Valuation in a Digital World

Does It Matter?

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Valuation in a Digital World

The Issues

Digital World and Innovation
Innovation and Valuation
Valuation models
Example: Snap Inc.

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World is changing
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Everybody is looking for Business Ideas which include Innovation

What Innovation?
What Innovation?

Incremental Innovation:
- Proved Existing Technology
- New Products
- Existing Markets

Enterprise Automation; Augmented Reality
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What Innovation?

Breakthrough Innovation:
- Proved Existing Technology
- Existing Products
- New Markets

Insuretech; Healthtech; Blockchain.

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What Innovation?

Disruptive Innovation:
- Non Proved Non Existing Technology
- New Products
- New Markets

Quantum Technology; Virtual Reality; Robotics
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To Innovate:
Develop new Products
new Services
new Markets

Internally: In-House
Externally: Acquisitions

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Valuation Matters

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Valuation Approaches:

Extrinsic: Market Value/Relative Value

Intrinsic: Fundamental Value/Base Value
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Extrinsic Valuation:

Do we have comparables?

Are we really facing a totally new situation?

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Intrinsic Valuation: Main limit of traditional DCF approach: It does not measure the importance of operational flexibility.

Operational Flexibility: In Amounts In Timing

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In a Digital World, Operational Flexibility does have an important economic value.

I want to be there!!!
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How to Introduce Operational Flexibility in our Intrinsic Valuation Method?

In Amounts: Expected FCF Probabilistic Sens. An. Monte Carlo Simulation
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How to Introduce Operational Flexibility in our Intrinsic Valuation Method?

In Timing: Open Options
Real options
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Measuring Intrinsic Economic Value:

1. Traditional DCF: No OF in timing.
   Reduced OF in Amounts

2. Traditional DCF + Probabilistic SA:
   No OF in timing
   More OF in Amounts
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Measuring Intrinsic Economic Value:

3. Probabilistic DCF, using MonteCarlo simulations:
   No OF in timing
   Max OF in Amounts

4. Value of a Real Option:
   Some/Max OF in timing
   Max OF in Amounts

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## Valuation in a Digital World

### Innovation/Business Ideas/Valuation

<table>
<thead>
<tr>
<th>Market Development</th>
<th>Low</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>Continuity Innovation</td>
<td>Incremental Innovation</td>
</tr>
<tr>
<td>High</td>
<td>Disruptive Innovation</td>
<td>Incremental Innovation</td>
</tr>
<tr>
<td></td>
<td>Probabilistic DCF</td>
<td>Probabilistic DCF</td>
</tr>
</tbody>
</table>

- **High Product / Technology Development**: Probabilistic DCF

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Understanding the business idea /model

Understanding the valuation model

Matching Market Value with Fundamental Value: Reverse Engineering

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### Some Acquisitions

<table>
<thead>
<tr>
<th>Buyer</th>
<th>Seller</th>
<th>Amount (billionUS$)</th>
<th>Date</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Google</td>
<td>Motorola</td>
<td>12.5</td>
<td>Aug 2011</td>
<td>Defensive</td>
</tr>
<tr>
<td>Microsoft</td>
<td>Skype</td>
<td>8.5</td>
<td>May 2011</td>
<td>Defensive</td>
</tr>
<tr>
<td>Microsoft</td>
<td>Nokia</td>
<td>7.2</td>
<td>Sept 2013</td>
<td>Defensive</td>
</tr>
<tr>
<td>Google</td>
<td>Doubleclick</td>
<td>3.1</td>
<td>Mar 2008</td>
<td>Expansion (publicity)</td>
</tr>
<tr>
<td>Google</td>
<td>You Tube</td>
<td>1.6</td>
<td>Nov 2006</td>
<td>Expansion (video)</td>
</tr>
<tr>
<td>Facebook</td>
<td>Instagram</td>
<td>1.0</td>
<td>Apr 2012</td>
<td>Expansion (pictures)</td>
</tr>
</tbody>
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### Valuation in a Digital World

#### Some Acquisitions

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</thead>
<tbody>
<tr>
<td>Google</td>
<td>Nest</td>
<td>3.2</td>
<td>Jan 2014</td>
<td>New Market (Internet of things)</td>
</tr>
<tr>
<td>Facebook</td>
<td>Oculus</td>
<td>2.0</td>
<td>Mar 2014</td>
<td>New Market (virtual reality)</td>
</tr>
<tr>
<td>Facebook</td>
<td>WhatsApp</td>
<td>19.0</td>
<td>Feb 2014</td>
<td>New Markets</td>
</tr>
</tbody>
</table>

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Valuation in a Digital World

How is this possible?

