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Lecture 5 Funding and Money



Who I am...

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Why is Funding Important?

Research and Development requires large sums of money

Cost per clinical trial phase

I: \$4 Million

II: \$13 Million

III: \$20 Million

Other Costs

Overhead? Manufacturing? Marketing? Intellectual Property



Who provides funding in
Medical Sciences?



Venture Capital (VC)

Form of equity for early young stage companies

- Investors believe the company has potential
- Crucial for funding high-risk, high-reward projects.
- Provides more than capital: strategic advice, networking opportunities, mentorship

Focus on **High Growth Potential**

- Companies that are projected to high valuations in the next 3-7 years



Angel Investors

High net worth individuals investing personal funds

- Based on individuals' preferences and interests
- Difficult to contact / connect with

Angel Investor vs Venture Capital?

- Similar in equity and stake
- VC is more prominent for medical industry



Equity Crowdfunding

Raise capital by selling small stakes of company to multiple investors

- Bridge the gap between venture capital and public markets

bionure

Biomedicine heading to future

Was able to proceed
Stage II Clinical Trial

Raised €1.3M



Equity Crowdfund Platform



Grants

Just like research, grants are available to help accelerate startups

- Non-repayable funds via government bodies to support research and development

Life Sciences Innovation Fund (LSIF)

- Up to \$500,000 for made-in-Ontario health solutions

Canada Biomedical Research Fund

- Increased domestic capacity of investments through partnerships
- Funding dependent on stage of company



Understanding Series Funding

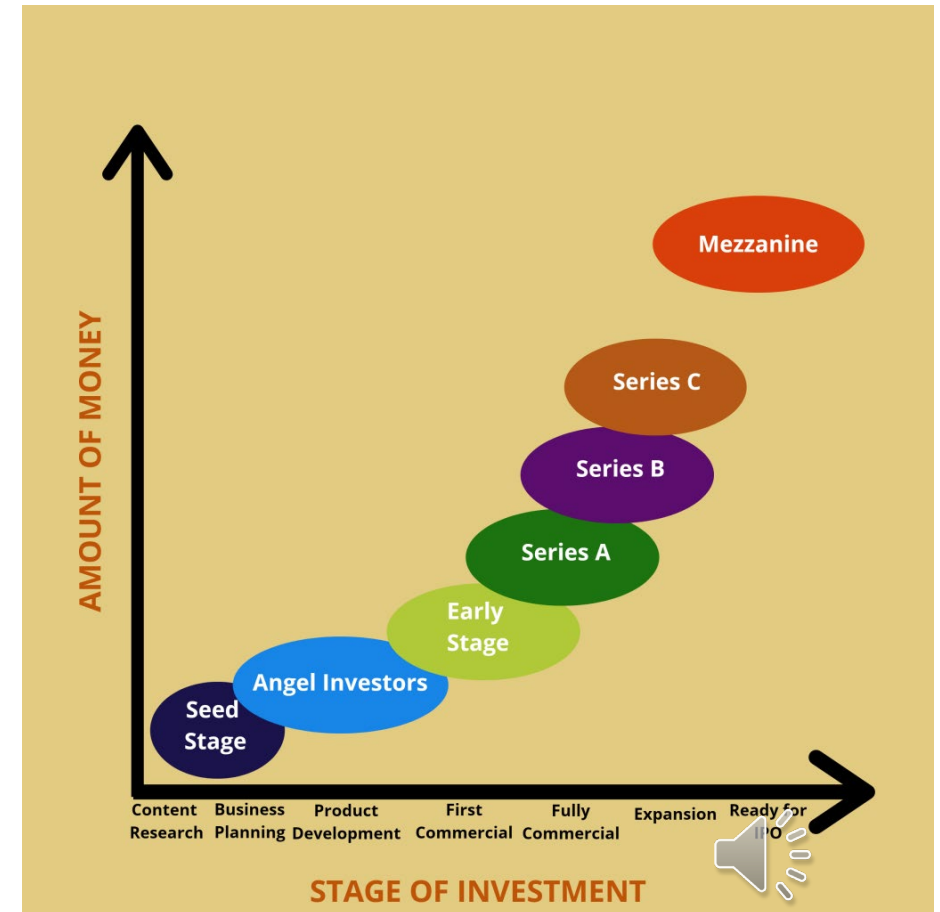
Investment Model (A,B,C) to provide capital in different stages

Series A funding

- For early-stage startups showing potential
- Led by VC's

Series B funding

- Focus on companies looking to expand
- Led by VC and other private equity



Understanding Series Funding

Series C funding

- Mature startup looking to transition into mid-size company
- Led by hedge funds and banks

Why is Series-based funding effective?

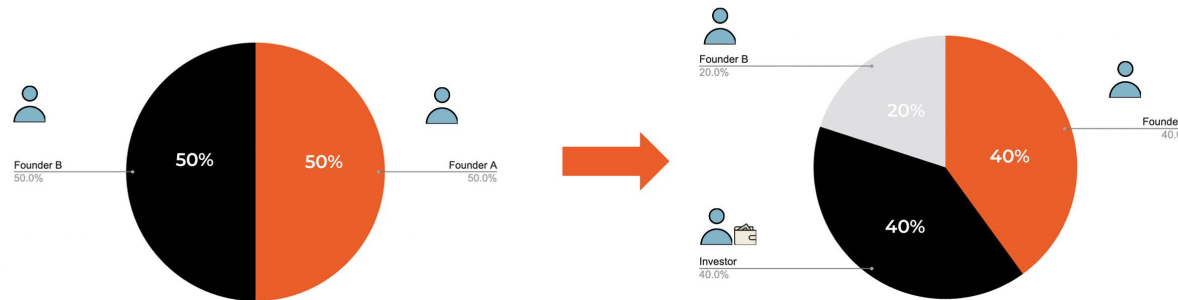
- Allows for valuations at each stage to decide if funding should continue, creates milestone ladders to help push startups forward
- This creates a domain of more investors...what happens to our equity?



