• First remarks
• Pre-Money / Post-Money & dilution
• Dangers of wrong valuation
• Factors impacting valuation
Methodologies

- Rule of thumb
- Traditional methods
- VC method
- Scorecard method (not analyzed here)
- Dave Berkus Method
- Risk Factor Summation
- Multiples & comparables
First remarks

- 1st rule: there is no rule
- Rule of thumb
- More an art than a science
- Price is not (always) the value
First remarks

• Do not compare
  - With US or other countries
  - With your friends

• More mature, more rational
  - From people/potential to metrics

• Valuations evolve all the time

• Be realistic and flexible
First remarks

• Professional (not personal) discussions

• Always too diluted for entrepreneurs and too expensive for investors

• Investment terms are as important as valuation
Dangers of wrong valuation

- Too high valuation
  - Not attract the right investors
  - Difficult for further rounds (down rounds, weak progresses)
  - Time to close is longer
  - Pressure & expectations
  - Terms
Dangers of wrong valuation

• Too low valuation
  - Too much given, not enough equity for further investors, employees
  - Founders—motivation
  - Difficulty to justify good valuation later
Pre & Post Money Valuation

• Pre-money
  - Value of your company before investors’ money

• Investment

• Post money
  - Value of your company after investment
Example

- Company worth \(1M_3\) before investment (Pre)
- Investors invest \(250k_3\)
- Post Money valuation: \(1M_3 + 250k_3 = 1,25M_3\)

- Ownership after investment:
  - Founders: \(1M_3 / 1.25M_3 = 80\%\)
  - Investors: \(0.25M_3 / 1.25M_3 = 20\%\)
## Dilution

<table>
<thead>
<tr>
<th>Pre-seed Round or creation</th>
<th>Angel/Seed Round</th>
<th>VC Round #1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shareholder</td>
<td>Shares</td>
<td>Percentage</td>
</tr>
<tr>
<td>Uncle</td>
<td>50</td>
<td>6.25%</td>
</tr>
<tr>
<td>Founder 1</td>
<td>250</td>
<td>31.25%</td>
</tr>
<tr>
<td>Founder 2</td>
<td>250</td>
<td>31.25%</td>
</tr>
<tr>
<td>Founder 3</td>
<td>250</td>
<td>31.25%</td>
</tr>
<tr>
<td>Founder 4</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>800</td>
<td>100%</td>
</tr>
</tbody>
</table>

| Uncle’s Investment        | 50,000.00 € | Pre-money | 700,000.00 € | Angel’s investment | 200,000.00 € | Pre-money | 2,000,000.00 € |
| Post Money valuation      | 900,000.00 € | % angel   | 22.22%       | % VC1              | 33.33%       | Share price | 1,944.44 €  |

Calculate # shares & share price =>%
Factors Impacting Valuation

Economy & market conditions

Location

Business Sector / industry
Factors Impacting Valuation

Stage of Development

Team

Market Size

Competition
Factors Impacting Valuation

• Revenue & (gross) margins

• Unit economics, metrics & traction

• Use of funds and next milestones

• Round size & competition to invest

• Further round(s) / past rounds
Valuation (Rule of thumb)

(Net) Burn rate for the next 18-24 months

- Achieve milestones for next round

Investors want to have 20-35% of the company to have substantial returns

Multiples regarding your industry / your company
Valuation

- Burn rate (18-24X)
- Ownership (20-35%)
- Multiples / Standards
• J. De la Rochebrochart
# Valuation (Rule of thumb)

## Changing Lanes

<table>
<thead>
<tr>
<th>Fund</th>
<th>Valuation</th>
</tr>
</thead>
<tbody>
<tr>
<td>BlackRock Global Allocation Fund</td>
<td>$40.02</td>
</tr>
<tr>
<td>Vanguard U.S. Growth Fund Investor Shares</td>
<td>$39.64</td>
</tr>
<tr>
<td>Hartford Growth Opportunities Fund</td>
<td>$35.67</td>
</tr>
<tr>
<td>Fidelity Contrafund</td>
<td>$33.32</td>
</tr>
</tbody>
</table>

