 TIM80C  Lecture 16  (5/21/15)

Agenda

1) Review Funding Plan (Lecture 15)

2) Financial Strategy: Ownership, dilution, shares, and valuation

3) End-games for start-up

4) Project
   - Phase III: feedback
   - Phase IV: assignment

5) Roadmap for the rest of the quarter
② Financial Strategy: Ownership, Dilution, Shares, and Valuation

Funding Process: Execute the Funding Plan

Step 1) The owners give up D% of the company.

\[ D\% = \text{dilution in ownership} \]

Step 2) In return for D% of the company (equity), the investors (VCs) provide the company with an investment $I$.

\[ $I = \text{invested capital} \]

Valuation of the Company

D% of the company = $I$

The whole company is therefore: \[ \frac{100\%}{D\%} \times I \]
Definition: Post Money Value

The post money valuation is the value ($) of the company after it receives funding.

Post Money Value = \frac{100\%}{D\%} \times I$

Example

Founders willing to give up 20% of the company for $1M of seed money to develop a prototype of the product.

Dilution D = 20\%
Investment I = $1M

Post Money Value = \frac{100\%}{20\%} \times $1M

\quad = 5 \times $1M
\quad = $5M

After finding the company (startup) will be worth $5M
Definition: Pre Money Valuation

The pre money value of the company is the value ($) of the founder's share of the company.

PreMoney Value = Post Money Value - Investment

\[ \left( \frac{100\%}{D\%} \times $I \right) - $I \]

or

\[ \left( \frac{100\% - D\%}{D\%} \right) \times $I \]

Example

\( D = 20\% \)  \hspace{1cm} Post Money Value = $5M

\( I = \$1M \)

Pre-Money Value = \[ \left( \frac{100\% - 20\%}{20\%} \right) \times $1 \]

= \$4M
Step 3) Decide on the number of shares to issue in order to keep track of ownership.

$$S_t = \text{the total number of shares}$$

The value ($) of \( S_t \) is equal to the Post Money Value of the company:

$$\left[ \frac{100\%}{D\%} \right] \times I = S_t \times \text{price per share}$$

$$\text{price per share} = \left[ \frac{100\%}{D\% \times S_t} \right]$$

Example:

\( D = 20\% \)  
\( I = \$1M \)  
\( \text{Post Money Value} = \$5M \)

The company decides to issue 1M shares.

\( S_t = 1M \)

$$\text{Price per Share} = \left[ \frac{100\% \times \$1M}{20\% \times 1M} \right] = \frac{\$1M}{200K} = \$5$$
Rule of Thumb

In the initial round of funding (seed round)

Price per share = $1 (50 cents to $2)

Series A and Series B price per share will depend on the company.
③ End Games for (Successful) Start-up

1) Become a public company through an Initial Public Offering (IPO)

Advantage: the company now access to trillions of dollars available on securities market (stock, bonds, and other financial products)

Disadvantage: the company is now controlled by a board that is elected by shareholders (everyone who owns stock)

2) Remain a private company (not publicly traded)

Advantage: founders retain more control

Disadvantage: less funding available (consulting and service companies often remain private)

3) Get acquired by a large company (Google, Apple, Facebook, GE, Cisco, Microsoft, etc.)
Phase III: Overall the work on Phase III was good.

General Comments:

- Most groups have a good set of stand-alone strategies (Product Strategy, Market Strategy, Business Strategy). The next step is to integrate all these strategies into a complete business plan.

Example:

Business Goals should match (be consistent) with target market segments.

Conceptual design should be consistent with your competitive strategy.
The cash flow analysis needs to be driven by the product development plan (costs) and the business goals / market strategy (revenues).

Most groups need to firm up the prototyping plan for how they will develop the product.
Phase IV Assignment

1) Complete any backlog of work from Phase I, II, III
   - Conceptual Design & Prototyping Plan
   - Market Strategy
   - Business Strategy
   - Financial Strategy (Cash Flows)

2) Add the Complete Financial Strategy
   - Funding Plan: objectives, source(s)
   - of funding, dilution, ownership, valuation
     Shares of Stock
   - Accounting: Income Statement,
     Balance Sheet
   - Financial (Health) Metrics: RoI, Profit
     Margin, etc

3) Complete Business Plan (Final Draft)
   - Phase III Feedback

4) 10-15 minute presentation for “pitching” your start-up to investor (e.g., VCs)
   - About the Company (1-2 Slides)
   - The product or Service (2-3 Slides)
   - The Market Strategy (1-2 Slides)
   - The Business (Competitive) Strategy (1-2 Slides)
   - The Financial Strategy (2-3 Slides)
Roadmap for the Rest of the Quarter

Tuesday: Guest lecture by Paul Uroemer (5/26) on "What Drives Venture Capital"

Entrepreneur \rightarrow \text{Semi-conductor Industry}

\rightarrow \text{Venture Capital}

PhD Student 3 Equity Based Crowd Equity

Attendance is Mandatory

Thursday: "What it's like to work at 5/28 a Start-up"

Early Stage Start-up: Tom Beckett
(CNC machines)

Mid-Stage Start-up: Tabitha Chew
(Cloud Services)

Late-Stage Start-up: Katrina Thanh
(Social Networking)

Course Closure, lessons learned,
Homework 5, Presentation Sign-ups
Attendance is Mandatory
Tuesday: Project Presentations

Attendance is Mandatory

Thursday: Project Presentations

Final Exam Review (time permitting)

Attendance is Mandatory

Monday: Final Exam 7:30 - 10:30 pm

4/8 (in-class)

HW 5

Project report (Business Plan) due

Attendance is optional but recommended