TECHNOLOGY DEVELOPMENT

NOTE: The purpose of these slides is to introduce and educate you about financing methods and mechanisms that you may not have heard about.

I've pulled these slides from past presentations (some from student projects and some from my work). Some of the numbers quoted within may have changed since these were drafted, but these financing services, methods and mechanisms remain

Please conduct your own diligence as you look into these. I am of course available to work with you if any of these are of interest

Many types of financing assisting SO many paths to market

BOSTON UNIVERSITY

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Types of financing (that you may or may not have heard of)

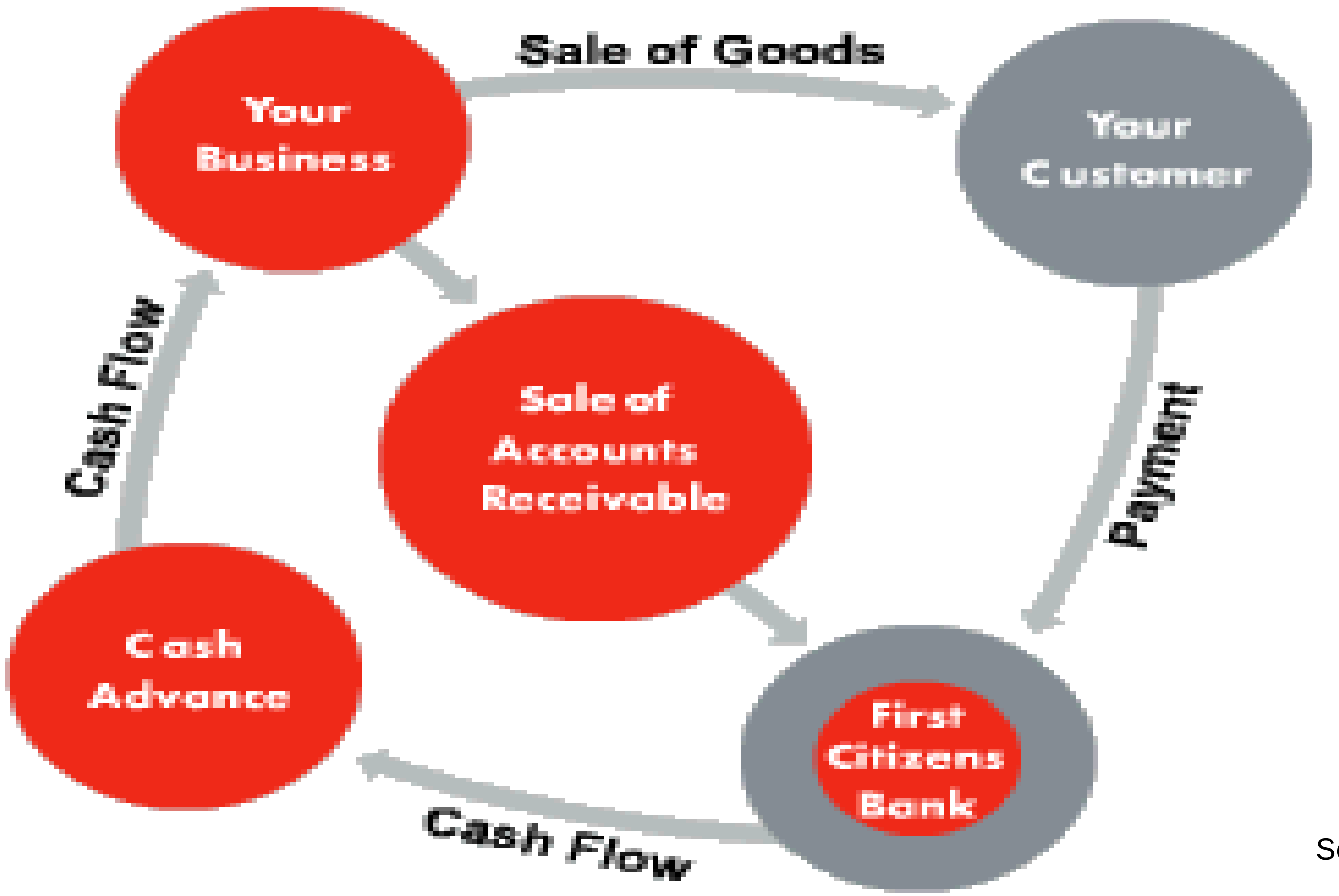
- **Factoring**
- Leasing
- Revolving line of credit
- SBIR
- Angel & FFF
- Bootstrapping
- Non-recurring Engineering

There are many financial mechanisms you can implement to advance your idea

What is Factoring?

