

A Simple Model

Net Present Value

NOTES TO ACCOMPANY VIDEOS

These notes are intended to supplement the videos on ASimpleModel.com. They are not to be used as stand-alone study aids, and are not written as comprehensive overviews of the topic detailed. The purpose of these notes is to provide a tangible collection of the visuals used in the videos with comments highlighting the more important aspects covered.

Discounted Cash Flow Model

• — 003 Net Present Value

This video introduces net present value (“NPV”), and walks through three examples to demonstrate how NPV is used to make investment decisions:

1. If $NPV > 0$: The company, project or asset is a good investment.
2. If $NPV = 0$: There must be motivation beyond financial gain to justify the investment.
3. If $NPV < 0$: The company, project or asset is not a good investment.

NET PRESENT VALUE (NPV)

The sum of the present values (PVs) of all incoming and outgoing cash flows.

In our example the only cash outflow is the purchase price of the boat. Consequently the NPV is simply the PV of future cash flows minus the purchase price.

COST OF CAPITAL

Capital required to purchase asset borrowed at 10% interest rate to be paid annually.

Cost of Capital

NET PRESENT VALUE

	Scenario 1	Scenario 2	Scenario 3
PV of Future Cash Flows	\$ 3,000,000	\$ 2,500,000	\$ 2,000,000
Purchase Price	\$ 2,500,000	\$ 2,500,000	\$ 2,500,000
Net Present Value	\$ 500,000	\$ -	\$ (500,000)
Net Present Value	>0	0	<0
Conclusion	Yes	Neutral	No

The video makes a few assumptions that deserve comments:

- It is not realistic to project consistent cash flows with certainty. Renting a boat to customers would generate uncertain future cash flows.
- It is highly unlikely that a bank would finance 100% of the purchase price of the boat.
- This example does not contemplate repayment of loan. Generally a loan is provided over a specific period of time.
- It is difficult to capture everything relevant to NPV in a four minute video.