290T: The Business of Software: Valuation and Start-up Strategies

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Class News

- **Sorry, can't make my office hour this week 3-4PM Tuesday, I'll move it to Wed 2-3PM**

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Valuation

- **The key common element between these:**

Start-up/ Entry

Valuation

Exit

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Valuable Business Skills

1. **The ability to predict the future**
2. **The ability to judge people**
3. **The ability to identify the value (and its direction arrow) of a technology, product, company, market or industry**
4. **The ability to develop a valuable technology, product, company, market or industry**

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So, let’s get started!

How do we value these?

- **A pen?**
  - **The cost to replace it**
- **A diamond?**
  - **Table look up on size, cut, index of refraction, color (the 4C’s)**
- **An oil well?**
  - **The value of seven years production**
- **A year of your work life**
  - **Comparable salaries**
  - **Opportunity cost!!!**

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So, let’s get started!

How do we value these?

- **A house?**
  - **Market comparison (comparables)**
  - **Cost of land and construction**
  - **Income:**
    - **Estimated_rental_income – mortgage - taxes – maintenance * 12 * 30**
    - **Includes: risk, maintenance**

  - **What other factors could affect the sale?**
    - **Unique features of the property (house provides access to other valuable property)**
    - **Disposition of buyers**
    - **Disposition of sellers**

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Buyers and Sellers

- How many sellers have a comparable product?
- Disposition of seller
  - Doesn’t want to sell
  - Willing to sell, but in no hurry
  - In the mood to sell
  - Anxious to sell
- How many buyers are there?
- Disposition of the buyer
  - Disinterested
  - Interested, but passively so
  - Actively interested
  - MUST HAVE!

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Why do we need to value start-ups?

- To raise capital
  - Invested capital buys some portion of company
  - Need to value start-up to determine how much money will buy
  - For example: myNewStartup, Inc. wants to raise $3mm
    - At a pre-money valuation of $7mm, investors will buy $3mm/($7mm + $3mm) = 30% of myNewStartup
    - At a pre-money valuation of $17mm, investors will buy $3mm/($17mm + $3mm) = 15% of myNewStartup
- For an exit
  - How much should we price myNewStartup, Inc.’s IPO at?
  - How much should we offer to buy myNewStartup, Inc.?

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How do you value a SW start-up?

- Cost of engineering effort involved in SW so far
- Market opportunity
  - Could use discounted-cash flow here but too many uncertain variables
    - Risk
    - Market size
    - Growth rate
- Comparables:
  - Team
  - Track record
- Disposition of sellers
  - The start-up team – it's selling a piece of equity in its company
  - The more choosey (time and money at your disposal) you can be, the better will be your valuation
- Disposition of buyers
  - Angels
  - VCs

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Angels

- Individual investors investing in start-up companies
- Who are they?
  - Most often, individuals who have been successful in other companies/start-ups and have income to invest
- What do they do?
  - Provide initial capital ($50K to $1M) to start-up teams
- Why do they do it?
  - They are looking to further increase their wealth, network, fun, by getting involved in other start-ups

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Angels Buying Behaviors

- Angels are almost always "mildly interested" to "actively interested" buyers
- Never seen one angel compete with another for a piece of a company
- Angels are looking to make money, put their expertise to work, have fun …

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Myths About Angels

- Myths:
  - Angel money is "cheaper" than venture capital – i.e. for the same amount of $$ angels will take less
  - Angel money is easier than venture capital – i.e. for the same amount of money angels will do less due diligence
  - Angels will invest smaller amounts than VCs will
    - Given an amount, e.g. $250K, that you want, you can always find a VC firm that is comfortable making that size investment
  - All of this depends, on the average it may be true but the standard deviation is large

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Advantages of Angels

- **Real advantages of angels:**
  - **The quality of their advice and network relative to the investment**
  - **$ for $ typically better endorsement of idea than VC money**
  - **Their greater willingness to get involved in *very* early stage deals – i.e. create a company**

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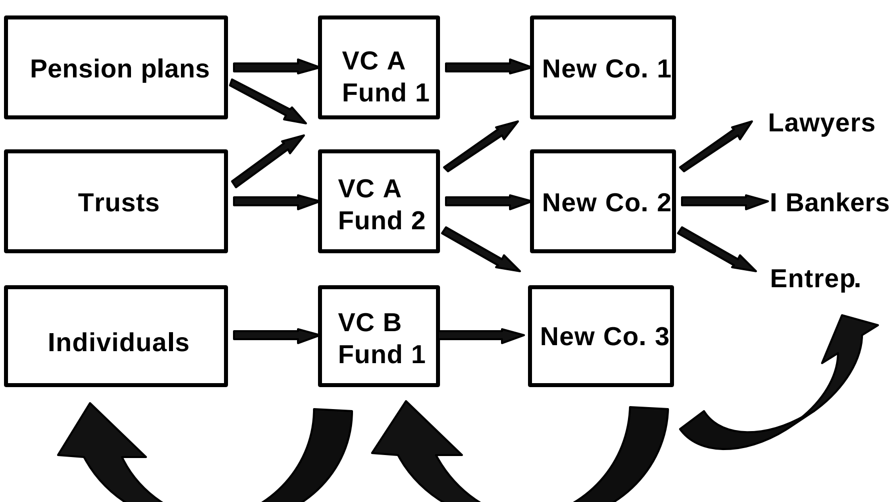
The VC Ecosystem



