WHO IS SERRA VENTURES?

- Managing four micro-venture capital funds, approximately $75M assets under management
- Have invested in over 70 companies, primarily in the Midwest
- Hands-on approach to working with portfolio companies:
  - Business Development
  - Capital Formation
  - Strategy
Core team has worked together for over a decade
Over 40 years of combined venture capital experience
Strong Midwest network
Experienced startup entrepreneurs
Previous experience with top tier management consulting firms
SERRA TEAM

John Guiliani
Venture Partner

Karin O’Connor
Venture Partner

Eric Wilson
Director of Operations

Alyssa Kolb
Dir of Marketing & Comm

ADVISORS:

Andrew Cittadine
Sanjay Patel, PhD
Chris Harbourt, PhD
Brad Sheafe

11/20/18
TIM’S BUSINESS VALUATION BACKGROUND

- Formerly an Accredited Senior Appraiser, American Society of Appraisers.
- McGladrey & Pullen Firmwide Business Valuation Director.
- Author, McGladrey & Pullen Business Valuation Practice Aid.
- Member, National AICPA Committee on Business Valuation Services.
- Over 500 business valuation projects.
Raising Capital: At What Value Will the Investment Take Place?

Stock Option Plans: At What Value will Options Be Granted?

Shareholder Buy-Out: At What Value will the Parties Agree to Buy Out Each Other?

Sale/Liquidity Event: What Proceeds Can Be Expected?
BUSINESS VALUATION DEFINED

Using a combination of analytical techniques, methodologies and common sense to determine the fair market value of a business enterprise.

- The ultimate test of accuracy/validity of a business valuation is: AT WHAT VALUE DOES AN ACTUAL TRANSACTION CONSUMMATE?
- When a willing buyer and willing seller, neither acting under compulsion, come to an agreement on value, that meets the ultimate test.
- Everything else is conjecture, speculation, negotiation and posturing.
VALUATION PERSPECTIVES

Entrepreneur’s Perspective:
  ▪ How much is my company worth?
  ▪ What are the unique, tangible and intangible assets (value components) we have to offer?
  ▪ What % of the business are we willing to give up in exchange for investment?

Investor’s Perspective:
  ▪ How much should I pay for this investment opportunity?
  ▪ Can I earn an appropriate return on investment (ROI) to justify the risk being taken?
  ▪ Is it possible to scale this company to achieve a 10X increase in today's value?
WHO’S ON FIRST?

- In most situations, the funder/investor will “move first” to propose a valuation.
- In other situations, they may ask for your valuation.
- This often becomes a KEY POINT of negotiation in funding a company.
- Concessions made on VALUATION may be counter-balanced in negotiation of deal TERMS.
Valuation is only one term to be negotiated in an investment deal.

Typical terms include:
- Liquidation preference
- Dividends
- Warrants
- Board seat or observation rights
- Founder vesting
- Protective provisions
- Redemption rights
Pre-Money Valuation: Value of everything to date and the value of the idea going forward.

Investment: Money required to realize opportunity.

Post-Money Valuation: What the company is worth funded.
VALUATION - TERMINOLOGY

Pre-Money Valuation + Investment = Post-Money Valuation

Pre-Money Valuation = $1.5m 75%

Investment = $0.5m 25%

Post-Money Valuation = $2.0m 100%
## Valuation Sensitivity

<table>
<thead>
<tr>
<th>Pre-Money Valuation</th>
<th>Investment</th>
<th>Post-Money Valuation</th>
</tr>
</thead>
<tbody>
<tr>
<td>$3,400,000</td>
<td>$600,000</td>
<td>$4,000,000</td>
</tr>
<tr>
<td>85.0%</td>
<td>15.0%</td>
<td>100.0%</td>
</tr>
<tr>
<td>$2,400,000</td>
<td>$600,000</td>
<td>$3,000,000</td>
</tr>
<tr>
<td>80.0%</td>
<td>20.0%</td>
<td>100.0%</td>
</tr>
<tr>
<td>$1,800,000</td>
<td>$600,000</td>
<td>$2,400,000</td>
</tr>
<tr>
<td>75.0%</td>
<td>25.0%</td>
<td>100.0%</td>
</tr>
<tr>
<td>$1,400,000</td>
<td>$600,000</td>
<td>$2,000,000</td>
</tr>
<tr>
<td>70.0%</td>
<td>30.0%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

