The Link Between Free Cash Flow & Net Present Value

Free Cash Flow (FCF)

- **One-Liner: *"Cash that is available to be distributed after major capital projects"***
  - *What investors care about most!*
- FCF measures the cash that a company generates, after taking into account spending associated with major capital projects
- **FCF = Operating Cash Flow – Capex**

where Operating Cash Flow equals:

- EBIT (Earnings before Interest & Tax)
- *Less:* Taxes (EBIT x Tax Rate)
- *Add:* D&A (non-cash item)
- *Less: Change in Net Working Capital* (related to timing of cash flows)

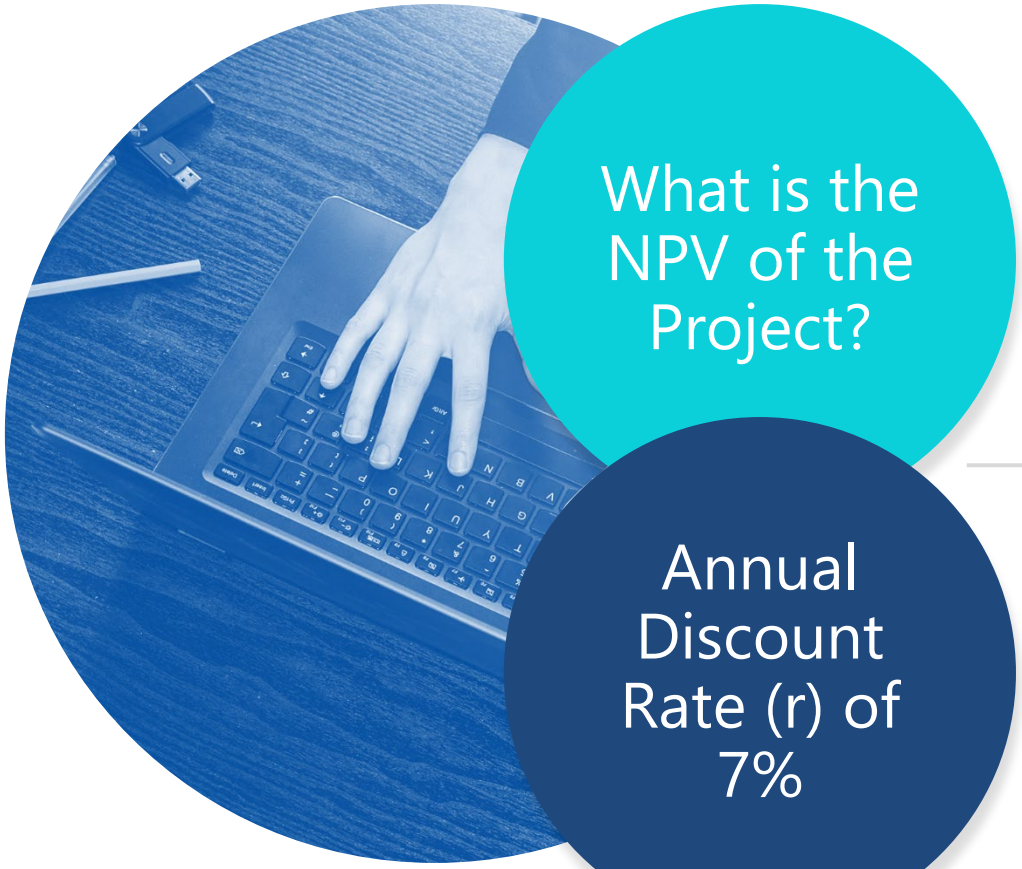
where Capex (Capital Expenditure) equals:

- Investments in PP&E

Net Present Value (NPV)

	NPV
NPV One-Liner	*"Used to value a project by discounting future cash flows including the initial cost"*
NPV Explanation	▪ NPV is compared to 'zero' ▪ >0: Proceed ▪ <0: Do Not Proceed ▪ Higher NPV = More Profitable
Relationship to DCF	▪ A discounted cash flow (DCF) valuation is similar, but separates cost and return into two 'buckets', and specifically uses Free Cash Flow ▪ DCF is compared to Present Value (PV) of Cost: ▪ > PV of Cost: Buy ▪ < PV of Cost: Sell ▪ Higher Differential between DCF and PV of Cost = Greater Return

Simple Net Present Value Example



What is the NPV of the Project?

Annual Discount Rate (r) of 7%

Project's Future Cash Flows

- **Year 1:** +$10M
- **Year 2:** +20M

Project's Initial Cost

- **Year 0:** -$25M
- No additional capital required

Calculation

$$NPV = CF_0 + \frac{CF_1}{(1+r)^1} + \frac{CF_2}{(1+r)^2} + \cdots + \frac{CF_n}{(1+r)^n}$$

$$= -25 + \frac{10}{(1+0.07)^1} + \frac{20}{(1+0.07)^2} = \$1.8M$$

NPV > 0 = Should Proceed with Project

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