Drew Isaacs

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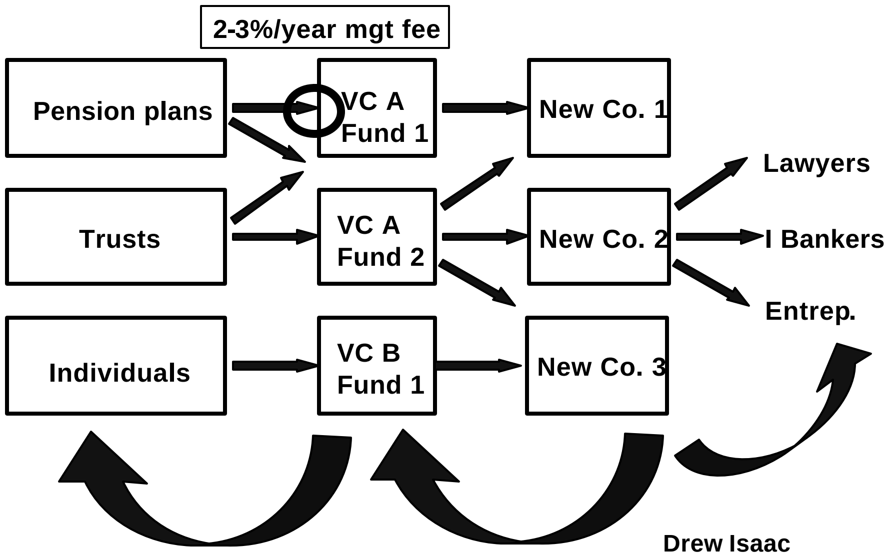
How VCs Pay Their Bills



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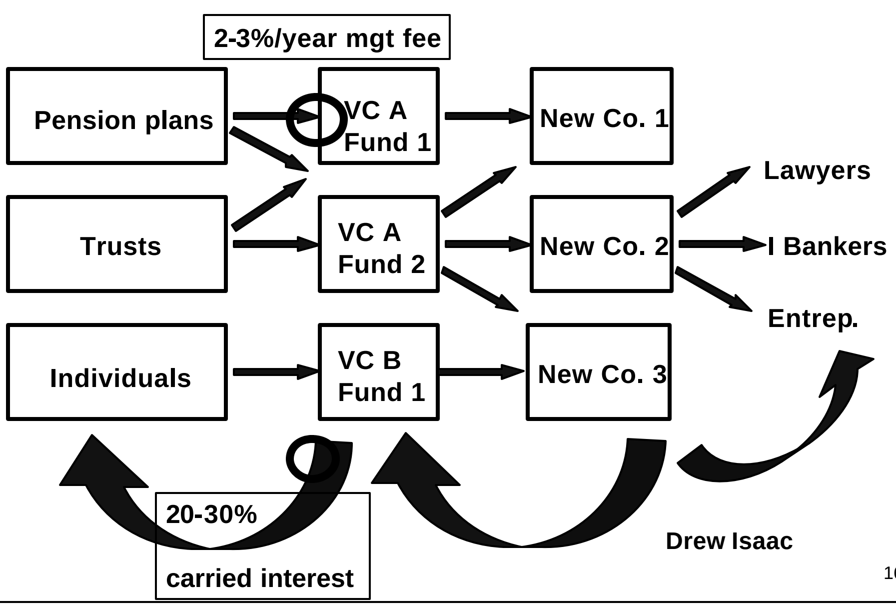
How VCs Make Big Money



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Variable Elements of the Model

- Management fee
  - 2-3%/year of assets under management
  - Life of fund can be 8-12 years
- Carried interest (aka ‘carry’ or ‘promote’)
  - 15 - 30% of fund’s profits
  - Limited Partners are first returned their capital + hurdle rate (sometimes)
  - Paid out as individual companies liquidate (IPO, acquisition, liquidation)
- Example: $250mm fund
  - Management fee: 2% = $5mm/year
  - Carried interest @ 20% (assuming no hurdle)
    - If fund grows to $400mm: $30mm
    - If fund grows to $1bn: $150mm
    - If fund shrinks to $200mm: $0
- How is this different, than say, a mutual fund?

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The Best VCs

Have an extraordinary lock on the most important business skills.

They are extraordinarily rewarded for those skills.

