The Three Cash Flow Valuation Methods Model

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- I have provided a simple model which demonstrates the different calculations of cash flow
- Available to download with this lecture

The Three Cash Flow Valuation Methods Model

- You need to input the key values
- Note the last cell is a circularity break - on this more later

INPUTS	
Sales ($)	US$5000
Unlevered Beta	1.00
Riskfree Rate	10%
Risk Premium	7%
Debt Ratio (Debt %)	40%
Depreciation ($)	US$500
Change in Working Capital	US$0
Capital Expenditures ($)	US$500
EBIT Margin (%)	40%
Tax Rate	40%
Interest Cost	10%
Debt Value (Circularity Break)	US$3116.88

The Three Cash Flow Valuation Methods Model

- The Model then calculates the value of the firm using the three different methods
  - Capital Cash Flow
  - Equity Cash Flow
  - Free Cash Flow

	CAPITAL CASH FLOW VALUATION	EQUITY CASH FLOW VALUATION	FREE CASH FLOW VALUATION
Debt	US$3116.88	US$3116.88	US$3116.88
	Debt = Debt% * Firm Value	Debt = Debt% * Firm Value	Debt = Debt% * Firm Value
Sales	US$5000	US$5000	US$5000
EBIT Margin	40%	40%	40%
EBIT	US$2000	US$2000	US$2000
Depreciation	US$500	US$500	US$500
Capital Expenditures	-US$500	-US$500	-US$500
Change in Working Capital	US$0	US$0	US$0
OPERATING CASH FLOW	US$2000	US$2000	US$2000
Taxes	US$675.32	US$675.32	US$800.00
	Taxes = TR * (EBIT - Interest)	Taxes = TR * (EBIT - Interest)	Taxes = TR * (EBIT)
Interest	US$311.69	US$311.69	US$311.69
		US$311.69	
		Debt Cash Flow	
	US$1325	US$1013	US$1200
	Capital Cash Flow	Equity Cash Flow	Free Cash Flow
	17.00%	21.67%	15.40%
	Expected Asset Return	Expected Equity Return	Weighted Average Cost of Capital
	US$7792.21	US$4675.33	US$7792.21
	Capital Cash Flow Value	Equity Cash Flow Value	Free Cash Flow Value
		US$3116.88	
		Debt Value	
		US$7792.21	
		Equity Cash Flow & Debt Value	

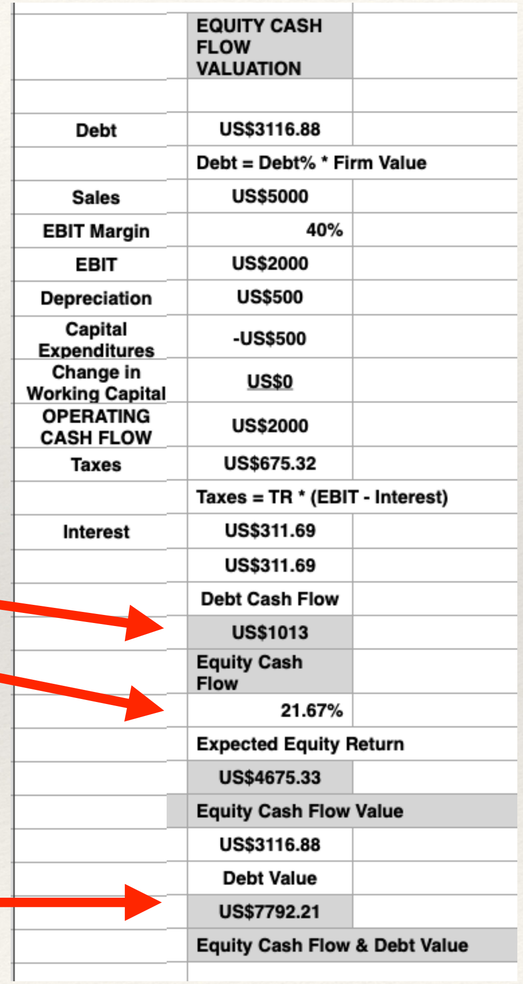
The Three Cash Flow Valuation Methods Model

- The Capital Cash Flow
- Operating Cash Flow less Taxes
- Divided by the Expected Asset Return
- Value of the Firm