Institutional Investors: hedging
Portfolio Management

Profile of founders
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Linking:

Innovation models

Business models

Valuation approaches

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Snap Inc IPO (March 2017)

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Snap Inc IPO (March 2017)

Background

- Started as Pictaboo by 3 Stanford Students
- Introduced video snaps
- Added filters, timestamps, and replay
- Snap, Inc. could be valued up to $25 billion

- Summer 2011: Fall 2011
- Winter 2012: Fall 2013
- Winter 2013: January 2015
- Today

- Changed name to Snapchat & grew to 100,000 users
- Launched snapchat Stories. Saw over 60 million snaps sent per day

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### Snap Inc IPO (March 2017)

#### Some Financial Facts (in thousands of US$)

<table>
<thead>
<tr>
<th>Assets</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash &amp; Equivalents</td>
<td>640.810</td>
<td>987.368</td>
</tr>
<tr>
<td>Other Curr Assets</td>
<td>51.754</td>
<td>192.617</td>
</tr>
<tr>
<td>Other Current Liabilities</td>
<td>174.791</td>
<td>343.936</td>
</tr>
<tr>
<td>Total Net Current assets</td>
<td>517.773</td>
<td>836.049</td>
</tr>
<tr>
<td>Net Fixed assets</td>
<td>246.372</td>
<td>542.807</td>
</tr>
<tr>
<td>Total Net Assets</td>
<td>764.145</td>
<td>1.378.856</td>
</tr>
</tbody>
</table>

| Debt                          | 0      | 47.134 |
| Equit y                       | 764.145| 1.331.722|
| D + E                         | 764.145| 1.378.856|

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# Snap Inc IPO (March 2017)

## Some Financial Facts

<table>
<thead>
<tr>
<th></th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Revenues</td>
<td>58.663</td>
<td>404.482</td>
</tr>
<tr>
<td>CGS</td>
<td>-182.341</td>
<td>-451.660</td>
</tr>
<tr>
<td>Gross Margin</td>
<td>-123.678</td>
<td>-47.178</td>
</tr>
<tr>
<td>Opex</td>
<td>-258.051</td>
<td>-477.775</td>
</tr>
<tr>
<td>EBIT</td>
<td>-381.881</td>
<td>-524.953</td>
</tr>
<tr>
<td>Interest Inc</td>
<td>1.399</td>
<td>4.654</td>
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<tr>
<td>Interest exp</td>
<td>0</td>
<td>-1.424</td>
</tr>
<tr>
<td>EBT</td>
<td>-380.482</td>
<td>-521.723</td>
</tr>
<tr>
<td>Taxes</td>
<td>7.589</td>
<td>7.080</td>
</tr>
<tr>
<td>Net Earnings</td>
<td>-372.893</td>
<td>-514.643</td>
</tr>
</tbody>
</table>

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Snap Inc IPO (March 2017)

Some Financial Facts

<table>
<thead>
<tr>
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<th>2016</th>
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<tbody>
<tr>
<td>FCF</td>
<td></td>
</tr>
<tr>
<td>EBIT</td>
<td>-524.953</td>
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<tr>
<td>Taxes</td>
<td>7.080</td>
</tr>
<tr>
<td>EBIaT</td>
<td>-517.873</td>
</tr>
<tr>
<td>Deprec &amp; Amor</td>
<td>29.115</td>
</tr>
<tr>
<td>FCF from Oper</td>
<td>-488.758</td>
</tr>
<tr>
<td>FCF from Ope WC</td>
<td>-318.276</td>
</tr>
<tr>
<td>Capex</td>
<td>-325.550</td>
</tr>
<tr>
<td>FCF</td>
<td>-1.132.584</td>
</tr>
</tbody>
</table>

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Valuation in a Digital World

Where is Snapchat?

