

What Happens When Everyone Scores Your Rockets?



Built from *The Rocket IPO: What Public Markets Do to a Science Project* by Ejin Chung, Science & Technology Editor

Grades 4–8 · About 45 minutes · ★ everyone · ★★ older readers

Name _____

Date _____

1. Before You Read

★ Think of a time you tried something, failed, and tried again. What did failing teach you?

★ Imagine that everyone watched every mistake you made and gave you a score each day. Would you take more chances or fewer? Why?

2. The Short Version

Read this first. Older readers: read the full article too.

When a company "goes public," it sells small pieces of itself, called **shares**, that anyone can buy. This first sale is called an **IPO**. In June 2026, the most famous rocket company went public, in what the article calls the largest IPO ever recorded. Each share has a price that changes all the time, and in its first week the company's price jumped up and down wildly.

Ejin does not cover stock prices. Ejin covers what happens to a group of people when something starts measuring them every single day.

This company became the best in its field by blowing up test rockets on purpose, in public. Its early tries at landing rockets ended in fireballs, again and again. But each crash gave the engineers new information, and now landings are so normal that TV broadcasts cut away from them. Ejin calls this buying knowledge with visible failure.

Here is the worry. Older aerospace companies became very careful, because being judged on short-term numbers punished risky, visible tests. Nothing blew up, but nothing improved either.

Here is the hope. Special voting shares keep the big decisions in the founder's hands, no matter what the price does.

So Ejin's question is: can the company keep exploding test rockets on purpose when every explosion gets a same-day price? Ejin's test is simple. Watch whether the test flights keep sometimes blowing up. The answer will take years.

3. Word Bank

Word	What it means
share	a small piece of a company that people can buy and own
IPO	short for "initial public offering": the first time a company sells its shares to the public
prototype	an early test version of a machine, built to learn from
iterative	improving something step by step: build it, test it, learn, and try again
cautious	careful and unwilling to take risks

★ Use **prototype** in a sentence of your own.

4. Check Your Understanding

★ 1. What does it mean when a company "goes public"?

★ 2. How did the rocket company learn to land its rockets?

○ It got every landing right on the first try. ○ It failed many times and learned from each failure. ○ It stopped testing rockets.

★ 3. Ejin says a rocket explosion can look like a disaster on a stock chart. Why might the same explosion actually be useful to the engineers?

★ 4. In the company's first week, the share price rose and then fell by a lot. What rocket news caused that?

☐ a rocket exploded ☐ a new rocket launched ☐ no rocket news at all

★★ 5. Ejin describes a worried (pessimist's) view and a hopeful (optimist's) view of what will happen to the company. Explain each view in your own words.

5. Ejin's Scoreboard: Results, Not Demos

Ejin keeps a public scoreboard. One column shows what the hype promised. The other shows what the data has actually delivered. Find three more claims or promises in the article and fill in the scoreboard. Then mark each one:

- **proven:** the article says the results are in, and it worked.
- **not yet:** testing has started, but the results that could prove it have not arrived.
- **we don't know:** the article says nobody can tell yet, or there is not enough information to decide.

What the hype promised	What has actually been shown so far	Score
<i>Example:</i> Blowing up test rockets on purpose is a good way to learn.	<i>The early landing tries failed in fireballs again and again. Now landings are so routine that broadcasts cut away from them.</i>	proven
		☐ proven ☐ not yet ☐ we don't know
		☐ proven ☐ not yet ☐ we don't know
		☐ proven ☐ not yet ☐ we don't know

★★ Pick one claim you marked "not yet" or "we don't know." What result would move it to "proven"?

6. Think Deeper

★ Ejn describes the company's method as "buying knowledge with visible failure." What does that mean? Give an example of a time a mistake taught you something.

★★ Ejn writes that "organizations optimize what measures them." In other words, people work hardest on whatever they are scored on. Give an example from school or sports, and explain how it connects to the rocket company.

7. Write Your Report

- **My answer:**
- **Reason 1 (from the article):**
- **Reason 2 (from the article):**
- **One thing the other side would say:**
- **My conclusion:**

For Teachers and Parents: Answer Key

Word bank sentence: Answers vary; check that the student uses prototype to mean an early test version of something, built to learn from.

1. The company sells shares (small pieces of itself) to the public for the first time, so anyone can buy them.
2. It failed many times and learned from each failure.
3. Each explosion gives the engineers data. The data adds up over time, and that is how the company made rocket landings routine.
4. No rocket news at all. Nothing about the rockets changed during that week.
5. Pessimist: older aerospace companies became cautious because short-term measurement punished visible risk, so the same thing may eventually happen to this company. Optimist: special voting shares keep decisions with the founder, so the stock price cannot control how the engineers work.

Scoreboard (sample answers):

Claim	Shown so far	Score
The company will keep testing boldly now that it is public.	The article says "grades take years."	not yet
Special voting shares will protect the engineering culture from the stock price.	The price swung with no rocket news; the article does not say whether the company's work pace changed.	not yet or we don't know
Becoming public will make the company cautious, like older aerospace companies.	That happened to older companies, but it is too early to tell for this one.	we don't know
A stock chart shows how good the rockets are.	The price soared and slid while nothing about the rockets changed.	we don't know (accept answers saying the first week argues against it)

Accept "not yet" or "we don't know" for any claim about the company's future if the student explains that the results will take years. Only the learn-by-failing method is "proven." **Follow-up:** the test flights keep sometimes blowing up and the company keeps sharing its failures, year after year, while it is public.

Think deeper: Open answers. "Buying knowledge with visible failure" means paying for lessons with failures that everyone can see, like the early landing fireballs that taught engineers how to land rockets. For the ★★ question, strong

answers give a clear example (for example, a team that only counts goals may stop practicing defense) and connect it to the article: if the company is scored by its share price every day, it may start avoiding visible failures, even useful ones.

Report: The best-supported answer is "we don't know yet." Ejin says the scoreboard "opens now" and "grades take years." Look for a clear answer, two reasons taken from the article (for example: older aerospace companies became cautious under short-term measurement; every explosion now gets a same-day price; special voting shares keep decisions with the founder; the price moved with no rocket news), a fair statement of the other side, and a conclusion that matches the answer. Accept "yes" or "no" if the student supports it with the article.