# BASIC PRINCIPLES OF FINANCIAL VALUATION DISCOUNTING

## Discounting Future Cash Back to the Present

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# BRINGING THE FUTURE INTO THE PRESENT

What is a cash flow in the future worth today?

$$FV = PV(1+r)^t$$

$$PV = \frac{FV}{(1+r)^t}$$

# PRESENT VALUE

If I offered you $175 payable 5 years from now, how much would you pay for that offer today if interest rates were 4%?

| Today | | | | | 5 years from now |
|---|---|---|---|---|---|
| 0 | 1 | 2 | 3 | 4 | 5 |
| $175/(1+4%)$^5$ | $175/(1+4%)$^4$ | $175/(1+4%)$^3$ | $175/(1+4%)$^2$ | $175/(1+4%)$^1$ | |
| $ 143.84 | $ 149.59 | $ 155.57 | $ 161.80 | $ 168.27 | $ 175.00 |

ANSWER: $143.84

# PRESENT VALUE

Two things drive how hard
discounting slams down the future

- How far out is the cash
- How big is the interest rate

# PRESENT VALUE

$100 discounted at 10%