1. **The ability to predict the future**
2. **The ability to judge people**
3. **The ability to identify the value (and its direction arrow) of a technology, product, company, market or industry**

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The Top VCs

- VCs are known by their successes
  - John Doerr:
    - Founding CEO of Silicon Graphics
    - In 1980, he joined Kleiner Perkins Caufield & Byers and sponsored a series of investments including Compaq, Cypress, Intuit, Macromedia, Netscape, Lotus, Millennium Pharmaceuticals, S3, Sun Microsystems, Amazon.com, and Symantec.
    - http://www.fastcompany.com/online/07/082doerr.html
  - Bob Kagle:
    - Ariba (ARBA), Art.com (acquired by Getty Images), eBags, eBay (EBAY), E-Loan (EELN), Friendster, Get2Chip (acquired by Cadence), Jamba Juice, Potbelly, Synopsys, WorldWinner.com and zipRealty.
  - Don Valentine:
    - Founder of National Semiconductor
    - In 1972, he founded Sequoia Capital and led investments in Apple Computer (AAPL), Atari, LSI Logic (LSI), Oracle (ORCL), Electronic Arts (ERTS), Network Appliance (NTAP), Cisco (CSCO), diCarta, Procurepoint Travel Solutions, C-Cube Microsystems (CUBE)

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The Top Funds

- Funds are known by their:
  - Returns:
    - Amount: 20-30% on average, occasional 32X (KPCB VII)
    - Consistency: ability to deliver impressive returns fund after fund
  - Wildly successful previous investments: Cisco, Oracle, eBay, Amazon, Yahoo!
  - Size of funds ($50M - $1B)
  - Expertise/vision of specific partners

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Buying Behavior of VCs

- Venture capitalists have herd behaviors in investment – strongly connected to wall street
- Why should I invest a $1 in a company today if it's likely:
  - It will only be worth $.50 next year or
  - I could wait a year and get the same investment for $.50
- Even in tough times the best deals are oversubscribed and command a premium due to competition
- There is also a huge motivation to "get in on the ground floor". Even $1Bn funds claim to be an early stage investor… but only in companies which have the potential to require a lot of capital.

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Myths About VCs

- VC's just can't wait to:
  - Rewrite your business plan for you
  - Put in a new CEO
  - Throw a fit at a board meeting

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Constraints on VCs

- **Management fees have to cover salaries of general partners, partners, associates, administration**
- **Assuming that ½ goes to partners salaries, ½ to everything else:**
  - **Partner salaries are high - >$500K (i.e. at 1% takes 50M of fund to pay $500K/year of salary)**
- **Partners can only sit on ~8 boards at a time, so they have to put *an average* of $6M into each deal a partner gets involved in (over the life of the company)**
- **In short, under these constraints, VCs are not interested in doing anything *they don't have to do* to make a company successful**

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Advantages of Venture Capitalists

- **Real advantages of VCs:**
  - **Deeper pockets – if you get the right VC they are in for more $$ for more duration – round after round**
  - **Will work hard to get other VCs involved in current and subsequent rounds**
  - **More professional – at the end of the day angels are hobbyists spending discretionary income and failure will have negligible impact on their career– VCs are professionals earning a living and *this is their career***
  - **Funding from a top VC firm is a great endorsement**

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When VC becomes Vulture Capital

- When VCs take a company beyond its expertise and vision
  - “We wanted to build a nice sustained service business. We had some experience and success in that. When we went for venture capital the VCs convinced us that we had a much bigger opportunity. 6 tough, miserable years later, 3 successive mergers later, we had nothing to show for it.”
- When things just aren’t working
  - VCs may shuffle management in a desperate attempt to find a formula that works
- When the company is closing up shop
  - VCs may be tough about getting their money out – preferred stock structure

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Corporate Venture Capital

- Most major corporations have venture capital funds
  - Invest in adjacent (or even competitive) businesses
    - Gives an inside look at new technologies
    - Provides first access to potential acquisitions
- When you get this money, you do get
  - General sense/perception of corporate endorsement
- You don’t get
  - Corporate endorsement
  - Friends in business units
- Granting “First right of refusal” may limit your ability to “bid up” your company at acquisition time
- Perceptions may back-fire – you may get no help from corporation doing the investing but it’s competitors think you’re “tainted” and won’t share information

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Funding?

- **You get a phone call from a friend on campus – he says:**
  - **“I got an invite to a private meeting with a number of VCs and angel funders. I don’t have anything I’m working on right now but I can bring you along and introduce you to some people.”**
- **Take some time now and …**
- **Assess your initial funding needs – what’s the value of your company – how much money are you looking for?**
  - **Will you approach**
    - **Angels**
    - **VCs**
    - **Both**
- **Also, you heard that the big hot button these days is “barriers to entry” – what is your barriers to entry strategy?**

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Barriers to entry

These are partially overlapping (“not orthogonal in nerdspeak”)

- **Lock on the shelf space**
  - **Unique relationship with distributors that eliminates competitors**
  - **Challenge: ruthlessly competitive distributors**
- **Own a key link in the user flow**
  - **Own the source, define the language – e.g. Matlab**
  - **Own the target (e.g. target hardware)**
  - **Challenge: trends toward standardization**
- **Dominant market share**
  - **Especially true for software**
  - **Low incremental cost so dominant player amortizes the development cost the most**
  - **Challenge: evolving markets, *innovators dilemma***
- **Technical lock – exclusive access to technologies/individuals that are essential to success of your endeavor**

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