1 INFO ON THE EXAMS + EXAM SAMPLE QUESTIONS

(Given he takes it veeeery late, this lesson is added in order to give you context on the exam. It can be even two/three days before the exam – atrocious, yes – with the same set of slides every year, apart from 22/23 which was slightly more detailed compared to the other two/three present in previous years. So, think well if you want to do the first exam or the second one)

On the groups, some past indications:

- Well mostly questions are easy but last part with counting needs some time (not hard but too long) so better prepare your counting skills (and calculator)
- The class itself is really good. I suggested to go to the classes. The exam is a bit tricky, but you can do the oral examination too

On the written exam (duration: 2 hours)

- Theory part is easy and takes some questions + the Lean Canvas (11/12 questions)
- The calculations part, taking most of the exam and never done in the course apart from the last lesson – basically, hours apart from the exam
    - These calculations do not require the usage of a calculator, given they are not hard
- Bad/No answer = 0 points while Good answer = 1 point

On the oral exam (I asked in the group to get some info):

- It's exactly like the first part of the exam. The professor will ask you some questions to be sure you understand the concepts. It's alternative to written exam to increase your score.
- After written exam and getting your score you just need to contact with professor and ask for oral examination

Let's start going into the *real* questions of the exam simulation:

1.1 FIRST PART - THEORY QUESTIONS

1)

We have seen one of the classifications of startups as:

- *Startup to maintain the shareholders quality of life*
- *Big company spin-outs*
- *Family businesses*
- *Social impact companies*
- *Companies planned to scale up fast*
- *Companies planned to be sold quickly*

Where would you classify AirBnB?

- or -

Why do you think Big companies do spin-outs?

Written by Gabriel R.

Answer:

AirBnB is definitely a company which was designed to scale up fast, since it recognized early the market opportunities in the space renting sector and, by networking effects, it became a platform basically of sharing/renting, enabling a cycle of rapid growth and high scalability, accessing to capital funding of investors while scaling rapidly.

2)

What do you think is more important at the initial stage of a startup?

- *Define and validate a problem*
- *Have a brilliant idea*
- *Master a complex technology*

Why?

Answer:

Of course, the right answer is the first one: see if the problem was the real one present in the market and ensuring the value proposition is right according to the market we want to reach and its niches, facilitating the access with market fit. This allows both to develop a product able to actually satisfy the market and using intelligently both time and resources, facilitating fundraising and customer acquisition, diminishing the risk and enabling distinctive capacities avoiding misalignment.

3)

By looking at the Lean Canvas, how would you describe the "Unique Value Proposition" and what does it express?

Answer:

The Unique Value Proposition is what distinguishes the startup at a high level. The UVP articulates the core value or benefit you promise to deliver to your target customers. It's a clear, concise statement that explains:

- What your product/service is
- Who your target customer is
- The key benefit or value your product/service provides
- What makes your offering unique or different from competitors

The UVP expresses the most compelling reason why a customer should buy from you. It's the primary thing that differentiates your offering in the market.

4)

What is the "Vesting" period when we talk about Stock Options?

Answer:

The Vesting defines the period over which an employee earns the right to exercise their options to buy company stock. This process essentially ties the options to a schedule that incentivizes employees to remain with the company and contribute to its long-term success before they can fully own the stock options granted to them.

Written by Gabriel R.

Options typically vest over a period of several years, often four years. The "cliff" is the period at the beginning of the vesting schedule during which no options vest. After the cliff, options usually vest monthly or quarterly over the remaining vesting period.

Vesting can be based on time (as described above), but it can also be based on achieving certain milestones or performance goals. Some companies have provisions that accelerate vesting if certain events happen, such as the company being acquired, or the employee being terminated without cause.

Time you spend in the company before applying for the stocks

5)

Make an example of a traditional pipeline business

- or –

Are there "Platform" business models in real-life (no internet)?

Answer:

Pipeline business models do things linearly, following a step-by-step process. A classic example of a pipeline business is a manufacturing company, such as an automobile manufacturer. Let's consider the process:

- Raw materials are sourced from suppliers
- The raw materials are transported to the factory
- The factory processes the raw materials and components to manufacture automobiles
- Finished vehicles are shipped to dealerships
- Dealerships sell the vehicles to end customers

In this model, value is created in a linear, step-by-step process. The company controls the entire value chain from sourcing to production to distribution. This is a typical pipeline business where value flows from one end to the other.