Source: the mutual funds

THE WALL STREET JOURNAL.
• shockwaveinnovations.com
Valuation =

\[
\left( \begin{array}{c}
\text{Founder's hopes and dreams} \\
\text{How fast it's actually growing}
\end{array} \right) \\
\times
\left( \begin{array}{c}
\text{Downside protection} \\
\text{Investor FOMO}
\end{array} \right)
\]
Traditional methods

(Past: assets) -> not for tech startups

Present: multiple

(Future: Discounted Cash Flow) -> not for early stage startups
Different methods

VC method

Scorecard method (not here->pre-revenue)

Dave Berkus Method

Risk Factor Summation

Multiples
VC method

Size of the fund
IRR to their LP’s
# of investments
# of rounds per company
Ticket size
Time to exit
Further rounds needed (further dilution)
Ownership
VC method

What value at exit?
Post-Money = Exit Value / (1+IRR)^time

Example
Time : 5 years
IRR : 20%
Exit : 25M€ (+/- average exit price in Europe)
Post Money : 25M€/(1.2^5) = 10,047M€
Example

Time: 5 years
Invest 2M€ @ 10M€ (Post-money) -> 20%
Further investment: 3M€ @ 15M€
  • Dilution of 20% (VC doesn’t follow-on in this case)
Ownership: 16% -> 4M€ return on 2M€
IRR: 15% -> NOT OK => lower valuation
VC method

• Fund size : 50M₃
• Investments : 40M₃ (Fund - mgt fees)
• IRR (expected) : 3X on 10 years (12% IRR)
• # investments : 22

<table>
<thead>
<tr>
<th>Investments in a startup (M€)</th>
<th>#startups</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>1,5</td>
<td>4</td>
</tr>
<tr>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>0,5</td>
<td>8</td>
</tr>
<tr>
<td>40</td>
<td>22</td>
</tr>
</tbody>
</table>
## Case 1 - 2,75X (10,65%)

<table>
<thead>
<tr>
<th>Amount invested (M€)</th>
<th>#startups</th>
<th>Return</th>
<th>Exits (M€)</th>
</tr>
</thead>
<tbody>
<tr>
<td>13,5</td>
<td>11</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>8</td>
<td>4</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>12</td>
<td>4</td>
<td>3</td>
<td>36</td>
</tr>
<tr>
<td>6,5</td>
<td>3</td>
<td>10</td>
<td>65</td>
</tr>
<tr>
<td>40</td>
<td>22</td>
<td></td>
<td>109</td>
</tr>
</tbody>
</table>

### Portfolio
1) 5@0,5M + 3@1M+2@1,5M+1@5M
2) 1@0,5M + 1@1M+1@1,5M+1@5M
3) 1@0,5M + 0@1M+1@1,5M+2@5M
4) 1@0,5M + 1@1M+0@1,5M+1@5M

This is a theoretical case
Many VCs don’t have this returns and few have much better
Portfolio repartition is never pre-determined
## Case 2 – 3,02X (11,69%)

<table>
<thead>
<tr>
<th>Amount invested (M€)</th>
<th>#startups</th>
<th>Return</th>
<th>Exits (M€)</th>
</tr>
</thead>
<tbody>
<tr>
<td>13,5</td>
<td>11</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>7</td>
<td>4</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>8,5</td>
<td>4</td>
<td>4</td>
<td>34</td>
</tr>
<tr>
<td>11</td>
<td>3</td>
<td>10</td>
<td>110</td>
</tr>
<tr>
<td>40</td>
<td>22</td>
<td></td>
<td>151</td>
</tr>
</tbody>
</table>