Equity Dilution

If you start a company, you own 100% of the equity, as you get funding, you share pieces of that equity with the investors

- The company value increases with funding, but your individual stake in the company will decrease



How do we get Funding?



Startup Pitches

VC, angels, crowdfunding, and grant applications all have one thing in common,

They want to know **why you need this money?**

Startup Pitch – Brief presentation to stakeholders to showcase your business plan and vision



Components of a Pitch

Problem Statement – What are you trying to solve? Value Proposition? Target audience?

Business Model – Revenue streams, pricing, financial projections

Milestones – 1 year goal vs 5-year goal

Your Team – Who is your team, what are their expertise?

Investment Strategy – How will the investment money be used?

Exit Strategy – Offering investors options for exiting



Investment Strategy

Investors want to know how their money will be spent

- Breakdown exact costs and uses for the funding
- Outline clear goals that align with the company mission
- Be able to provide reasonable financial projections for at least the next 1-2 years



Preparing your pitch

- **Know your audience**
 - Research their past investments and their interests
- **Create a compelling story**
 - Keep technical knowledge at a high level and share your startups journey
- **Visuals > Text**
 - Show graphs, tables, projections, be able to express your ideas audibly
- **Short and Sweet**
 - Pitches can be anywhere between 3-15 minutes...



Managing Investor Relations

You got the money...Now what?

Maintain your relationship with your new stakeholder by:

- Transparent communication about progress
- Regular financial reporting
- Setting expectations and timelines
- Communicate potential strategies



Financial Basics for Startups



Financial Statements

Basics of Reporting your finances in a company

Balance Sheet: Shows a company's assets, liabilities, and equity at a certain date.

Income Statement: Reports revenue and expenses to show profit or loss over time.

Cash Flow Statement: Tracks the movement of cash in and out of a business.

Statement of Changes in Equity: Displays changes in the company's equity within a period.



Burn Rate

$$\text{Net Burn} = \frac{\text{Starting Cash Balance} - \text{Ending Cash Balance}}{\text{Number of Months}}$$

The rate at which a company is spending its capital before achieving profitability

- Provides an estimate to how long a company can operate before needing more funding
- Lower burn rate is ideal

How to manage your Burn Rate?

- Monitor your cash flows, where is money being spent?
- Plan ahead, estimate your future expenses



Return on Investment (ROI)

$$\text{Return on Investment (ROI)} = \frac{\text{Net Return}}{\text{Cost of Investment}}$$

Measure of profitability of an investment relative to its costs

- Compare ROI between different investments to choose which one to pursue
- Higher ROI indicates more profitable investments

ROI in the Medical Sciences is Tricky

- RnD takes years to complete and uncertainty if the product will pass regulation to be commercialized



Financial Modeling / Projections

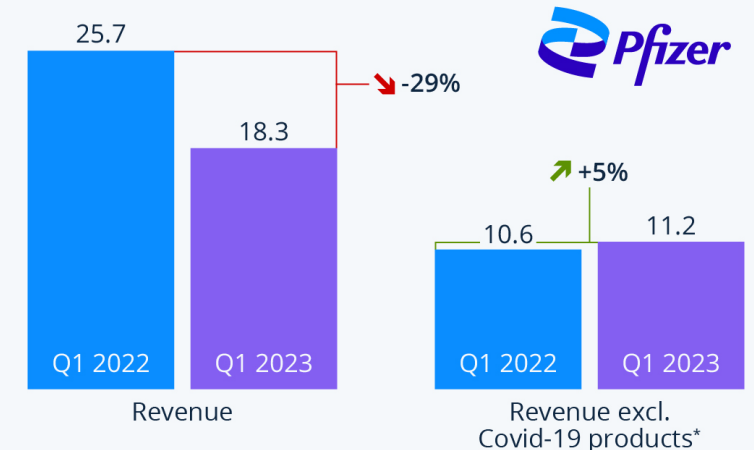
Tools to create numerical representations of your company's future

- Predicting revenues
- Predicting future costs

Helps an investor understand the amount of money needed for a given time period

A Covid Vaccine-Sized Hole in Pfizer's Revenue

Revenue of Pfizer in Q1 2022 and Q1 2023
(in billion U.S. dollars)



* Operational (excluding the impact of foreign exchange rates)

Source: Pfizer



statista



How do we Predict Finances?

Financial projections are EXTREMELY SENSITIVE to the assumptions made prior

Revenue Growth: Expected rate of increase in sales over time.

Customer Acquisition Cost: Estimated cost to gain a new customer.

Market Conditions: Assumptions about the economic and industry environment.

Interest and Tax Rates: Expected rates for interest on debts and taxes.

Avoid creating unlikely assumptions, use other businesses/industries to predict





End of Lecture 5

Next up Lecture 6: The Regulatory Landscape