Coca-Cola is another classic example of a traditional pipeline business model. In this model, Coca-Cola manufactures products, manages inventory, and distributes these products through a series of steps including production, marketing, and sales:

- *Production*: Coca-Cola produces its beverages by mixing raw materials like water, sweeteners, and flavorings.
- *Distribution*: The company then distributes these beverages through a global network of bottling partners and distributors.
- *Retail Sales*: Finally, the products reach consumers through various retail outlets, including grocery stores, restaurants, and vending machines.

This linear process of creating and selling products is characteristic of the pipeline business model, where value is created upstream and consumed downstream.

Written by Gabriel R.

Often, infact, platforms are considered to be mostly tied to real-life platforms. There are several real-life, non-internet examples:

1. *Shopping malls*: A shopping mall is a physical platform that connects retailers with consumers. The mall owner provides the infrastructure (the building, common areas, parking, etc.), and retailers rent space to sell their products. The mall attracts customers, and the more customers it attracts, the more valuable it is to retailers. This is a classic two-sided platform model.
2. *Farmers' markets*: Farmers' markets are platforms that connect local farmers and food producers directly with consumers. The market organizer provides the space and coordinates the event, and farmers pay a fee or a percentage of sales to participate. The more farmers and the more diverse the offerings, the more attractive the market is to consumers.
3. *Credit card networks*: Visa and Mastercard are platform businesses in the financial sector. They connect merchants who accept card payments with consumers who use those cards. The more merchants in the network, the more valuable it is to cardholders, and vice versa. The credit card network sets the rules and facilitates transactions between these two sides.
4. *Newspapers*: Traditional newspapers are a form of a platform. They connect advertisers with readers. The newspaper provides content to attract readers, and this audience is valuable to advertisers who pay to place their ads. The larger the readership, the more the newspaper can charge for advertising.
5. *Industry trade shows*: Trade shows in various industries are platforms that connect buyers and sellers. The trade show organizer provides the venue and coordinates the event, and companies pay to exhibit their products or services. Attendees come to discover new products and suppliers. The more exhibitors and attendees, the more valuable the trade show becomes for all participants.

6)

What is a "lock-up" condition for a shareholder and why do you think this is important in the life of a startup?

Answer:

A lock-up condition is the time a specific shareholder must stay within the company (or specific rules trigger. It refers to a contractual provision that prohibits shareholders (often founders, employees, and early investors) from selling their shares for a specified period of time, often 90 to 180 days after a significant event like an IPO.

The purpose of the lock-up is to prevent a flood of shares from hitting the market all at once, which could depress the stock price. It's meant to provide stability in the early days of a company's public trading.

7)

Make an example of a good-leaver condition for a shareholder

Answer:

A good-leaver condition for a shareholder refers to provisions that allow a shareholder, usually an employee or founder, to keep or sell their shares if they leave the company under certain favorable circumstances. These circumstances might include retirement, death, disability, or termination without cause.

Suppose Emma is a co-founder and CTO of a startup. She owns 20% of the company's shares, which are subject to a four-year vesting schedule. The shareholders' agreement includes the following good-leaver condition:

If Emma's employment is terminated by the company without cause, or if she resigns for good reason (such as a significant demotion or relocation), she will be considered a "good leaver." In this case:

1. All of her unvested shares will immediately accelerate and vest in full.
2. She will have 90 days to exercise any of her vested stock options.
3. She will be released from any non-compete obligations.
4. The company or other shareholders will have the right to buy back her shares at fair market value, but she will not be obligated to sell.

In this example, the good-leaver condition protects Emma's ownership stake even if she leaves the company under certain circumstances. The accelerated vesting rewards her for her contributions and the circumstances of her departure. The extended exercise window and release from non-compete obligations give her flexibility in her next steps. And while the company has the right to buy back her shares, she is not forced to sell at an unfavorable price.

On the other hand, if Emma were to leave the company voluntarily without good reason, or if she were terminated for cause (such as misconduct or breach of fiduciary duty), she would likely be considered a "bad leaver" under the agreement. In this case, she might forfeit any unvested shares, have a much shorter window to exercise vested options, and potentially be required to sell her shares back at a discount.

1.2 SECOND PART - SIMULATED STORY OF A STARTUP

8)

Suppose that Eric, working at his master's degree thesis, under the direction of his professor, develops a demo of a very interesting AI-based algorithm which could be used to predict traffic in some cities. What would you suggest him as the next step in his startup career:

- *Look for substantial funding.*
- *Run to a consultant to help him found a startup*
- *Spend the next year in a lab trying to develop the algorithm into a mature, stable software*
- *Interview people looking for details in traffic management and finding potential similar software already facing this*

Answer:

Fourth answer of course, since the whole course is why are we doing this. In order: (4) – (3) – (1) – (2)

9)

Joe, Anna and Mike are three friends and colleagues deciding to found a startup. Joe and Anna will work full time, Joe as the CEO and as the one "on the market", Anna as the CFO and as the initial human resource recruiter. Mike will work 40% part time as the CTO – but will additionally put 5.000€ to start the company up (while Joe and Anna have no initial cash to invest).