**Portfolio**

1) 5@0,5M + 3@1M + 2@1,5M + 1@5M  
2) 2@0,5M + 1@5M  
3) 1@0,5M + 2@1,5M + 1@5M  
4) 2@1M + 2@5M

This is a theoretical case  
Many VCs don’t have this returns and few have much better  
Portfolio repartition is never pre-determined  
IRR on 50M€ not 40M€
## Case 3 – 2X (7.18%)

<table>
<thead>
<tr>
<th>Amount invested (M€)</th>
<th>#startups</th>
<th>Return</th>
<th>Exits (M€)</th>
</tr>
</thead>
<tbody>
<tr>
<td>13.5</td>
<td>11</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>7</td>
<td>3</td>
<td>1.5</td>
<td>10.5</td>
</tr>
<tr>
<td>7</td>
<td>3</td>
<td>3</td>
<td>21</td>
</tr>
<tr>
<td>5.5</td>
<td>2</td>
<td>4</td>
<td>22</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
<td>5</td>
<td>25</td>
</tr>
<tr>
<td>40</td>
<td>22</td>
<td></td>
<td>80.5</td>
</tr>
</tbody>
</table>

Portfolio:

1) 5@0.5M + 3@1M + 2@1.5M + 1@5M
2) 1@0.5M + 1@1.5M
3) 2@1M + 1@5M
4) 1@0.5M + 1@1.5M + 1@5M
5) 1@0.5M + 1@5M
6) 1@5M

This is a theoretical case.
## Berkus Method (seed stage)

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sound idea</strong></td>
<td>0-500.000€</td>
</tr>
<tr>
<td>Basic Value</td>
<td></td>
</tr>
<tr>
<td><strong>Prototype</strong></td>
<td>0-500.000€</td>
</tr>
<tr>
<td>Reducing technology risk</td>
<td></td>
</tr>
<tr>
<td><strong>Quality management team</strong></td>
<td>0-500.000€</td>
</tr>
<tr>
<td>Reducing execution risk</td>
<td></td>
</tr>
<tr>
<td><strong>Strategic relationships</strong></td>
<td>0-500.000€</td>
</tr>
<tr>
<td>Reducing market risks</td>
<td></td>
</tr>
<tr>
<td><strong>Product roll out &amp; sales</strong></td>
<td>0-500.000€</td>
</tr>
<tr>
<td>Reducing production risks</td>
<td></td>
</tr>
</tbody>
</table>

**Startup valuation**: www.startups.be
VC method

BUT majority of the startups die before any exit
Average exit in Europe/Benelux : 23M€
## Risk Factors Summation

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management</td>
<td>-2 / -1 / 0 / +1 / +2</td>
</tr>
<tr>
<td>Stage of the business</td>
<td>-2 / -1 / 0 / +1 / +2</td>
</tr>
<tr>
<td>Legislation/ Political risk</td>
<td>-2 / -1 / 0 / +1 / +2</td>
</tr>
<tr>
<td>Sales &amp; marketing risk</td>
<td>-2 / -1 / 0 / +1 / +2</td>
</tr>
<tr>
<td>Funding risk</td>
<td>-2 / -1 / 0 / +1 / +2</td>
</tr>
<tr>
<td>Competition risk</td>
<td>-2 / -1 / 0 / +1 / +2</td>
</tr>
<tr>
<td>Technology risk</td>
<td>-2 / -1 / 0 / +1 / +2</td>
</tr>
<tr>
<td>Litigation risk</td>
<td>-2 / -1 / 0 / +1 / +2</td>
</tr>
<tr>
<td>International risk</td>
<td>-2 / -1 / 0 / +1 / +2</td>
</tr>
<tr>
<td>Reputation risk</td>
<td>-2 / -1 / 0 / +1 / +2</td>
</tr>
<tr>
<td>Exit</td>
<td>-2 / -1 / 0 / +1 / +2</td>
</tr>
</tbody>
</table>
## Risk Factor Summation