- AKA Accounts Receivable Financing
- Selling of a company's Accounts Receivable, at a discount, to a factor firm
- Cash advance usually 80% of invoice; remaining balance paid at collection, less a fee for service
- Great, very fast way to improve your business's cash flow
- Not a loan; no new debt created
- Usually more expensive than a loan

How Factoring Works



Source: www.firstcitizens.com

Appropriateness of Factoring

- **<u>DO USE</u>**
- Existing Sales Ledger
- Finance Growth
- Liquidity Problems
- Not Able to Attain Traditional Financing

- **<u>DON’T USE</u>**
- A/R Not Easily Collected
- A/R Disputable
  - Perishable Goods
  - Complex Goods
- Low margin business

Of note:

- **Usually 3 months notification period to end service**
  - **May be longer**
- **Customer creditworthiness is critical**
- **Customers may prefer to deal directly with you, not the factor**

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Leasing -- Introduction

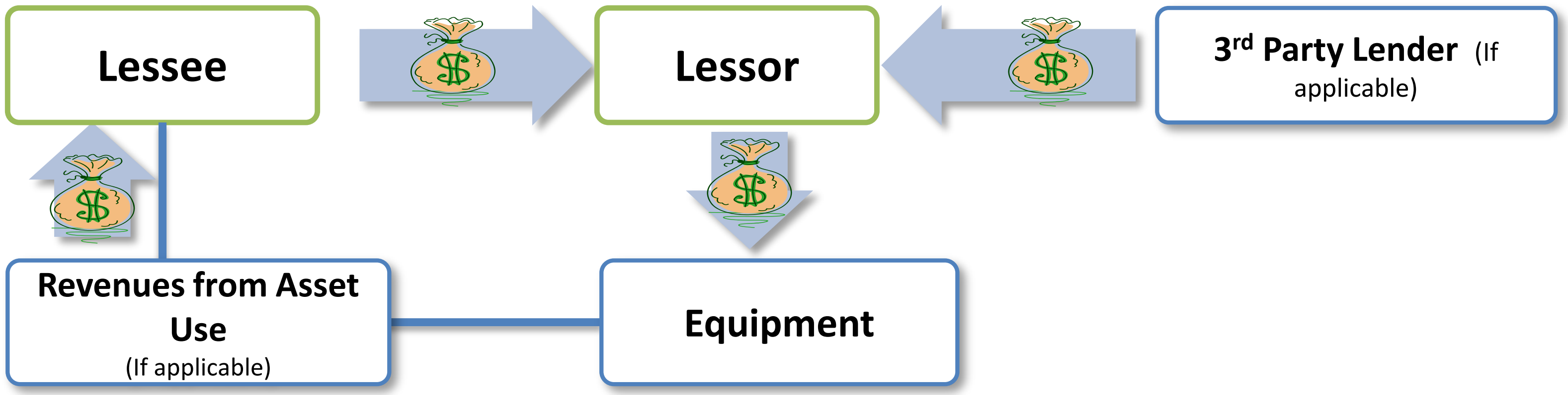
- **Leasing:** A method of financing between an owner (Lessor) of property and a firm (Lessee) employing a contract covering the possession and use of property, plant or equipment at a given rent for a stated length of time.

BUY	LEASE
Manufacturer	Manufacturer / Lessor
↕	↕
Firm uses asset Firm owns asset Firm pays manufacturer full cost of PP&E	Firm uses asset Firm does not own asset Firm pays manufacturer/lessor monthly installment payments

SOURCE: Ross, Stephen A.. Corporate Finance, Sixth edition, p. 587, 2002.

Lease Structures

	Financing Lease	Operating Lease
LESSOR (Legal ownership)	▪ Make equipment available for use in return for, at minimum, rental fees. ▪ Expect to recover the entire acquisition costs plus a return on its investment.	▪ Supplies equipment to lessee. ▪ Responsible for servicing and marinating the leased equipment.
LESSEE (User of Asset)	▪ Series of payments, which in total exceed the purchase price of the asset acquired. ▪ Usually responsible for maintenance, insurance, and applicable taxes.	▪ Series of payments for a specified period of time and when finalized, returns assets. No fixed future commitment. ▪ Similar to most types of business expenditures.
CONTRACT	▪ Long-term agreement: Lease covers most if not all of the economic life of the asset (~90%), ▪ Generally non-cancelable. ▪ At the end of lease period lessee has an option to purchase the asset at a price lower than the fair market value.	▪Short Term (i.e., shorter than the economic life of the asset.) ▪Can be cancelled after a specified time period. ▪At the end of lease period lessor can lease the equipment to someone else or sell the equipment second hand.



