

Session 12

Stock Options



Agenda

- **Barbara Arneson Case**
- **Stock Options**



Barbara Arneson Case

- What is the number of shares outstanding at BioGene as of May 31, 2006?
 - What is its current PE ratio?
 - Why do you think it is higher than the current average of other bioinformatics companies
- What is Barbara's % ownership in each firm?
- Compare the firms in 4 years when the stock options will be fully vested.
 - Assuming Barbara remains employed which stock option offer is better?
- What other factors would you suggest Barbara consider in making her decision?



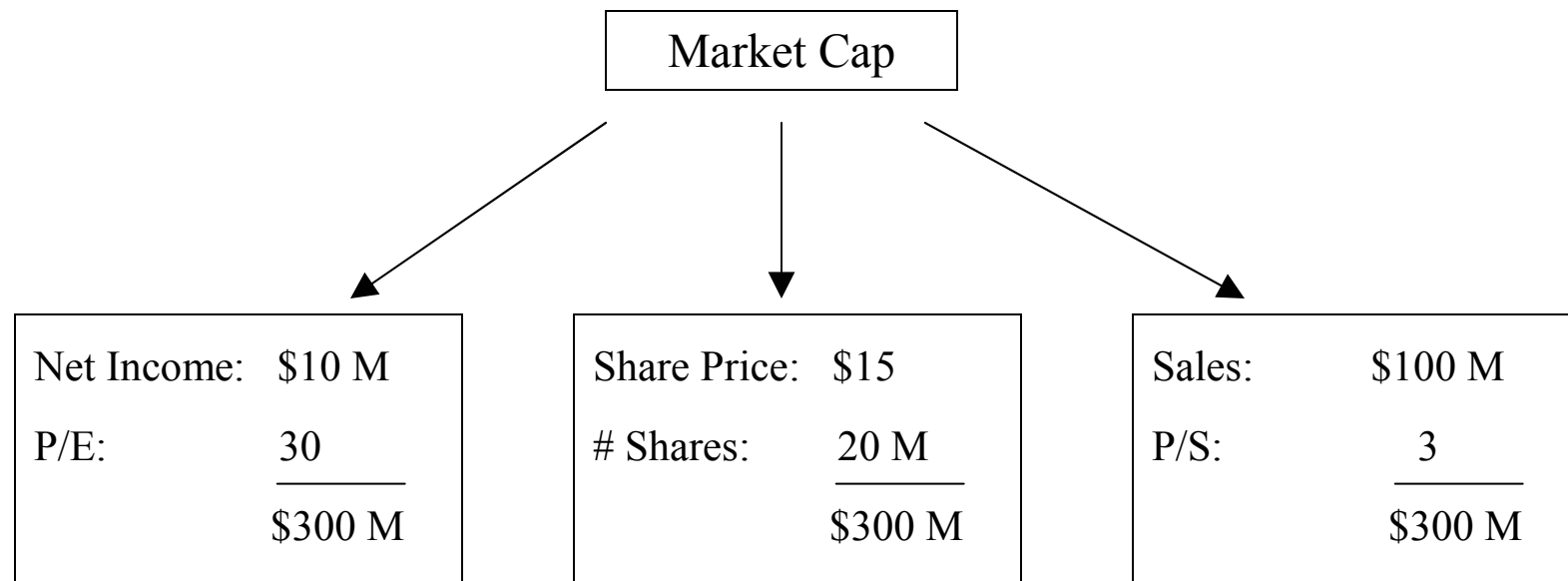
Barbara Arneson Case

Case Analysis

All other factors being equal, and based on the stock option packages only, I would accept the (BioGene/InterWeb -- choose only one) offer because ...



