TIM 80C Lecture 16 5-19-16

(1) - Financial Strategy - Funding Plan

(2) Financial Strategy - Ownership, Dilution, Shares, and valuation

(3) End-games for start-ups

(4) Project - Phase IV assignment

(5) Roadmap for end of quarter

[Recall the previous financial analysis step was to generate the cash flow analysis, income statement, & balance sheet [Lect. 14)]
(also ratios)

(1) Financial Strategy - Funding Plan

The Funding Plan is a time phased plan for when & how The start-up will raise the necessary capital

Process:

(1) Set the funding objectives for 3-5 years (How much capital is needed based on the cash flow analysis.)

"ballpark" examples

Seed Capital ($1M>): develop a prototype

e.g. $100,000 in yr 1

Round A ($10M>): product development

e.g. $2 m. in yr 2

Round B ($100M>): product launch: manufacturing, marketing, customer service, etc.

e.g.: $10M in yr 4

(2) Decide the amount of equity that will be exchanged for funding

Dilution $\triangleq$ % reduction in ownership

EX: to get seed money, you give up 30% of the company
$\Rightarrow$ 30% dilution
(30% is worth \$100,000)

(3) Determine the funding source(s)

(a) Private sources of funding
- founder's personal savings
- friends & family (NOT Recommended)
- angel investors (wealthy individuals looking for high risk - high reward opportunities)

(b) Financial Institutions (Professional Investors)
- Venture Capitalists (Kleiner-Perkins, Andreesen Horowitz)
- Investment Banks (Goldman Sachs, MerrilLynch)

(c) Government Funding
- Defense (DOD, NSA, DARPA)
- Public Research - (NSF, NIH, USEPA, etc.)

(d) Crowd sourcing (generally not for equity)

(e) Large companies (Microsoft, Cisco, IBM, Intel)

(f) Bank Loans (debt, not equity)

(4) Obtain the funding

- Compelling Product Idea (Conceptual design)
- Business Plan (Product Strat., Market St., Business/competitive St., Financial Strat.)
- Prototype/mockup (esp. for VCs)
- Presentation (10-15 Min Pitch)

(2) Financial Strategy - ownership, dilution, shares, and valuation

Funding Process: Execute the Funding Plan

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

$$D\% \triangleq \text{dilution in ownership}$$

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

$$\$I \triangleq \text{invested capital}$$

Valuation of the company

$$D\% \text{ of the company} = \$I$$

The ~~w~~ whole company is therefore

$$\frac{100\%}{D\%} \times \$I$$

Definition: Post Money Value

... is the value ($) of the company after it receives funding.

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

Example

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

D (dilution) = 20%
I (investment) = $1M

$$\text{Post Money Value} = \frac{100\%}{20\%} \times \$1M$$
$$= \$5M$$

After funding, the startup will be worth $5M

Definition: Pre money Value

... the value ($) of the founder's share of the company

Pre Money Value = Post Money Value − Investment

$$= \left[\frac{100\%}{D\%} \times \$\underline{I}\right] - \$\underline{I}$$

Ex: $D = 20\%$ Post Money Value = \$5M

$I = \$1M$

$$\text{Pre-money value} = \left[\frac{100\%}{20\%} \times \$1M\right] - \$1M$$

$$= \$4M$$

Step 3) Decide on the number of shares to issue in order to keep track of ownership

$S_t \triangleq$ the total # of shares

The value ($) of S_t is equal to the post money value of the company.

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

Example

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

Post Money Value = $5M

Company decides to issue 1 M shares

$S_t = 1M$

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

$$\frac{\frac{100\%}{20\%} \times \$1M}{1{,}000{,}000} = \$5/\text{share}$$

Rule of thumb

In the initial round of funding (seed round)

price per share ≈ $1 (50cents - $2)

Series A & Series B price per share depends on the company.

(3) End games for successful start ups

(1) Become a publicly-traded company through an Initial Public Offering (IPO)

advantage: the company now has access to trillions of dollars available on securities markets

disadvantage: the company is now controlled by a Board of Directors elected by and representing shareholders (people who own stock)

(2) Remain a private company

advantage - founders retain more control

disadvantage - less funding available

(3) Get aquired by a large company (Google, Apple, linkedIn, IBM, GE...)

(4) Project Phase 4

Pitch : - 10-15 minute presentation presenting your start-up to the investor (VC)

- 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)

For Notebooks :

Complete Financial Strategy

- Funding Plan - objectives, sources of funding, dilution, ownership, valuation, shares of stock
- Accounting : Income Statement, Balance sheet
- Financial (health) metrics : ROI, Profit Margin, etc.

Complete any backlogged work from phases 1, 2, 3 ; integrate feedback.

(5) Roadmap for the rest of the Quarter

Tuesday - Guest lecture:

Paul Vroomen*

from entrepreneur to VC to

semiconductor industry

PhD student

equity-base crowd funding

Thursday - Final lecture

Tuesday - Presentations*

Thursday - Presentations*

Final Exam