	CAPITAL CASH FLOW VALUATION	
Debt	US$3116.88	
	Debt = Debt% * Firm Value	
Sales	US$5000	
EBIT Margin	40%	
EBIT	US$2000	
Depreciation	US$500	
Capital Expenditures	-US$500	
Change in Working Capital	US$0	
OPERATING CASH FLOW	US$2000	
Taxes	US$675.32	
	Taxes = TR * (EBIT - Interest)	
Interest	US$311.69	
	US$1325	
	Capital Cash Flow	
	17.00%	
	Expected Asset Return	
	US$7792.21	
	Capital Cash Flow Value	

The Three Cash Flow Valuation Methods Model

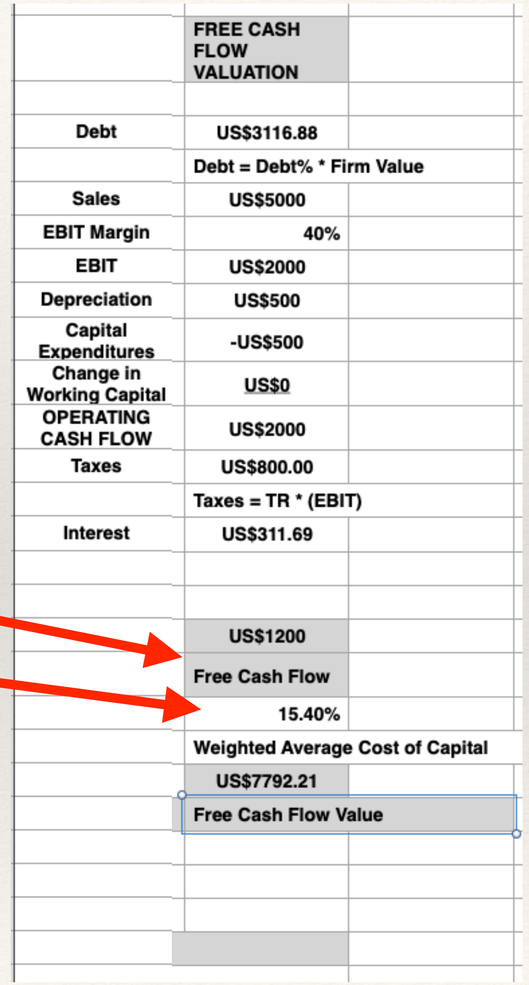
- The Equity Cash Flow
- Calculates the Equity Cash Flow and divides it by the expected Equity Return
- The Debt Value is added back as a check to arrive at the value of the Firm



	EQUITY CASH FLOW VALUATION	
Debt	US$3116.88	
	Debt = Debt% * Firm Value	
Sales	US$5000	
EBIT Margin	40%	
EBIT	US$2000	
Depreciation	US$500	
Capital Expenditures	-US$500	
Change in Working Capital	US$0	
OPERATING CASH FLOW	US$2000	
Taxes	US$675.32	
	Taxes = TR * (EBIT - Interest)	
Interest	US$311.69	
	US$311.69	
	Debt Cash Flow	
	US$1013	
	Equity Cash Flow	
	21.67%	
	Expected Equity Return	
	US$4675.33	
	Equity Cash Flow Value	
	US$3116.88	
	Debt Value	
	US$7792.21	
	Equity Cash Flow & Debt Value	

The Three Cash Flow Valuation Methods Model

- The Free Cash Flow is divided by the WACC and arrives at the same value of the firm



	FREE CASH FLOW VALUATION
Debt	US$3116.88
	Debt = Debt% * Firm Value
Sales	US$5000
EBIT Margin	40%
EBIT	US$2000
Depreciation	US$500
Capital Expenditures	-US$500
Change in Working Capital	US$0
OPERATING CASH FLOW	US$2000
Taxes	US$800.00
	Taxes = TR * (EBIT)
Interest	US$311.69
	US$1200
	Free Cash Flow
	15.40%
	Weighted Average Cost of Capital
	US$7792.21
	Free Cash Flow Value

The Three Cash Flow Valuation Methods Model

- If you want to make your own calculations on the model all you have to do is alter the inputs
- You will then have to use the circuit breaker to arrive at the correct value of the firm
- The cell in yellow calculates the value of debt as a ratio of the firm value
- Type the value from the yellow cell into the cell with the green font

The Three Cash Flow Valuation Methods Model

- We will run a little exercise to demonstrate how the model works in the next lecture and you can do this yourself along with the video
- Make sure you have the model downloaded and opened in Excel

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