Metrics in Action



Source: Prof. Tom Byers: Stanford



Metrics Calculation

Public Company Info:

(must be filed with SEC)

Sales:	\$100 M
Net Income:	\$10 M
Shares Outstanding:	20 M
Stock Price:	\$15

We can calculate:

EPS:	
P/E:	
P/S:	
Market Cap:	

Source: Prof. Tom Byers: Stanford



Metrics Calculation

Public Company Info:

(must be filed with SEC)

Sales:	\$100 M
Net Income:	\$10 M
Shares Outstanding:	20 M
Stock Price:	\$15

We can calculate:

EPS:	\$0.50
P/E:	30
P/S:	3
Market Cap:	300

Source: Prof. Tom Byers: Stanford



Stock Options



SEE REVERSE SIDE FOR RESTRICTIVE LEGEND(S)

Number CS-21

3,333 Shares

STARTUPS.COM, INC.
A Delaware Corporation

THIS
Three (3,333)
books of Co
endorsed or

This
Certificate o
on file at th
Incorporatio
acceptance l

The
preferences and relative, participating, optional or other special rights of each class of stock or series thereof and the
qualifications, limitations or restrictions of such preferences and/or rights.

WITNESS the Seal of the corporation and the signatures of its duly authorized officers this 16th day of July,
2001.