Gart, Alan. An Analysis of the New Financial Institutions. United States: Quorum Books, 1989.

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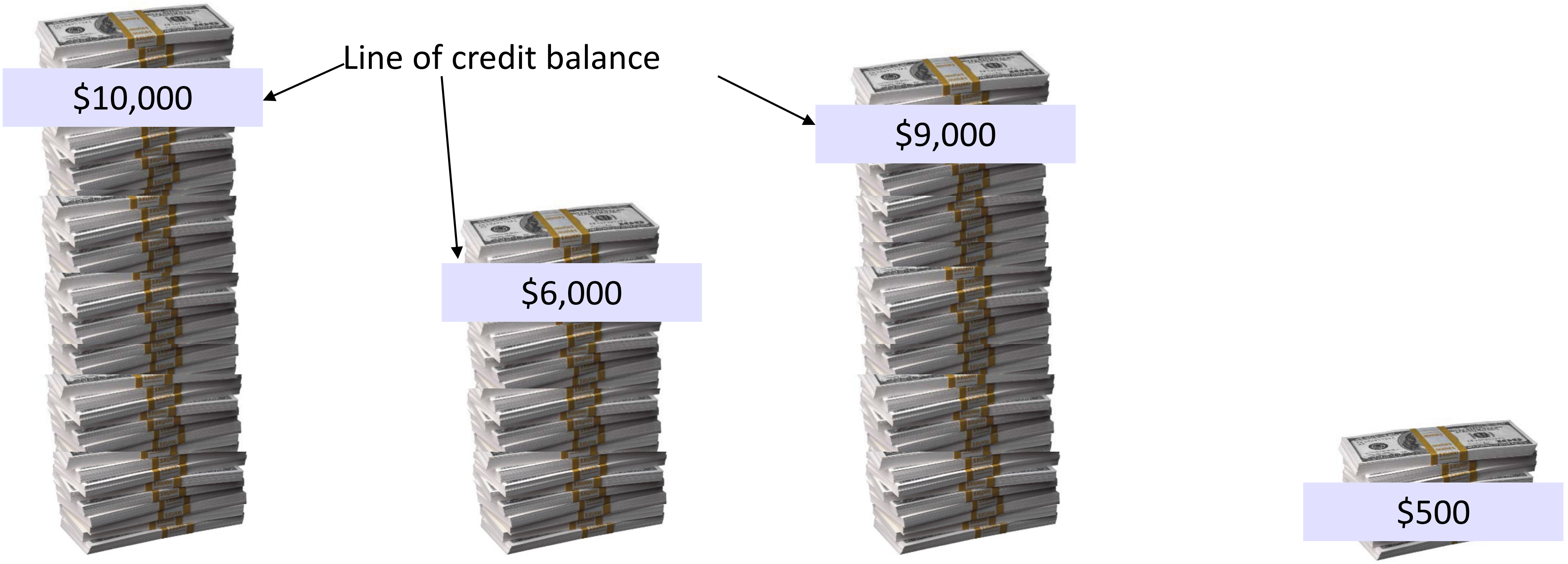
How Revolving Credit Works

Day 1:
- Bank/credit union authorizes $10,000 Revolving Line of Credit

Day 5:
- Spend $4,000
- Begin accruing interest on spent funds

Day 15:
- Repay $3,000 + interest accrued

Day 30:
- Spend $8,500



Revolving Line of Credit

Unique Features

- **Immediate** borrowing as need arises.
  - Can borrow and repay without credit application for each transaction.
- **Fluctuating**—Account balance replenishes as loan is repaid.
- **Flexible**—No scheduled payment of principal.
- Interest accrues only when money is used.

Revolving Line of Credit

Financing Uses

Finance day-to-day operations, primarily:

1. Accounts Receivable Financing
2. Inventory Financing
3. Other
   - Payroll
   - Cash needed for day-to-day operations
     - When monthly cash/working capital demands vary
     - To grow small/mid-sized company, its sales
     - “cancelled” without penalty in months when no borrowing is required
   - If hard to obtain traditional business loans
   - Uses A/R as collateral
   - Avoids extra term debt & equity dilution

Do not want to use for long-term financing

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What is SBIR?