They decide to share the stocks in 45%, 35% and 20% amounts. How would you assign the stocks and why?

Answer:

The maximum goes to the CEO, since he's the most invested in the company (45% is good, since he works full time) given the market role and the legal representation of the company. Mike is the CTO (bigger standing on the CFO) but he works two days a week, instead Anna works more (five days a week) and takes the 35%; in the end, Mike takes 20% is a part-time. So, in the end to summarize:

- Joe = 45%
- Anna = 35%
- Mike = 20%

10)

A Business Angel meets the founders of Zomaz, a novel startup dealing with smart e-maps. He decides to help the founders by giving them € 50.000 for the 10% of the society.

What is the pre-money evaluation of the company?

Answer:

How much is the company worth?

After the investment (after the round or post-money evaluation → $500.000€$ (so, $50.000 * 10$)

Basically, the computation is $Post\_money = \frac{Investment\ for\ equity}{Percentage\ equity} = \frac{50.000}{0.10} = 500.000€$

Written by Gabriel R.

Before the investment (before the round or pre-money evaluation → $500.000 - 50.000 = 450.000€$

Basically, the computation is $Pre\_money\ evaluation = (Post\_money\ evaluation - Investment)$

(Or conversely = $Post\_money\ evaluation = (Pre\_money\ valuation + Investment)$)

11)

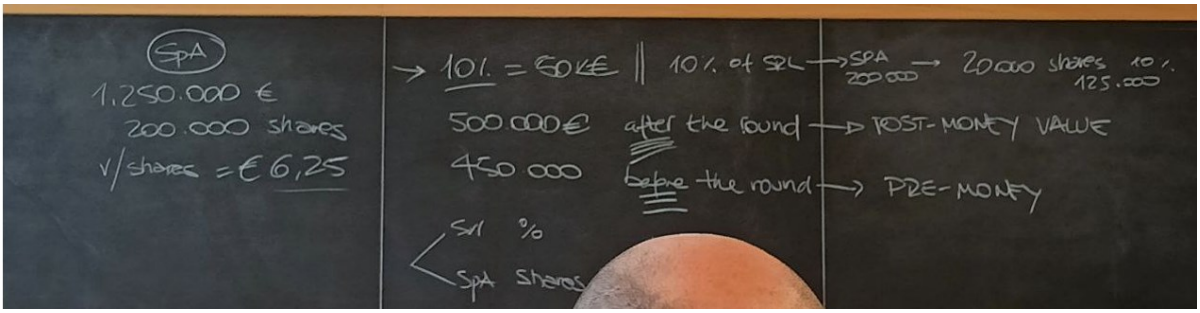
After some years Zomaz becomes an "SpA" with 200.000 shares and with an overall value of € 1.250.000 – what is the value of a single Zomaz share?

Answer:

Simply divide the overall value for the shares: $\frac{1.250.000}{200.000} = 6.25€$.

Consider Srl are made with percentages, while SpA reason by shares.

This scenario in which the Srl becomes SpA: 10% of Srl → SpA with 200.000 → 20000 shares = 10 % = 125.000 (see here as reference for passing from Srl to SpA)



12)

After some years, a Venture Capital firm invests in Zomaz and gets the 20% of the company, with a liquidation preference of 2x of the initial investment (2.2M€) with full participation. Zomaz is then sold completely for 9M€.

- *(1) How much will the Venture Capital firm receive for its shares covering the 20% of the overall company?*
- *(2) How much will be left for the rest of the shareholders?*
- *(3) Will the Venture Capital firm get also a part of this second level value?*
- *(4) Compare the ending results for the Venture Capital firm and for the CEO who also owns the 20% of the company at selling time*
- *(5) What if Zomaz is sold completely for 4M€? How much will the rest of the shareholders get?*

Answer:

(1)

Post-money: $2.2M * 5 = 11M$
Pre-money: $11 - 2.2 = 8.8M$ = Post money – investment
Full Zomaz sold for 9 millions → things went very bad

The VC has a 2x liquidation preference on their investment of 2.2 million euros. Thus, they are entitled to 4.4 million euros off the top when Zomaz is sold.

