Calculating Present and Future Value of Cash Flows

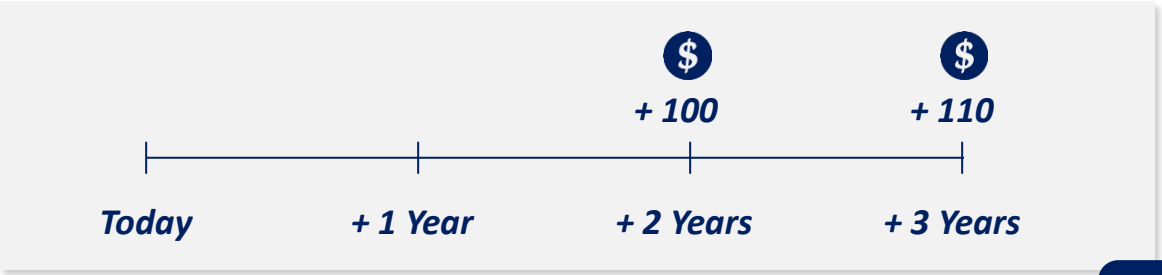
365

Time Value of Money

Money today is ***more valuable*** than money tomorrow

Comparing Cash Flows

Scenario I:



= 210

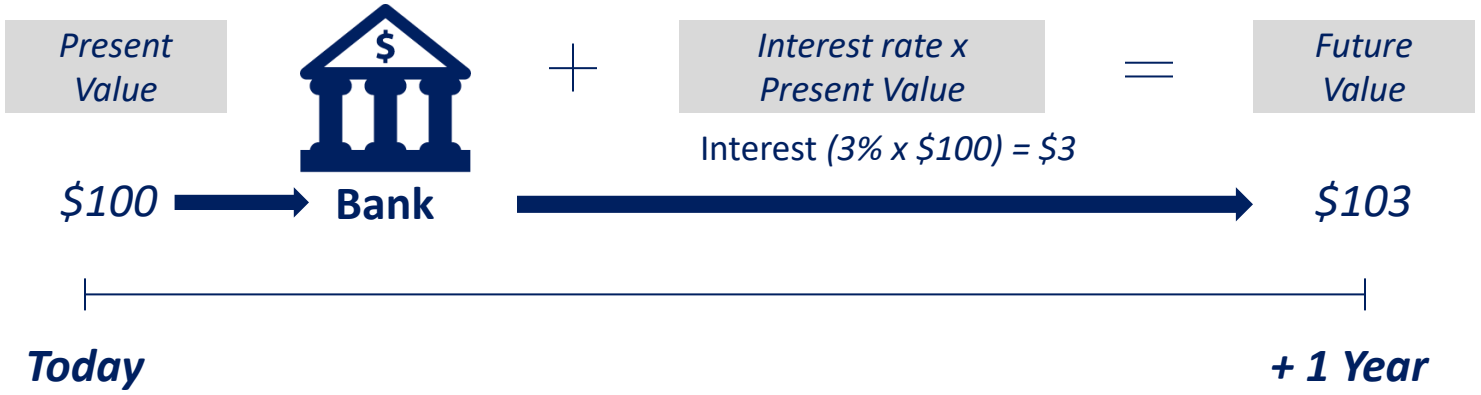
~~***Better option***~~

We have to consider the Time Value of money

Scenario II:

= 200

Present and Future Value of Cash Flows



Future Value = Present Value x (1 + i)

Future Value = 100 x (1 + 3%) = $103

How do we find the Present Value of a Future Cash Flow?

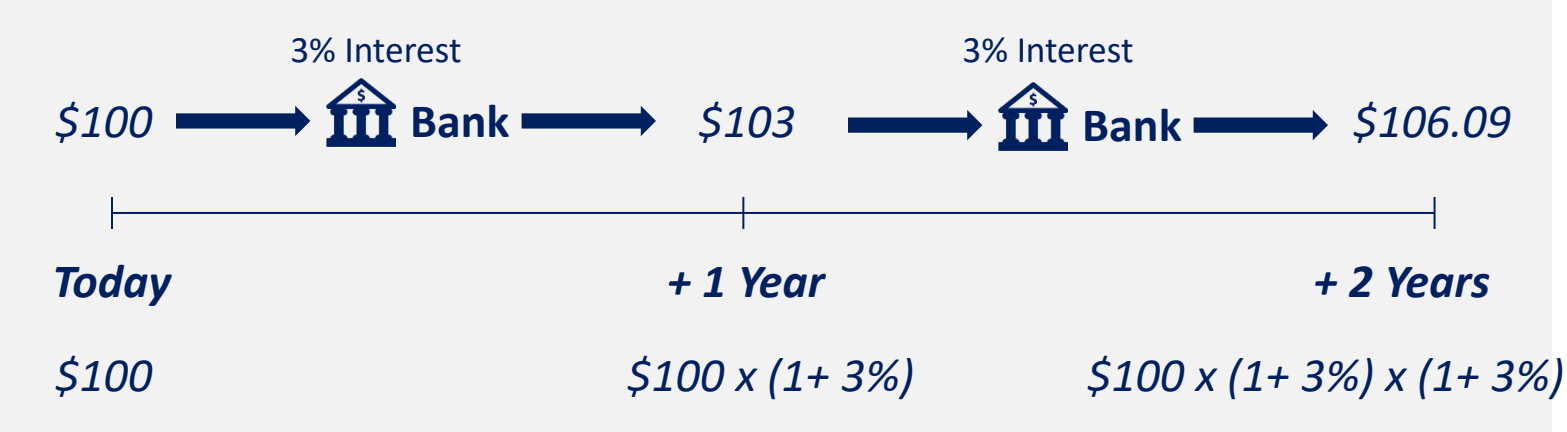
$$\text{Future Value} = \text{Present Value} \times (1 + i)$$

Divide by (1 + i)

$$\frac{\text{Future Value}}{(1+i)} = \frac{\text{Present Value} \times \cancel{(1 + i)}}{\cancel{(1+i)}}$$

$$\frac{\text{Future Value}}{(1+i)} = \text{Present Value}$$

Present and Future Value of Cash Flows



$$\text{Present Value} = \frac{\text{Future cash flow “n” years from now}}{(1+ i\%)^{n}}$$