Thomas H. Tobiason, Secretary


Donna R. Jensen, President

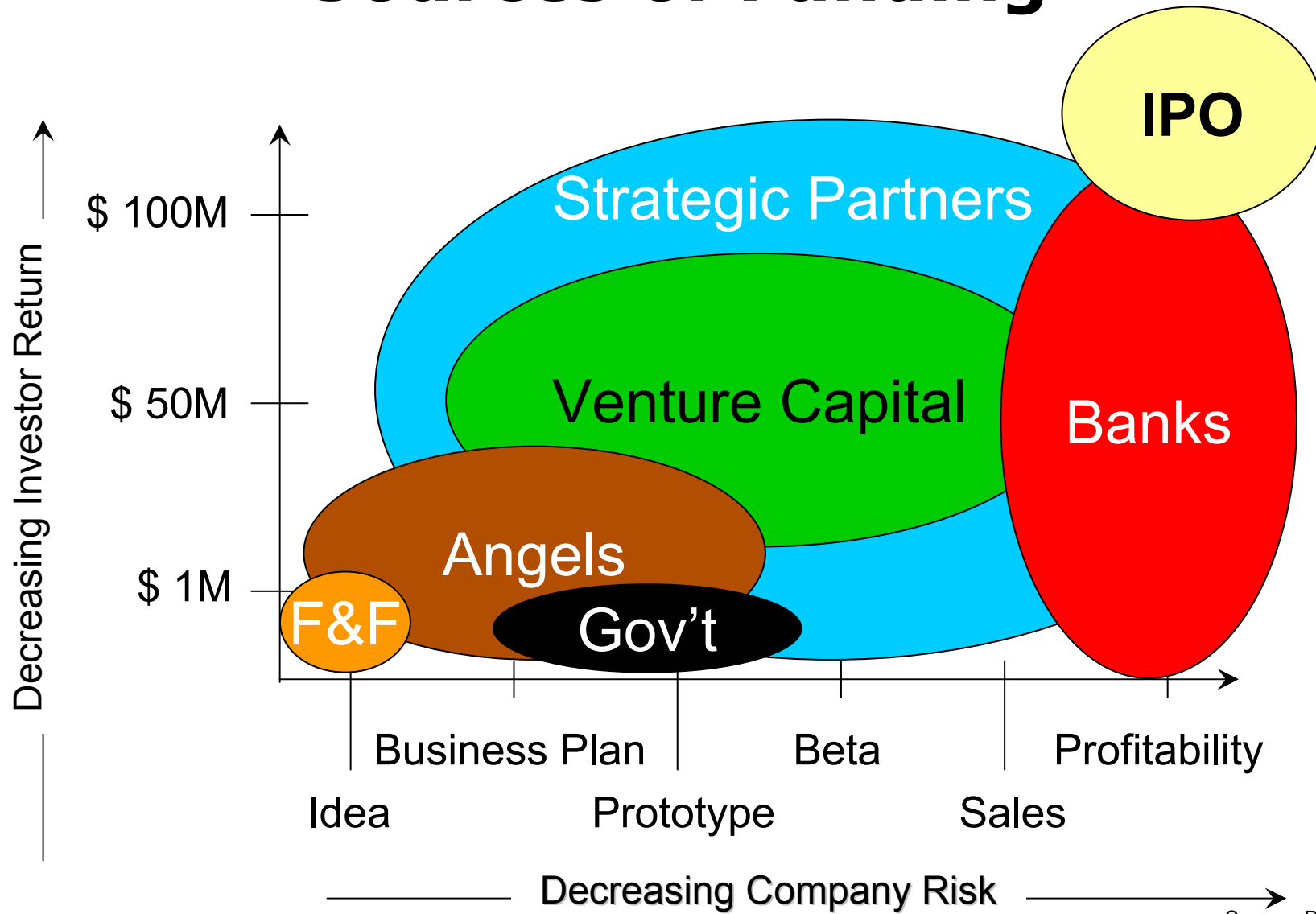
•Worthless Paper
Or
•\$100 Million

Three Hundred Thirty
transferable only on the
this certificate properly

all the provisions of the
copy of each of which is
as of the Certificate of
of this certificate, by

powers, designations,

Sources of Funding



Source: David M. Lee

What's this Stock Stuff?

- **Why does everyone want it?**
 - Finance the company before it's profitable
 - Obscene returns for "risk capital"
 - "Combat pay" for founders and employees
- **How do you get it?**
 - Invest money
 - Start the company
 - Work at the company
 - Buy stock at when it is publically traded



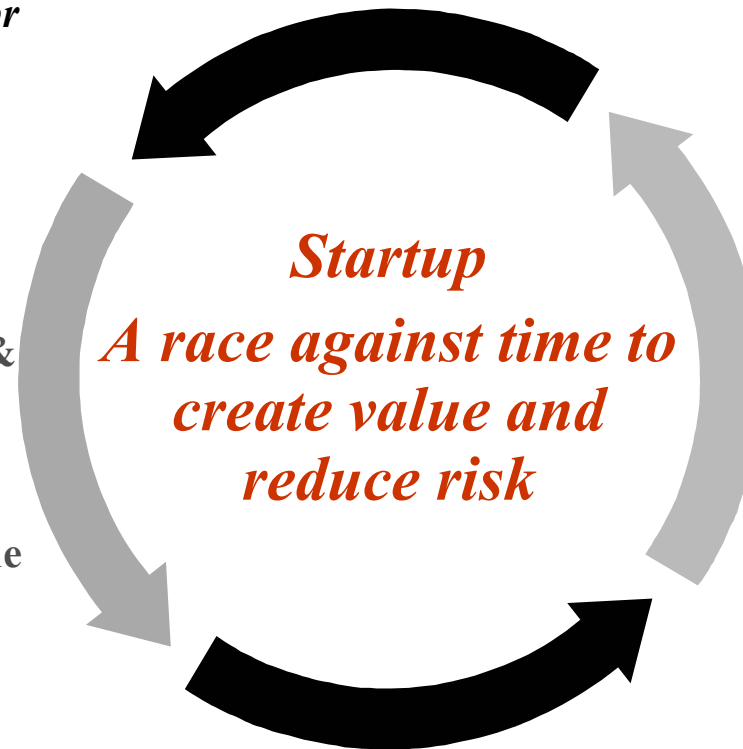
(1) Founding:

An **entrepreneur begins with** a vision and **shares of stock** in the new venture.

Entrepreneur trades stock for ideas, money, and people

(2) Seed Stage:

- Venture capitalists **provide money in return for stock**
- Employees join via friends & associates in return for cash salary and stock options
- Ideas become intellectual property which represents the initial value in the company



(4) Exit Stage:

- Company files for IPO
- Entrepreneur, investors, and employees can cash in stock for money
- A viable public company has been created
- Each party continues to build the company, retires, or starts the game again

(3) Growth Stage:

More money, ideas, and people are obtained, **but for much less stock** than in the earlier stage due to lower risk

Reference: Start-Up by Jerry Kaplan

Source: Prof. Tom Byers: Stanford

VC John Doerr of KPCB

Q. What is the most important part of any business plan?



A. "I always turn to the bios of the team first. For me, it's **team, team, team. Others might say, people, people, people -- but I'm interested in the team as a whole."**

Why Stock Options in a Startup?