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management</td>
<td>1</td>
</tr>
<tr>
<td>Stage of the business</td>
<td>-1</td>
</tr>
<tr>
<td>Legislation/ Political risk</td>
<td>2</td>
</tr>
<tr>
<td>Sales &amp; marketing risk</td>
<td>-2</td>
</tr>
<tr>
<td>Funding risk</td>
<td>1</td>
</tr>
<tr>
<td>Competition risk</td>
<td>0</td>
</tr>
<tr>
<td>Technology risk</td>
<td>-1</td>
</tr>
<tr>
<td>Litigation risk</td>
<td>1</td>
</tr>
<tr>
<td>International risk</td>
<td>-1</td>
</tr>
<tr>
<td>Reputation risk</td>
<td>1</td>
</tr>
<tr>
<td>Exit</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Average valuation</th>
<th>1M€</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit = 250k€</td>
<td>500k€</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1,5M€</td>
</tr>
</tbody>
</table>
Multiples

• Multiple of few metrics like
  • Revenue
  • Growth
  • (EBITDA) -> most of the time negative
  • (P/E ratio) -> most of the time negative
  • (Price book ratio) -> no sense
  • (Dividend Yield) -> most of the time none

Shares of a public companies are more liquid then you will have a discount as a private company => lower valuation
Figures are outdated

Principle remains the same

Multiples
Multiples

Figures are outdated

BUT

Principle remains the same
Figures are outdated but the principle remains the same.
Tomasz Tunguz

Multiples (evolution)

Public SaaS Median Forward Revenue Multiple Has Fallen by 57% in 2 Years

Source: CapitalIQ
Multiples

2016 Enterprise Value / Revenue Multiples

- Facebook: 10.8x
- LinkedIn: 6.3x
- Twitter: 5.2x
The next slides are about US publicly traded companies

Goal is to show difference by sectors

Difference between private and public companies exists

Public companies have a premium valuation

Leader companies too
Multiples

![2016 Enterprise Value / Revenue Multiples](image)

Marketplaces

- LendingClub: 8.2x
- Just-Eat: 7.8x
- Zillow: 5.5x
- TripAdvisor: 5.4x
- GrubHub: 4.4x
- Etsy: 4.1x
- HomeAway: 3.7x
- eBay: 3.2x
- Yelp: 2.1x
- Shutterstock: 1.7x
- TrueCar: 1.4x
- Angie’s List: 0.8x
- Care.com: 0.7x

Mahesh.vc
Multiples

2016 Enterprise Value / Revenue Multiples

- Fitbit: 3.6x
- Amazon: 2.0x
- Coupons.com: 2.0x
- GoPro: 1.8x
- Zalando: 1.7x
- Ocado Group: 1.7x
- ASOS: 1.4x
- Shutterfly: 1.3x
- RetailMeNot: 1.2x
- Wayfair: 1.0x
- JD.com: 0.8x
- Blue Nile: 0.7x
- Groupon: 0.5x

Ecommerce
Multiples

2016 Enterprise Value / Revenue Multiples

- Yahoo! 5.9x
- Netflix 5.0x
- Google 4.5x
- Activision Blizzard 4.5x
- Electronic Arts 4.2x
- Pandora 2.6x
- WebMD 2.5x
- King Digital 1.9x
- IAC 1.8x
- Zynga 1.6x
- Glu Mobile 1.3x
- Take-Two Interactive 1.1x
Multiples

2016 Enterprise Value / Revenue Multiples

- Priceline: 6.2x
- TripAdvisor: 5.4x
- Sabre: 3.1x
- Expedia: 2.3x
One tool that can help you

• www.seriousfunding.be
Any Questions?

Jan Bormans
Jan.bormans@europeanstartupnetwork.eu
@janbormans
Appendix

“Normal” Times – Neither Strong Bull nor Bear

Round / Valuation

Time

B

$25m

$8-10m raised

$10m

$5m

$2-5m raised

$5m

A

$2.5m

$2-5m raised

$1m

Seed

$2.5m

$500k-1m raised

$1m

Mark Suster/US
Appendix
Less money invested in Europe but also less pressure regarding exits.
A good assessment is to look at your competitors through two Databases