Written by Gabriel R.

After satisfying the VC's liquidation preference, the remainder is 9 million euros - 4.4 million euros = 4.6 million euros.

The VC still participates in sharing the remaining proceeds due to their full participation rights. They get an additional 20% of the remaining 4.6 million euros, which is 920,000 euros

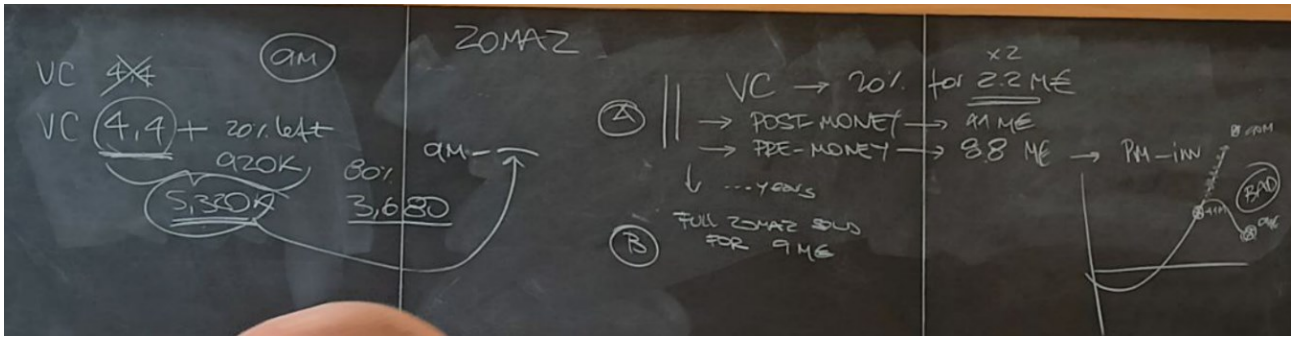
$VC = 4.4M + 20\%\ left\ from\ liquid.preference = 4.4 + 920K = 5{,}320M$

Liquidation preference = first give back the money they gave you

(2)

After the VC's total receipt of 5.32 million euros, the remaining funds to be distributed among other shareholders are 9 million euros - 5.32 million euros = 3.68 million euros.

Investors get → $9M - 5{,}320M = 3{,}680M$



(3)

Yes, the VC will get $5.320\ M$.

The VC firm has full participation rights, meaning after receiving their liquidation preference, they still participate in the distribution of the remaining sale proceeds. After the liquidation preference, there's 4.6M€ left, of which the VC firm would claim an additional 20% (due to their equity stake). This is 20% of 4.6M€ = 0.92M€. So, in total, the VC firm receives 4.4M€ + 0.92M€ = 5.32M€.

(4)

Venture Capital Firm:

- The VC firm's investment terms include a 2x liquidation preference on their initial investment of 2.2 million euros, totaling 4.4 million euros.
- After receiving this preference, the remainder of the sale proceeds is 9 million euros minus 4.4 million euros = 4.6 million euros.
- Additionally, the VC has full participation rights, allowing them to claim 20% of the remaining 4.6 million euros. This amounts to 920,000 euros.
- Therefore, the total amount received by the VC firm is 4.4 million euros (liquidation preference) plus 920,000 euros (participation in the remainder), totaling 5.32 million euros.

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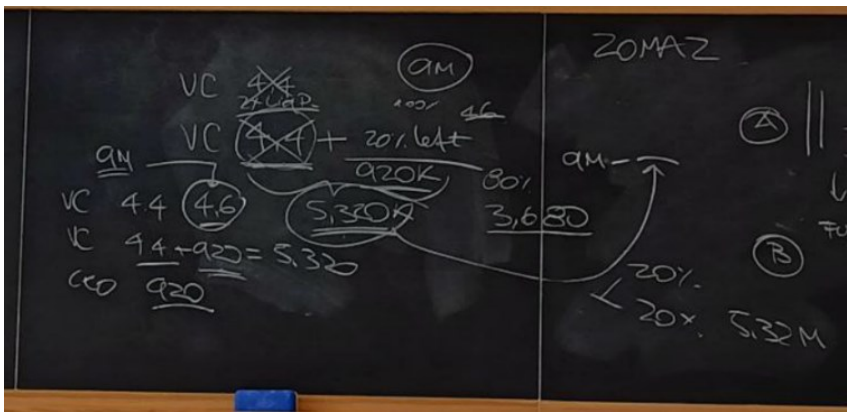
CEO:

- The CEO, owning 20% of the company but without any special liquidation preference or participation rights, would normally expect to receive 20% of the total sale proceeds.
- However, the liquidation preference paid to the VC first reduces the available proceeds to 4.6 million euros.
- The CEO then receives 20% of this remaining 4.6 million euros, which is 920,000 euros.