- U.S. Government funding program originating in 1982
  - Promotes technology innovation through grants and contracts to ***small businesses***
- 11 federal agencies allocate 2.5% of R&D budgets annually to fund small business research and development efforts
- Three-phase award system to qualifying small businesses

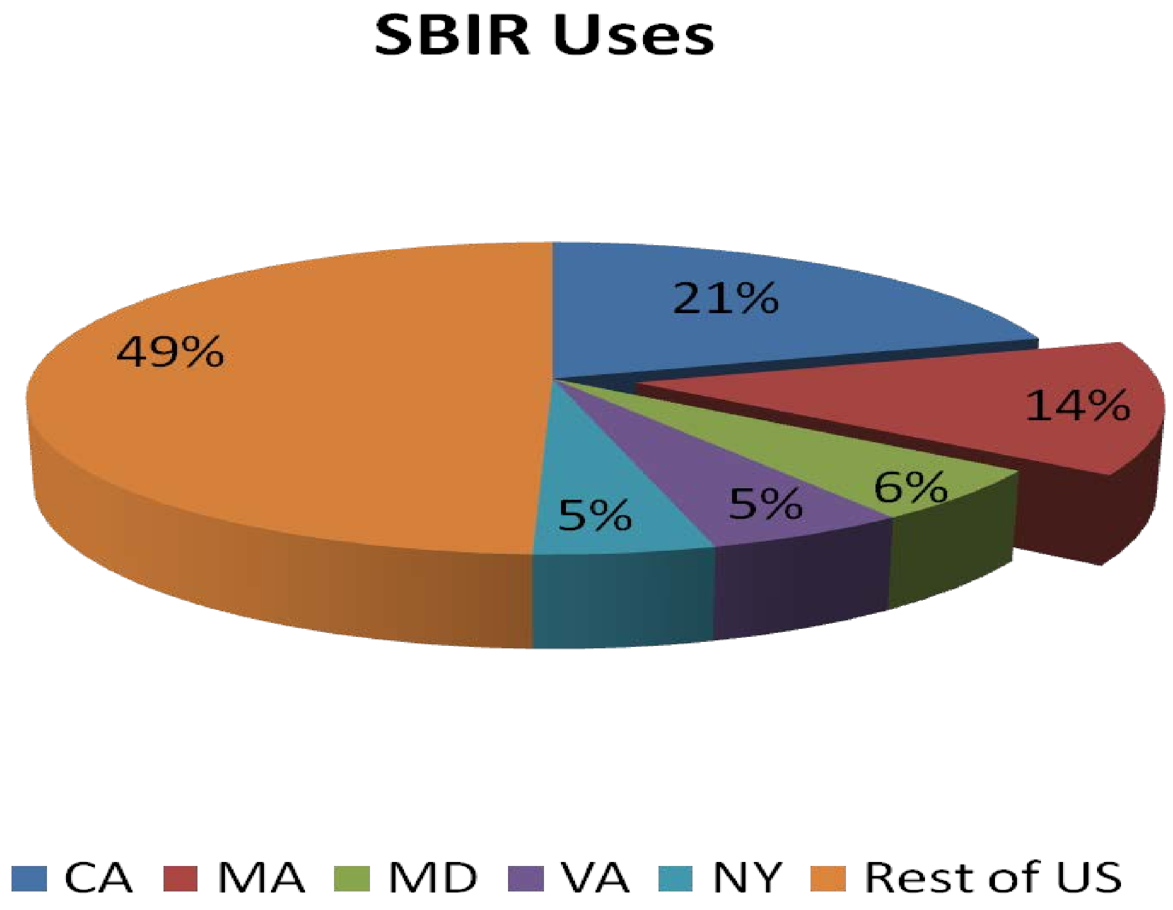
Structure of SBIR Funding

- **NOT A LOAN** - No payback terms required
  - SBIR is considered a ***grant or contract*** for the promotion of innovation in small US tech firms
  - If contracted, terms are dependent on needs of specific agency
- Most IP rights remain with the awarded firm
  - Depends on if the agency has vested interest in the venture
- A commercialization grant, not an equity investment
  - No shares sold to the government

SBIR budget:
$2+ Billion Annually

SBIR Sources*

- Dept of Agriculture
- Dept of Commerce
- Dept of Defense
- Dept of Education
- Dept of Energy
- Dept of Health and Human Services
- Dept of Homeland Security
- Dept of Transportation
- Environmental Protection Agency
- National Aeronautics and Space Administration
- National Science Foundation