11/20/18
BUSINESS VALUATION: ART VS. SCIENCE

Causes of Climate Change:
- Sunspot cycle length
- Temperature anomaly
- CO₂ Concentration
TRADITIONAL BUSINESS VALUATION METHODOLOGIES

INCOME

MARKET

ASSET
These methods value a business based on its expected income or cash flow stream.

Two most common measures of "income" are Sales Revenue and Earnings Before Interest, Taxes, Depreciation & Amortization (EBITDA)

May use history (in some cases) as a base-line predictor of the future.

Often involves preparation of detailed financial projections.

Involves determination of some kind of RATE or MULTIPLIER to be applied against the selected income stream.
INCOME METHODOLOGY EXAMPLE:

EBITDA MULTIPLIER

- EBITDA = $300,000
- Industry multiplier range = 3 to 5 x EBITDA
- Valuator selects 4x as the multiplier based on analysis of company tangibles and intangibles
- Calculation:
  
  $300,000 \times 4.0 = $1,200,000 \text{ Entity Value}$
Valuator selects discount rate of 25% based on analysis of all company factors; prepares cash flow projections

<table>
<thead>
<tr>
<th>Projected Cash Flow</th>
<th>25% Discount Factor</th>
<th>Calculation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 1 = ($100,000)</td>
<td>.80</td>
<td>($80,000)</td>
</tr>
<tr>
<td>Year 2 = $0</td>
<td>.64</td>
<td>0</td>
</tr>
<tr>
<td>Year 3 = $150,000</td>
<td>.512</td>
<td>76,800</td>
</tr>
<tr>
<td>Year 4 = $425,000</td>
<td>.4096</td>
<td>174,080</td>
</tr>
<tr>
<td>Year 5 = $600,000</td>
<td>.3277</td>
<td>196,620</td>
</tr>
<tr>
<td>Year 6 &amp; Beyond = $1,000,000</td>
<td>(divide by .25) x .3277</td>
<td>$1,310,800</td>
</tr>
<tr>
<td>Deduct Debt</td>
<td></td>
<td>($150,000)</td>
</tr>
<tr>
<td>DCF Value</td>
<td></td>
<td>$1,528,300</td>
</tr>
</tbody>
</table>

Terminal value ($1,000,000/.25) x .3277 = $1,310,800
Calculation: DCF Sum = ($367,500) + Terminal value ($1,310,800) – Debt ($150,000) = $1,528,300 Entity Value
MARKET METHODOLOGIES

- These methods value a business based on comparison to similar companies or portions of companies being bought/sold in the marketplace.

- Requires access to information on COMPARABLE sales or sales of shares in companies which are sufficiently similar to the subject company.

- Very difficult to find true comparables, especially for start-ups

- Involves determination of some kind of RATE or MULTIPLIER from the comparable data, which is then applied against a selected income stream (as in the Income Methodologies).
MARKET METHODOLOGY EXAMPLE

- Net Revenue of Company $1,600,000
- Average Price/Revenue Ratios of Selected Publicly Traded Comparable Companies is 2.5
- Valuator applies Discount for Lack of Marketability of 40%

Calculation:

\[ \text{Entity Value} = 1,600,000 \times 2.5 \times (1 - 0.40) = 2,400,000 \]
These methods value a business based on the value of the assets.

Common asset methods include the Book Value Method, Adjusted Book Value Method, Replacement Value Method and Liquidation Method.

Can often be used to calculate a FLOOR value.