- **Aligns Everyone's Interest to Liquidity**
 - ties compensation to collective success
 - Provide incentives to employees to work harder
 - Motivation for the potential big payoff
 - Team spirit everyone with "skin in the game"
- **Conserves cash**
 - Conserve cash – cash is king for startups
 - Allows start-ups to be competitive with established companies
- **Retention**
 - Vesting is like drugs



Common vs. Preferred Stock

- **“Preferred” is what investors buy**
 - has preference on liquidation
 - Usually has cumulative dividend rights
 - Converts to common at "exit"
 - Make aggressive promises, don't perform, and you pay
 - » Via anti-dilution rights
- **“Common” for founders and employees**
- **Why the distinction?**
 - Outside investors demand special rights
 - Justifies lower price for common – avoids...
 - » Tax problems
 - » Accounting problems



Common: Employee Stock

- **Lesser Rights than preferred**
 - Preferred gets their money back 1st (and then some)
 - Other rights
- **Acquired by:**
 - Founders' shares (outright ownership)
 - Stock grants
 - Stock Options
 - » Incentive Stock Options (ISO)
 - » Non-qualifying (NQ)
 - Common Price set by 409A analysis



Pricing Common Stock Options

- **For public companies – current market value**
 - Different specific methods, but basically a ten day trailing average
- **For private companies**
 - With venture backed firms, can use $\geq 10\%$ of last round price
 - Then 409a requires independent audit
 - » ISO's are exempt



Stock “Vesting”

- **“Golden Hand-Cuffs”**
 - Forced servitude
 - You have to stay to receive all your stock
- **Reinforces the idea that company’s value is built going forward**
- **Avoid “free riders”**
 - e.g. co-founder leaves; you keep working