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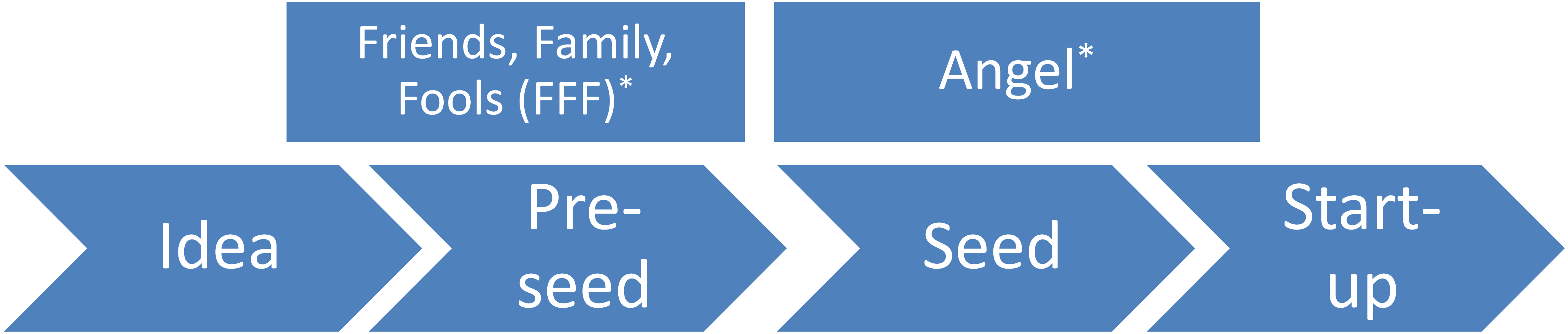
* Since this section was written: 1) Angel investors have grown and so have amounts they'll invest; 2) they've become more sophisticated; 3) they're no online, e.g. www.angel.co

Financial Comparisons



FFF

- Typically < $100k[1]
- Usually invest only once
- Financed in one single payment
- Receive Common Stock

Angel

- $50k - $3 million[1]
- Open to investing in multiple rounds
  - "Angels look at each decision point one round at a time"[1]
- Financed in multiple payments
- Require certain rights and privileges on their investment
  - Director position in company
- Receive Preferred Stock
- Terms vary by investor

Snapshot of Angel and FFF Financing

	Pros	Cons
FFF	- No lengthy application process - Pay back not always required - Surrender of company control not required - Commitment to project is proven to later stage investors[1]	- Transparency with investors (being asked about business at family events) -Emotional attachment to investments/investors - Risking family assets creates pressure - If poorly structured, can prohibit later stage funding
Angel	- Angel may have expertise in the industry - Medium ground between FFF and VC financing - Easier to align goals due to varying investor preferences	- Largely based on connections - Payments are staggered - Can become too involved in management decisions

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What is bootstrapping?

A practical definition:

“A situation in which an entrepreneur starts a company with little capital. An individual is said to be bootstrapping when he or she attempts to found and build a company from personal finances or from the operating revenues of the new company.” [4]

- A key tenet of bootstrapping is to exploit resources other than capital, i.e. social network, sweat equity, etc., to create value.
- By definition, operating with scarce resources breeds innovation and creativity.

Interesting Facts:

- The term originated from the expression, “Pulling yourself up by your bootstraps“ taken from a Horatio Angler story about moving from rags to riches.
- Bootstrapping is the source of initial equity for more than 90% of tech firms. [5]
- Some of today’s most innovative companies used bootstrapping. [9]
- Examples: Microsoft, Dell, Cisco, Oracle, ebay, Apple, Samuel Adams

Overview

Bootstrapping focuses on six areas of business management:

- **Employee Expenses**
- **Operating Expenses**
- **Overhead**
- **Marketing**
- **Owner Financing**
- **Trade Financing**

Why Bootstrap?
What should I know before starting?

Necessity

- Many entrepreneurs use bootstrapping to finance their startups simply because they have no other choice.
- They may face limited starting capital, collateral, or credit.
- They might not be able to demonstrate cash flows needed to service debt.
- Yankee Candle started with $20 borrowed from a friend.

Keep your equity

- You command complete control over decision making.
- Performance measures can be yours alone.
- Your original business objectives remain intact.

Know your business

- **Business plan** Account for the cost savings you intend to benefit from in your BP.
- **Expense plan** Be realistic given the nature of your business. Stick to your plan.
- **Contingency plan** Nothing is certain in business, a backup plan is essential.