Not terribly meaningful in most operating company situations.
## ASSET METHODOLOGY EXAMPLE

<table>
<thead>
<tr>
<th></th>
<th>Book Value</th>
<th>Adjustment</th>
<th>Adj. Book Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td>50,000</td>
<td>--</td>
<td>50,000</td>
</tr>
<tr>
<td>Accounts Receivable</td>
<td>250,000</td>
<td>(40,000)</td>
<td>210,000</td>
</tr>
<tr>
<td>Inventory</td>
<td>175,000</td>
<td>(20,000)</td>
<td>155,000</td>
</tr>
<tr>
<td>Fixed Assets</td>
<td>300,000</td>
<td>400,000</td>
<td>700,000</td>
</tr>
<tr>
<td>Intangible Assets</td>
<td>0</td>
<td>100,000</td>
<td>100,000</td>
</tr>
<tr>
<td><strong>Total Assets</strong></td>
<td><strong>775,000</strong></td>
<td><strong>440,000</strong></td>
<td><strong>1,215,000</strong></td>
</tr>
<tr>
<td>Accounts Payable</td>
<td>75,000</td>
<td></td>
<td>75,000</td>
</tr>
<tr>
<td>Long Term Debt</td>
<td>300,000</td>
<td></td>
<td>300,000</td>
</tr>
<tr>
<td><strong>Total Liabilities</strong></td>
<td><strong>375,000</strong></td>
<td><strong>0</strong></td>
<td><strong>375,000</strong></td>
</tr>
<tr>
<td><strong>Net Equity</strong></td>
<td><strong>$400,000</strong></td>
<td></td>
<td><strong>$840,000</strong></td>
</tr>
</tbody>
</table>
"RULES OF THUMB" METHODOLOGIES

- Differ from industry to industry
- Can be somewhat useful
- Need to be tested against other methods

An example:
Guy Kawasaki’s Law of Pre-Money Valuation

- For Each Engineer add $500,000
- For Each MBA subtract $250,000
Traditional valuation methods are very difficult to apply to start-ups:

- Often, no revenue or EBITDA metrics; insufficient history
- No meaningful “comparables”
- Income/cash flow projections are very difficult or are suspect
## A Pre-Revenue, Pre-EBITDA Valuation Model for Start-Ups

<table>
<thead>
<tr>
<th>Key Factor</th>
<th>Rating</th>
<th>Value Assigned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Team with tech and business talent; Experience a plus.</td>
<td>0 to 5</td>
<td>$0 - $500,000</td>
</tr>
<tr>
<td>Large scale market opportunity; Demonstrated customer need and interest.</td>
<td>0 to 5</td>
<td>$0 - $500,000</td>
</tr>
<tr>
<td>Disruptive technology; Novel I/P with freedom to operate.</td>
<td>0 to 5</td>
<td>$0 - $500,000</td>
</tr>
<tr>
<td>Evaluation of Risks/Intangibles.</td>
<td>0 to 5</td>
<td>$0 - $500,000</td>
</tr>
</tbody>
</table>
START UP RISKS FACED

- TECHNOLOGY RISK
- EXECUTION RISK
- FINANCIAL RISK
- I/P FREEDOM-TO-OPERATE, COMPETITIVE RISK
- MARKET RISK
There are always exceptions to the model!

Supply and demand of funding impacts the range of $0 to $500,000 assigned to each element of the model.

A combination of the “right stuff” inherent in the start-up can impact the model.

The ultimate test of “fair market value” is a willing buyer and willing seller coming to mutual agreement.
VALUATION TIPS AND TRAPS

- Understand that the Market for Start-up Capital is what ultimately sets your value
- Be flexible and willing to negotiate value with investors
- Remember that valuation is only one element of a successful term sheet for funding....it's called a term sheet for a reason!
- A over-valued first round of financing can really mess things up down the road
- Seek professional guidance in establishing your valuation expectations
CONTACT INFORMATION

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