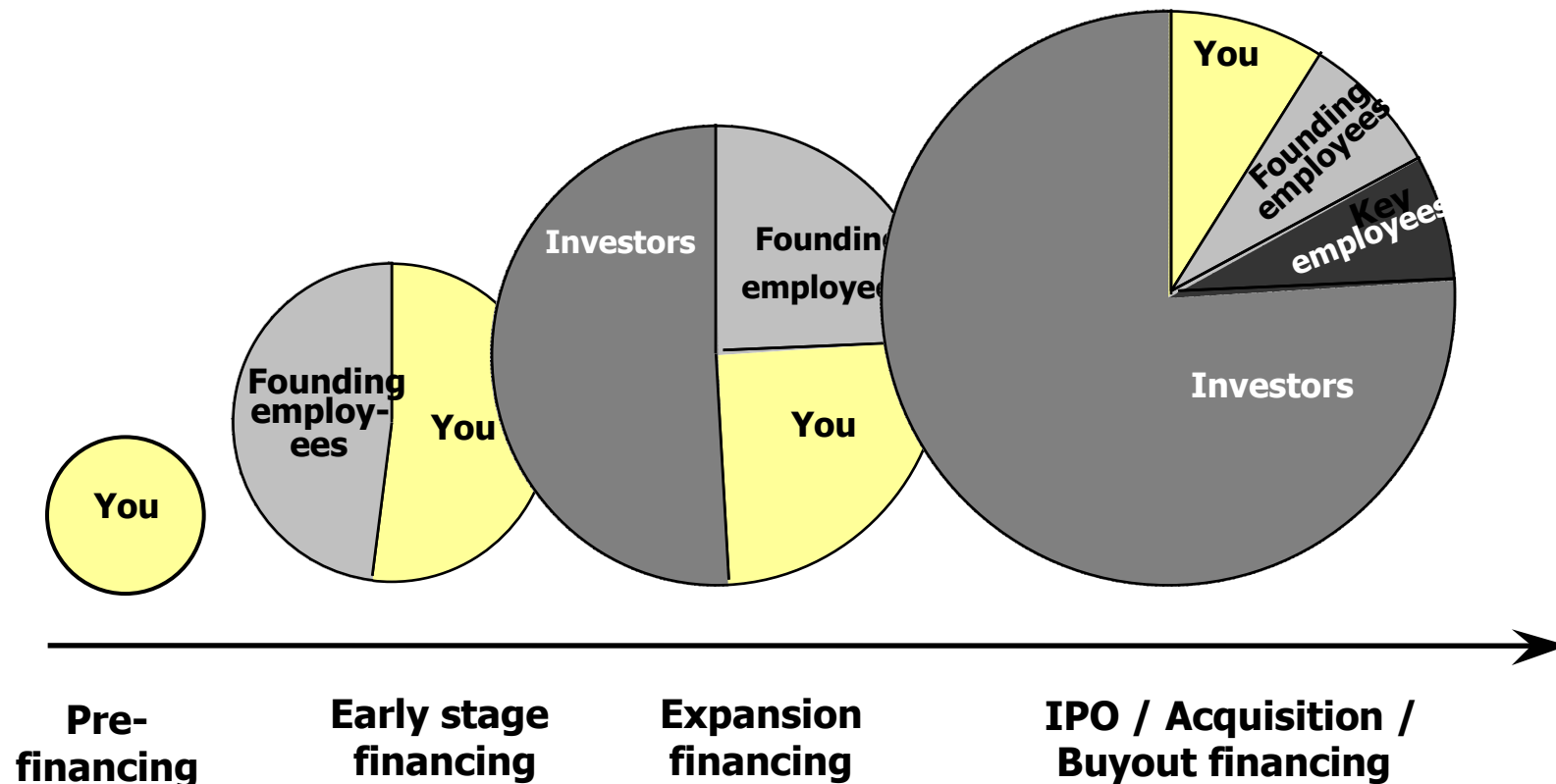


Vesting Schedule

- **Total vesting time**
 - Typically 3-5 years; 4 is typical
- **The “cliff”**
 - Period of time during which none of the stock (or options) vests. Typically the 1st year
- **Monthly vesting**
 - % of the stock which vests at the end of each month. Depends upon total vesting time.