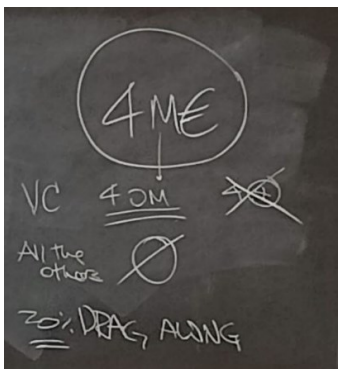
So, the VC will get $5.320\ M$ while the CEO takes the 20% of the total $(9M)$ without the liquidation preference (4.4), which allows to get $4.6 \rightarrow 9 - 4.4 = 4.6M$.

Then, there is the 20% cut over 4.6, which is 920. This is correct, since this quote is added to the 4.4 of the VC, which allows us to get back the $5.32 \rightarrow 4.4 + 920 = 5.320$. Such is shown below.

(5)



Suppose the company sells for 4 million, how much the stakeholders get?



- First, the VC would receive their liquidation preference, which is 2x2.2M€ = 4.4M€. However, since the total sale is only 4M€, the VC can only receive the full sale amount
- As the sale amount is less than the VC's liquidation preference, there is nothing left for other shareholders. The VC absorbs the entire sale amount of 4M€ due to their liquidation preference, and the rest of the shareholders receive nothing

Why the CEO allowed the VC to do all of this while he gets 0?

There is a specific clause, which is the drag along on his 20% → recall the definition

Specific shareholder *can trigger* the call option of other shareholder when selling his/her participation

Right to sell the company and you accept my offering, you get 4 millions and get back the 400000, so to get at full 4.4.

In the scenario where Zomaz is sold for a lower amount (e.g., 4 million euros), despite the initial high expectations and investments, the drag-along clause becomes crucial. It allows the VC, holding significant influence and investment preference, to enforce the sale of the company to recoup their investment as much as possible, even if it means that the CEO and other minority shareholders may receive little to no return on their shares.

Written by Gabriel R.

At the time of the VC's investment, the CEO agreed to the drag-along clause possibly under the assumption that it would be unlikely to be used under such detrimental conditions, or because the investment terms were necessary to secure the needed capital for growth.

The CEO might have had to compromise on certain terms, including the drag-along clause, to attract significant capital from the VC, especially if the company was in urgent need of funding.

13)

What do we mean by FFF?

Answer:

FFF stands for "Friends, Family, and Fools." It refers to the initial sources of funding that many startups rely on in their very early stages, before they are ready for professional investors. Entrepreneurs often turn to their personal networks - friends, family members, and others ("fools") who believe in them and their idea - for initial seed capital.

While this capital can help get a startup off the ground, it's usually not sufficient for significant growth and comes with the risk of straining personal relationships if things don't go well.

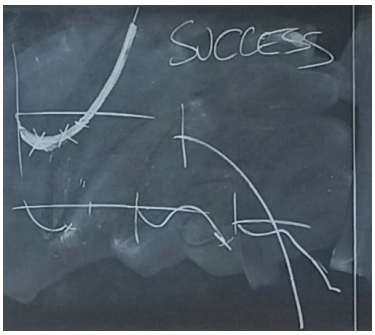
So → no relationships, no contracts

14)

Why, in a typical J-Curve, there is always a first period of cash-loss (valley of death) and what are the key-facts that affect the trend of the curve?

Answer:

The J-Curve is a graphical representation of the typical path that a startup's cash flow follows over time. The curve gets its name from its shape: it starts with a downward slope (representing negative cash flow), reaches a low point, and then gradually trends upward (representing positive cash flow).

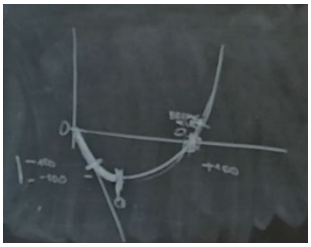


The period of cash loss is defined as the “valley of death”, common and expected phase for most startups since there are upfront investments, limited revenue and customer acquisition costs which can limit the initial non-existent revenue of said startup.

So → the j-curve represents the typical successful startup curve

The phases are as follows:

- Slopes going down (remember here we are making money anyway)
    - start having customers
    - loss equal to the profits
        - specifically → accumulated losses = accumulated profits
- Breakeven point → slope starts going up again



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