



# *Evaluating Operations + Financial Performance*



MGMT 6260  
ESHIP FINANCE  
FALL 2023

Prof. Brett Orzechowski

# AGENDA

**1**

## **WELCOME BACK! (3 min.)**

Financials and equations. HBR Readings.

**2**

## **CASH FLOW + LTM (20 min.)**

Different metrics depending on startup maturity.

**3**

## **P/L + BURN/RUNWAY (20 min.)**

When will EasyEcho run out of money?

**4**

## **BREAK (5 min.)**

Stretch the legs.

**5**

## **REVIEW OF SIMULATION (15 min.)**

For next week.

**6**

## **EXERCISE No. 1 (30 min.)**

IRR + D/E - what's your pick?

**7**

## **TEAM FORMATION + SIM (5 min.)**

Looking ahead to Monday and beyond.

# CASH FLOW

## A DIFFERENT LOOK FOR A STARTUP

# STARTUPS: CASH FLOW ISSUES

BOOKKEEPING

IMMEDIATE RESULTS

OVERSPENDING

HIGH OVERHEAD COSTS

NO FINANCIAL GOALS

PAYROLL

TOO MUCH EQUITY

FLEXIBILITY

All have what in common?

# CASH FLOW ACTIVITIES

## THREE PRIMARY ACTIVITIES

---

OPERATING

INVESTING

FINANCING

**Common Practice: Most startups only have one activity.**

# CASH FLOW: OPERATING

## 1/5 RULE

---

PAYMENTS RECEIVED

RENT PAYMENTS

SALARIES PAID

INTEREST PAYMENTS

PAYMENTS MADE

INCOME TAX PAYMENTS

# CASH FLOW: TWO CALCULATIONS

## DIRECT

Add up all the startup's cash payments, including the ones received from clients, those paid to suppliers, and any paid out in salaries and wages. Use your beginning cash balance and ending cash balances over a specific period to track your progress.

## INDIRECT

Operating cash flow can be determined by taking the startup's **net income figure** directly from its income statement. The income statement is established from an accrual basis, which means that income is only recognized when earned and not received.

# CASH FLOW COMPARISON

**YOUR STARTUP**

**We just distilled it into nutshell.**

**TWITTER OR X**

**Let's take a look here.**



# LTM

## ANOTHER DEFINING METRIC

## STANDARD DEFINITION

**A time frame frequently used in connection with financial ratios, such as revenues or return on equity (ROE), to evaluate a company's performance during the immediately preceding 12-month time period. This is not necessarily related to a fiscal year period, as the LTM references any 12-month period.**

# LTM CALCULATION

LTM

**LTM REVENUE =**

**Most recent quarter figures + most recent annual figures –  
figures in the corresponding quarter 12 months before the  
most recent quarter.**

**OR**

	Q1 2022	FY2022	Q1 2023	LTM
<b>REVENUE</b>	<b>\$45,321</b>	<b>\$151,541</b>	<b>\$51,156</b>	<b>\$157,375</b>
<b>EQUATION</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>=B+C-A</b>

# P/L

## A MUCH DIFFERENT STARTUP LOOK

# P/L: THE STANDARD

## STANDARD DEFINITION

**Shows how much your business has spent and earned over a specific period of time. Your P&L statement shows your revenue, minus expenses and losses. The outcome is either your final profit or loss.**

## P/L: THE STARTUP LOOK

### RUNWAY

How much money you have until your bank account hits zero, you can't pay your people, and you can't pay yourself.

### BURN RATE

The rate at which a startup spends money, especially venture capital, in excess of income.

# RUNWAY CALCULATION

RUNWAY

## TODAY

Startup runway =  
current cash balance ÷ burn rate

EasyEcho had \$250,000 in its bank account. The company also raised \$500,000 in investor funds during that time.

Example starting cash balance: \$750,000

## SIX MONTHS FROM NOW

Current cash balance at the end of the period, or your cash balance at the end of the period you're measuring. You spent, \$250,000.

Example ending cash balance: \$500,000.

**THIS IS YOUR RUNWAY.**

# BURN RATE CALCULATION

**Net burn rate:** Net burn rate measures how much cash you lose each month when you consider both income and expenses.

**Gross burn rate:** Gross burn rate estimates how much cash you spend each month, but doesn't take income or positive cash flow into account.