<table>
<thead>
<tr>
<th>High</th>
<th>Breakthrough Innovation</th>
<th>Disruptive Innovation</th>
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<tr>
<td>Market Development</td>
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<td></td>
</tr>
<tr>
<td>Low</td>
<td>Continuity</td>
<td>Incremental Innovation</td>
</tr>
<tr>
<td>Product / Technology Development</td>
<td>Low</td>
<td>High</td>
</tr>
</tbody>
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Snap Inc IPO (March 2017)

IPO at 2nd, March, 2017

Does Snap worth 20 billions?

Or 28 billions?

Accounting value = 1, 3 billions
Snap Inc IPO (March 2017)

IPO at 2nd, March, 2017
It started at 24 $/share
It went to 29 $/share next day
Now in 15 $/share

From 20b to 12.5b
Volume from 217m to 13 m
Snap Inc IPO (March 2017)

Intrinsic value:

Part from FCF
Part from Real Option

What FCF and what type of Option?
## Assumptions

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Revenue</strong></td>
<td>100%</td>
<td>100%</td>
<td>80%</td>
<td>70%</td>
<td>60%</td>
<td>50%</td>
</tr>
<tr>
<td><strong>CGS</strong></td>
<td>100%</td>
<td>90%</td>
<td>80%</td>
<td>70%</td>
<td>70%</td>
<td>70%</td>
</tr>
<tr>
<td><strong>Opex</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R&amp;D</td>
<td>40%</td>
<td>25%</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>Sales&amp;Mark</td>
<td>25%</td>
<td>20%</td>
<td>20%</td>
<td>15%</td>
<td>15%</td>
<td>15%</td>
</tr>
<tr>
<td>Admin</td>
<td>40%</td>
<td>20%</td>
<td>10%</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>105%</td>
<td>65%</td>
<td>35%</td>
<td>25%</td>
<td>25%</td>
<td>25%</td>
</tr>
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<th>6</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Other CA</strong></td>
<td>150</td>
<td>120</td>
<td>90</td>
<td>80</td>
<td>70</td>
<td>60 days of sales</td>
<td></td>
</tr>
<tr>
<td><strong>Other CL</strong></td>
<td>200</td>
<td>150</td>
<td>100</td>
<td>90</td>
<td>90</td>
<td>90 days of CGS</td>
<td></td>
</tr>
<tr>
<td><strong>Capex</strong></td>
<td>50,000</td>
<td>51,500</td>
<td>53,045</td>
<td>54,636</td>
<td>56,275</td>
<td>57,964</td>
<td></td>
</tr>
</tbody>
</table>
Snap Inc IPO (March 2017)

With 20D/80E capital structure
And TV with implicit ROCE of 45.8%

EV = 14.4 billions

With ROCE at 10%

EV = 2.6 billions
Snap Inc IPO (March 2017)

As a Real Option,

Call Option would worth 20,000 only if

Future Price of 40,000
Volatility = 100%
$t = 5 \text{ years}$
Snap Inc IPO (March 2017)

As a reference:

Call Option would worth 10,570 when

Future Price of 30,000
Volatility = 50%
t = 5 years
Snap Inc IPO (March 2017)

In Summary:

EV of Snap Inc coming from FCF: 2.6
EV of Snap Inc coming from RO: 7.2
Total EV of Snap Inc 9.8
Estimated Price: 11.8

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Snap Inc IPO (March 2017)

What happened?
1) Instagram’s reaction: copied features
2) Snapchat users going down: who dominates the market?
3) Dark side of IPOs
Price: 18-29 Currently around 15
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Some Lessons:

1. Focus the valuation.
2. Understand the business idea/model.
3. Do not value as if it would become the only survivor.

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Some Lessons:

4. Analyze market value in terms of intrinsic value.

5. Use the appropriate intrinsic valuation methodology.

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Some Lessons:

6. Understand the initial reasons.

7. Understand technical aspects

8. How to monetize the business model?
   - Microsoft and Skype: features of WhatsApp
   - Be careful with fashions/trends
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What is Digital World?

Digital world is not only digital savvy.
Digital transformation
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Thank you!