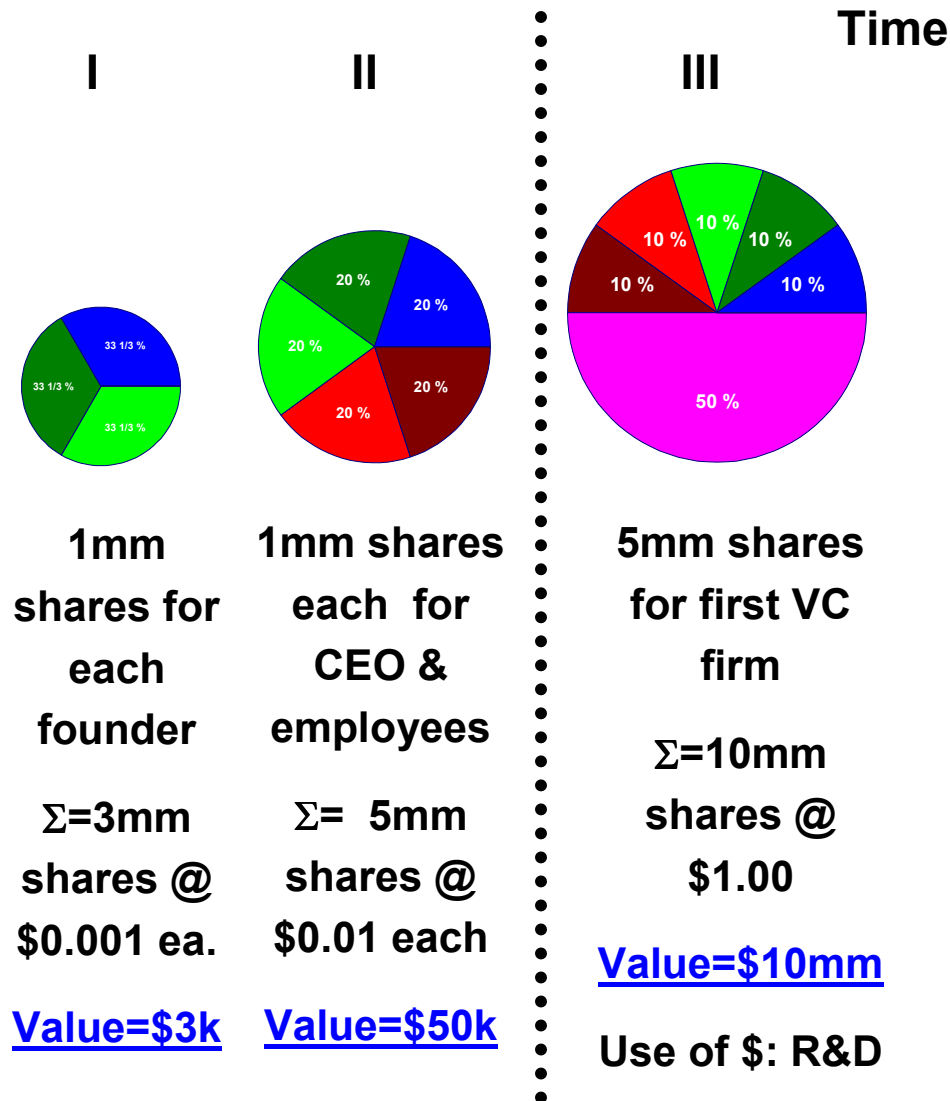


Dividing Up the Stock Pie!



