(1) Cash Flow Analysis

(2) Team meetings
(1) Cash Flow Analysis

Before we can create a financial strategy for the start-up, we need to understand the flow of cash into and out of the business.

5-Step Process for cash flow analysis

(1) Make a list of all the relevant cash flows of the startup.

Cash flows in:

- NOT Funding
- revenue from selling the product
- licensing revenue from patents
- contract work for other companies (e.g., product development)

Cash flows out:

- people: managers, product developers, marketing & sales team, others
- equipment: computers, lab equipment
Step 2: Determine the timing of the cash flows (typically done quarterly). 

Step 3: Determine the net cash flow for each period.
Step 4: Compute the present value of the net cash flow for each period.

Money loses value over time due to inflation: \$1_{2016} > \$1_{2017}

We need to discount the future value of the cash flow in order to get its present value.

FV = future value
PV = present value
\( d \) = discount rate (rate of inflation)
\( n \) = number of periods that the FV is in the future

\[
PV = \frac{FV}{(1+d)^n}
\]

In the present, \( n = 0 \), so \( PV = FV \)

\[\rightarrow FV = PV(1+d)^n \rightarrow \text{(just like a bank account)}\]
Example:
A venture capital firm has promised you they will invest $1 million, but the investment will be in 3 years.

How much is the investment worth in today's dollars?

\[ FV = \$1\text{m} \]
\[ n = 3 \]
\[ d = 10\% \text{ per year} \]

\[ PV = \frac{\$1\text{m}}{(1+0.1)^3} \approx \$750\text{ K} \]

What if the investment will be made in 3 quarters?

Adjust \( d \) from years to quarters

\[ d = \frac{10\%}{4\text{Q}} \times \frac{4\text{Q}}{1\text{Y}} = 2.5\% \]

\[ PV = \frac{\$1\text{m}}{(1+0.025)^3} \approx \$940\text{ K} \]
Example #2

Based on your cash flow analysis, you promise the venture capitalist a $3m return on their $1m investment in 3 years.

Q: How much is that return actually worth?

\[ FV = 3m \quad d = 10\% \quad n = 3 \text{ yrs} \]

\[ PV = \frac{\$3m}{(1+0.10)^3} \approx 2.25 \text{ m} \]

Compare return on investment: ROI

\[ \Delta = \frac{\text{return} - \text{investment}}{\text{investment}} \]

\[ \frac{\$3m - \$1m}{\$1m} = 2 \text{ or } 200\% \text{ ROI} \]

Without discounting:

\[ \frac{\$2.25m - \$1m}{\$1m} = 1.25 \text{ or } 125\% \text{ ROI} \]