Employee Expenses

Assume more responsibilities and know your capacity

- Cut salary expenses by acting as bookkeeper, receptionist, and even janitor.
- Use part time employees, contractors, and interns to fill gaps in capacity.
- Under-hire as much as possible.

Develop management talent from within

- Promoting talent from within reduces hiring costs for potential management.
- Managers groomed from within know your product and your culture.
- Hiring good resources is harder than you think, and can impede progress.

Replace high compensation with alternative rewards

- Flexible hours, additional time off, performance incentives, and home offices.
- Think profit sharing instead of issuing equity—you want to keep the business simple.

Operating Expenses

Outsourcing every chance you get

- Utilize outside resources for manufacturing, shipping, and administrative duties.
- Focus on your core competencies: product development, customer service, etc.

Inventory management

- Keeping inventory and raw materials at proper levels for immediate needs is a particularly important and tricky cost saving measure.
- Actively manage the cost of each unit sold including all relevant costs.
- Strive to reduce excess product and capacity while meeting demand.

Managing accounts receivable

- Maintaining consistent cash flows is vital during times of growth.
- Maintaining positive cash flows can be the difference between thriving and folding.
- Find your leverage and let customers know YOU are NOT financing their operation. (6)
- Offer discounts for prompt payment.

Overhead

Managing your startup’s overhead is essential

- Operates out of your lawyer’s spare office space or conference room for meetings.
- Forgoing a paycheck and bartering with suppliers for goods AND services.
- Administrative expenses—reduce by taking care of administrative duties.

Office space

- Start your business in the home, out of your garage, even if you have employees.
- Create a virtual office where employees can work from home. This may not be an option for some industries like manufacturing.
- Look around for businesses in your area with excess space—utilize your network.

Equipment

- Avoid upfront payments, consider renting, leasing, sharing—with other companies.
- Buy used equipment from failed business, at auction, or from brokers.

Marketing

Know your customer inside and out

- Know your customer: what are their buying patterns?
- Step back and do some marketing AND financial analysis.
- Content creation (created by you) can have a better ROI than other marketing methods, i.e. advertising, PR campaigns, mailing programs .

Campaign to change something

- Identify a problem in your marketplace? Start an awareness program.
- Make your business part of the solution—attract customers through your solution.

Cross-promote products and network

- Leverage your relationship with the customer. Add value by selling service.
- Find where potential customers meet. Join trade orgs. and business groups.

Publicity

- Newspapers struggle for decent content. Write an op-ed for your local paper.

Owner Financing

Personal funds: savings, (401K), credit cards

- Reality: commercial banks aren't viable without assets.
- Plastic is king, a loan against your home puts it at risk.
- Should be able to repay funds in 90 days, based on projected revenue.

Family and friends

- Get it in writing, be creative, consider family dynamics.

Employee sweat capital

- Don't issue equity, develop profit sharing to reward hard work.

Employee loans

- Debt problems can occur even while revenues increase.
- As a last resort businesses have offered equity to employees.

Trade & Customer Financing

Bartering for goods and services

Products AND Services: Look to utilize excess capacity to maximize value.

Slow down supplier payments

- Aim for net 60 or net 90. This may be tough for brand new businesses.
- Use creative terms, for example 50% upon receipt with the balance net 60-90.

Using customer as a capital source

- Get creative, don't just look for prepayments from customers.
- Demonstrate benefits to your customers and they become a source of capital. [6]
- Consider cash flow ramifications of business improvements-increased credit sales.

Is Bootstrapping right for you?

Benefits

Maintain control over all decisions

Minimize the inherent risk of startups

Focus on core competencies by outsourcing - know the downsides too

Develops corporate culture

Drawbacks

May not provide enough investment to become successful at a reasonable rate

Not helpful when your market requires immediate action

Sacrificed paychecks for quite some time to make this work

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NRE: Non-Recurring Engineering

- **NRE is when your customer pays you to build it and then buys it from you!**
- Situation:
  - You’re building something: widget, machine, software, etc. to address a NEED you’ve identified in the market
  - You need financing to build it (sort of goes without saying but I decided to say it)
- You approach your customer and tell them what NEED of theirs your invention will address
- They jump up and down because you’ve done your homework (interviewed customers, competitors, users, etc.) to identify their NEED
- You say, “I’m glad you like my solution. I’ll tell you what I’m going to do for you, to address your NEED. You pay me to build it and then buy it from me.”