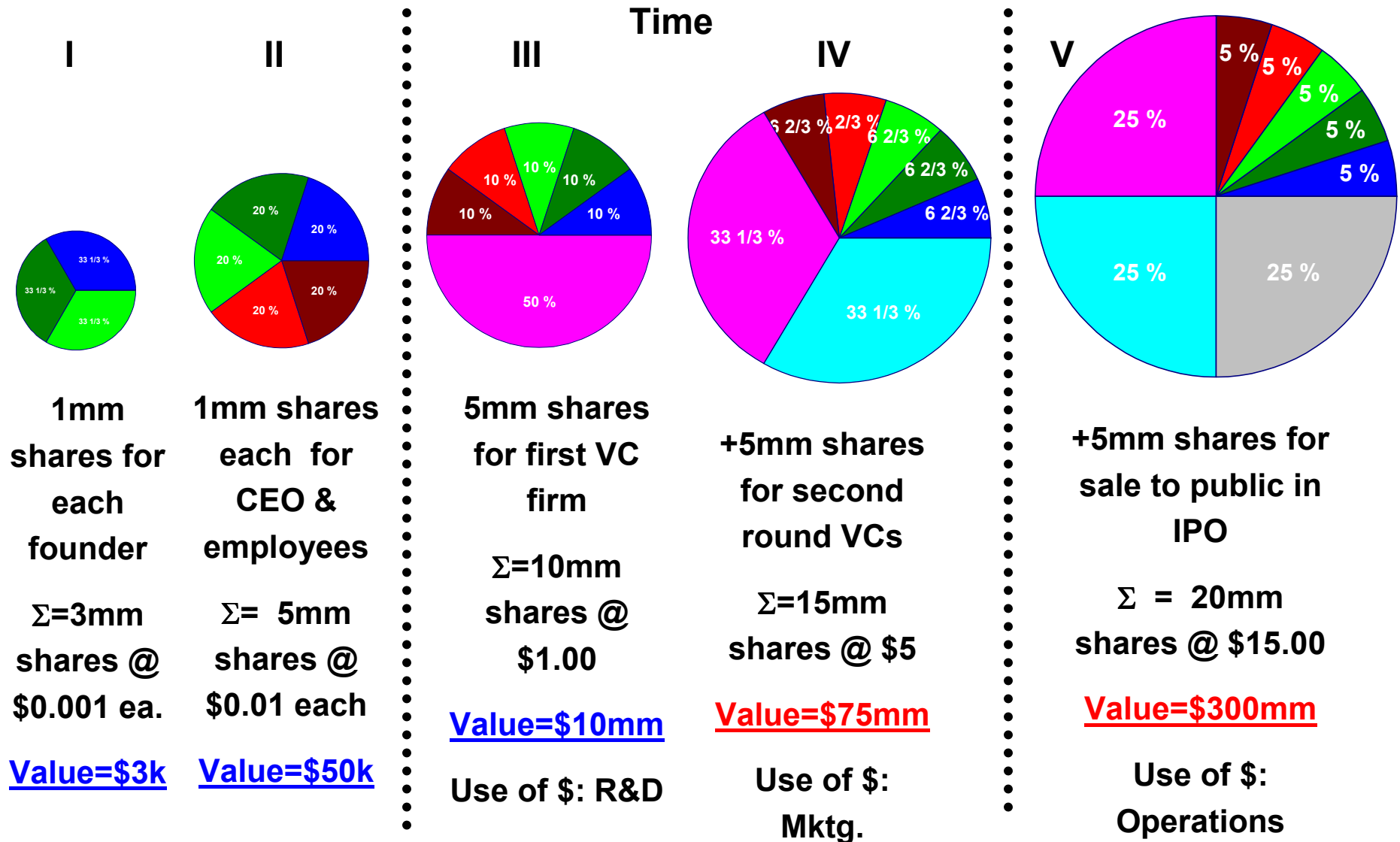
Source: Prof. Tom Byers: Stanford

Venture Finance



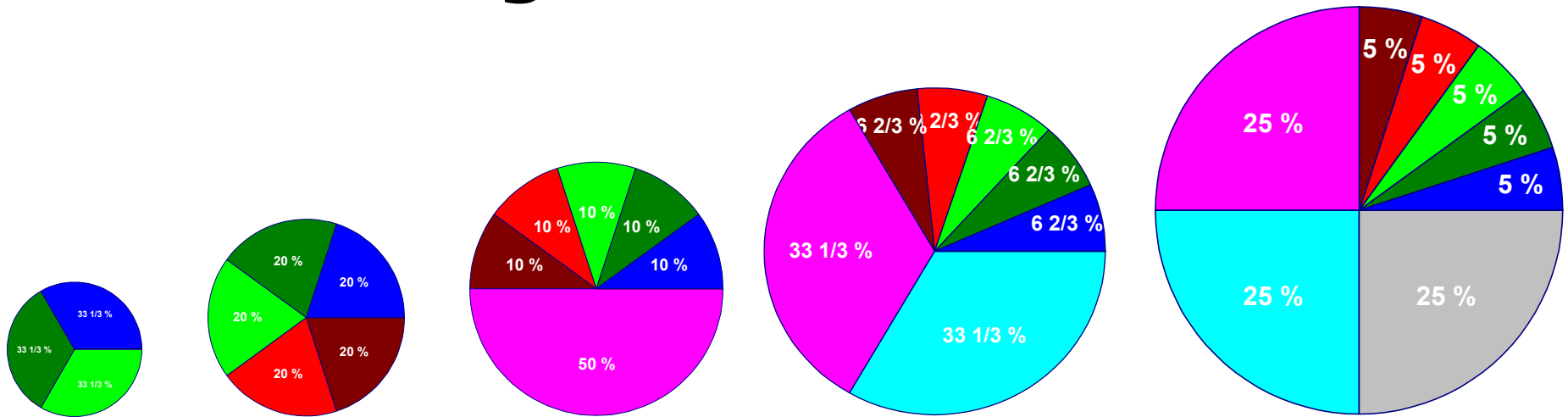
Source: Prof. Tom Byers: Stanford

Venture Finance



Source: Prof. Tom Byers: Stanford

Growing The Valuation Pie



- **Goal: Trade shares to grow the pie**
- **Requires high growth rates**
- **Not easy to achieve, even with lots of financing**
- **Requires a good relationship between entrepreneur and investors**

Source: Prof. Tom Byers: Stanford

How Do I “Split” Founders Equity?