Net burn rate is the preferred metric for most startups because it accounts for common cash inflows like investor funds, sales, loans, and more.

BURN RATE



# BURN RATE: CALCULATION

**Net burn rate = (starting cash balance - ending cash balance) ÷ number of months**

**Net burn rate = (\$750,000 - \$250,000) ÷ 6 months**

**Net burn rate = \$500,000 ÷ 6 months**

**Net burn rate = \$83,333.33 monthly burn**

**BURN RATE**

# WHEN WILL EASYECHO RUN OUT OF MONEY?

Startup runway = current cash balance ÷ burn rate

Startup runway = \$500,000 ÷ \$83,333

Startup runway = 6 months

BURN RATE

# HOW MUCH RUNWAY?

Financing Sequence	Average Time Lapse	Median Time Lapse
Seed to Series A	18.1 mo.	15.0 mo.
Series A to Series B	20.3 mo.	17.0 mo.
Series B to Series C	22.0 mo.	19.0 mo.
Series C to Series D	21.7 mo.	19.0 mo.
Series D to Series E	20.8 mo.	18.0 mo.
<b>Overall</b>	<b>20.6 mo.</b>	<b>18.0 mo.</b>

**SOURCE:** PitchBook Average, Median, 2022

# BREAK

# THE FIRST SIMULATION

# ENTREPRENEURSHIP SIMULATION: THE STARTUP GAME

## OVERVIEW

**This multi-player simulation places students into a variety of roles that explore the chaos and excitement of starting a new company. Students role-play as founders, investors, and potential employees who must deal with the many complexities of negotiating deals, finding the right staffing mix, building relationships, and making critical early decisions that affect the chances of long-term success.**

# ENTREPRENEURSHIP SIMULATION: THE STARTUP GAME

## OVERVIEW

**Participants prepare in advance for their roles before forming teams and launching their exploratory or exploitative ventures amid intense competition. The Startup Game tracks players along a variety of dimensions that lead to startup success, including the interaction between hiring and strategy, the trade-off between control and wealth, the skills needed to run a company, and the valuations that startups receive.**

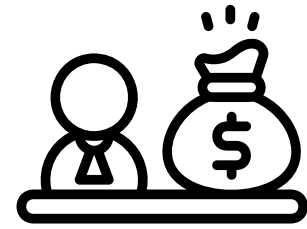
# THE STARTUP GAME: THREE ROLES



**Founders:** All new companies are at a very early stage, having gone through some initial proof of concept, but seeking additional funding and talent. Each company has 100 shares in total plus whatever capital and resources listed in their role information.



**Employees:** All are C-level talent, who will come part of the core management team and will often have a significant stake in the company. These are the star players that can make a significant contribution to new organizations. Employees are compensated with cash and equity. It is assumed if those roles are not filled, that lower level employees will.



**Investors:** Represent angel or VC investors in a company. Investors may invest in multiple companies, though their information sheet should serve as a guide for their investment strategy.



# THE STARTUP GAME: ASSESSMENTS

## RICH V. KING/QUEEN

Some are interested in maximizing control over their destinies, others want to make as much money as possible, and, of course, many want both. It is very hard for founders to maximize control and revenue. Choices that allow a founder to maintain control -- such as not delegating, not being responsible to outside investor, not hiring senior employees -- hurt the ability of the start to grow quickly and gain market share.

Conversely, choices that are likely to maximize returns often involve giving up some control.

## SKILLS: FOUNDERS + EMPLOYEES

Not all early employees are created equal and employees sometime operate independently and rise to challenges. Also, it can be hard for new companies to find people to hire, and there are often no formal HR practices. The sim focuses on getting the right skilled employees for the job.

# THE STARTUP GAME: ASSESSMENTS

## EXPLORATION/EXPLOITATION

Research on founding teams and early employees have repeatedly found critical linkages between composition of a start team and its business strategy. Founding teams tend to be homogenous. There are real benefits to this. Low diversity is helpful when firms are looking to exploit an existing idea or concept. They are focused on execution rather than innovation.

For more exploratory and innovative organizations, looking to hire and developing and bring more radical ideas, diversity can be an advantage.

## INVESTING

For the game, the goal is not to deeply differentiate among investor types, but, instead, to pay attention to what investors might offer -- both in terms of money and other benefits. In this game, we are primarily concerned with this equity stake.