- **Equally?**
- **Formula?**
 - Based on front-end contribution
 - Based on life-time contribution
 - Based on title?
- **Typically founder stock is purchased outright upon incorporation (rather than grant options)**
 - Tax benefits
 - Avoid potential pricing risks with options



How About Early Hires

- **How much do they get?**
- **How do they get it?**
 - The Option Pool



Do Advisors Get Stock?

- **Advisors part of your “eco-system”**
 - bring expertise, contacts, experience and credibility
 - Industry experts
 - Legal counsel
- **Advisor Compensation**
 - Company specific; wide range .1% to 1.0% post Series A
 - » depends upon involvement/contribution
 - Vest monthly over 3 years, no cliff
 - Full acceleration upon change of control



How Much Equity Do You End Up With?

- **At IPO/M&A**

- CEO 5%
- VP 1-2%
- CFO 0.5%



What Else Should I Know?

- Price
- Liquidation Preference
- Board of Directors
- Protective Provisions
- Drag Along
- Anti-Dilution
- Pay-to-Play
- Dividends
- Redemption Rights
- Conversion
- Conditions Precedent to Financing
- Vesting
- Information Rights
- Registration Rights
- Right of First Refusal
- Voting Rights
- Employee Pool
- Restriction on Sales
- Proprietary Information and Inventions Agreement
- Co-Sale Agreement
- Founders Activities
- Initial Public Offering Shares Purchase
- No Shop Agreement (also Unilateral or Serial Monogamy)
- Indemnification
- Assignment

Read: http://www.feld.com/blog/archives/term_sheet/



What is a Stock Option Pool?



- **It's Stock for the rest of us**
- **Generally 10% - 25% of the overall equity**
 - Depends upon stage of the company
 - Depends upon how many founders are part of management
 - Depends upon how much additional funding is required

Authorized and Outstanding Shares

- **Authorized**
 - # of shares you can issue
 - » N/A for valuation or % ownership calcs
- **Outstanding**
 - Same as "Issued"
 - number of shares granted or purchased



How much Do I Pay for Founder Stock?

- **You make a judgment about the company value**
- **Your Purchase the stock early when value presumptively low**
 - If vesting, make 83(b) elections to avoid possible bad tax consequences
 - Allows you to "pay taxes now" on founders stock ¢
 - Means you don't have to pay \$\$ taxes when stock could be worth tons — only pay taxes later if stock is sold
- **Founders should always elect 83(b)**
 - Many don't



Company Valuation

- **Pre-money defined**
- **Post-money defined**
- **Rule of thumb**
 - ~\$3-5 million is pre-money valuation for a start-up with a good management team, a hot market w/ identified customers, and a "protected" product



What is a Pre-money Valuation?

1,000,000 shares outstanding:

300,000 sold for \$0.01/share	\$3,000 (founder's common shares)
700,000 sold for \$1.00/share	\$700,000 (preferred shares)
<i>Total paid-in-equity</i>	<i>\$703,000</i>

If new investors willing to pay \$2.00/share
pre-money valuation is \$2,000,000
(\$2 x 1,000,000 shares)



What is a Post-money Valuation?

1,000,000 shares outstanding:

New investors willing to pay

\$2.00/share, for 1 million new shares (\$2,000,000).

Total paid-in-equity is now \$2,703,000

Post-money valuation = number of shares outstanding * last price
(1,000,000 old shares + 1,000,000 new shares)
= 2,000,000 * \$2/share =
\$4,000,000 *post money valuation*



Two Types of Common Stock Options

- **Incentive Stock Options: ISO's**
- **Non-Qualified Stock Options: NSO's**



Incentive Stock Options (ISO)

- Offered at market value
- Vest over N years, usually annually
 - No tax liability upon exercise.
- Easy to exercise



Non-Qualified Stock Options (NSO's)

- Can be priced below market value
- Tax liability at exercise
- Difficult for employees and ex-employees to exercise shares before exit event, because of large tax bill
- Maintains small number of share holders
- Can be given to anyone (partners, consultants, board members, etc.)