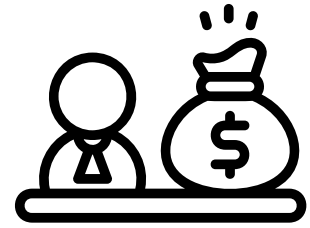
# THE STARTUP GAME: SCORING



**The founder score is based on the company ranking, adjusted for the amount of equity the founder retained.**



**The investor score is based on whether you deployed your money, how well the companies you invested in did, and what price you paid for shares in those companies.**



**Employees score if they had equity stakes in successful companies and if they achieved their salary goal. However, each employee was either focused on salary or on equity, and their score was based more on whether they achieved their desired goal.**

# THE STARTUP GAME: WHAT YOU SEE

Wharton  
UNIVERSITY OF PENNSYLVANIA

The Startup Game

Home Prepare Play Brilliant Guy Investments

Brilliant Guy Investments Investor

**Role Description**

Every large bank uses the software you created to handle specialized bank-to-bank communications. When the three-man company you ran was bought by a large technology organization, it confirmed what you always knew: you are a technical genius! Bored by your new life of luxury, you now want to invest your money in something in the financial-services area, and perhaps get the thrill of helping another startup design its software and systems.

You can invest up to \$2,000,000 in new ventures. While you haven't done this before, you're confident you'll be great at it. You also expect that whomever you invest in will recognize how terrific you are - after all, what's the point of being successful if you aren't also looked up to?

For further details, please click below:

Startup Founders > How to Play >

**Introduction to the Startup Game**

Wharton

Wharton  
UNIVERSITY OF PENNSYLVANIA

0:00 / 0:16

# THE STARTUP GAME: OVERVIEW

**Wharton**  
UNIVERSITY OF PENNSYLVANIA

The Startup Game

How to Play

Home Prepare Play Brilliant Guy Investments

**How to Documentation**

**Preparation:**

Before game day, please take time to prepare for The Startup Game by:

1. Reading your role information and Overview video, both located on the [Home](#) screen
2. Reading the Founder descriptions located on the [Founders](#) screen
3. Watching the How To video located on this screen
4. *Be creative!* Think about the best way to promote yourself on game day, given the ultra competitive marketplace.

**Game Day:**

1. If you are a Founder, be prepared to say a few words about your company at the beginning of the game. This is your chance to promote your company and attract the best investors and employees.
2. During the game, seek out as many conversations with the other roles as possible, with the goal of making the most optimal deal(s) for your role.
3. If you are an Investor, you can invest in multiple companies.
4. If you are an Employee, you can be hired by one company. As an early employee, you may want to help your new employer seek out investments and other hires.
5. If you are a Founder, use the [Play](#) screen to enter deals.

**How-To Video**

Wharton




Wharton  
UNIVERSITY OF PENNSYLVANIA

0:00 / 0:15

PDF Download Player Guide

# THE STARTUP GAME: ENTER DATA

All Employee and Investor deals will automatically appear on the Founder's Play screen and the Founder has the ability to delete any of these deals. A smartphone or tablet can be used to enter deals.

- Founders have a total of **100 shares** for their company
- Investors: Select the company name, the number of shares (whole number, no decimals) and the amount you wish to invest (whole number, no decimals or commas). Select the green check mark. Investors can make investments in as many companies as they wish to their maximum available funds per their role description.
- Employees: Select the company name, the number of shares (enter 0 if none) and the salary you have accepted (whole number, no commas). Select the green check mark. Employees can be hired by only one company.
- Edit a Deal: Investors and Employees can edit a deal if they have renegotiated with the Founder by selecting the green edit icon to the right of their deal.   
Once the modification is complete, select the green save icon. 
- Delete a Deal: All players have the ability to delete a deal which they are involved in. Simply select the red delete icon to the right of the deal. 
- To edit the terms of a deal, click on the green icon in the right-hand *Action* column of the deal you wish to edit. Once you have made the necessary edits, click the save icon in the *Action* column. Cancel the modification at any time by clicking the red X icon.

# TODAY'S EXERCISE

## THE SITUATION

# SEED ROUND

**Your firm invests in life sciences-focused startups, looking to secure seed round with small valuations but a ton of promise. You are given a host of variables and will mitigate risk to choose which startup to seed at a level of \$500,000 or less.**

**Choose the startup. Make them an offer.**