What is Economic Value Added - EVA?

What is Economic Value Added - EVA?

- Economic Value Added or EVA is a measure of the value created in excess of the required rate of return demanded by shareholders
- The concept was developed by Stern Stewart

What is Economic Value Added - EVA?

- The EVA formula is shown here:
- NOPAT = Net Operating Profit after Tax
- Capital Invested = Equity + Long Term debt at the beginning of the period
- WACC = Weighted Average Cost of Capital
- Capital Invested x WACC is also referred to as the Finance Charge

- EVA= NOPAT - (Capital Invested x WACC)

What is Economic Value Added - EVA?

- NOPAT = Net Operating Profit after Tax
- Does not take into account Interest
- Net Profit + Net Cost of Interest = Interest x (1-tax rate)

- EVA= NOPAT - (Capital Invested x WACC)

What is Economic Value Added - EVA?

- There are other adjustments to consider
  - Expenditure on R&D, promotion and employee training should be capitalised
  - Add back the Depreciation charge and then make a deduction for the true economic cost of the asset, rather than the accounting charge
  - Assets such as provisions, bad debts, deferred tax provisions and inventory allowances should be added back to capital

- Non cash expenses added back to profits and capital employed
- Operating leases should be capitalised and added back to capital employed
- Tax charges should be based in cash taxes rather than accounting taxes

What is Economic Value Added - EVA?

- Have to make adjustments to accounting conventions to ensure that the correct level of capital employed is being used as the yard stick
- Otherwise likely to understate the capital and overstate the profit created by the firm
- In practice there are over 160 adjustments which can be made

What is Economic Value Added - EVA?

- Economic Capital Employed can be calculated from
  - Sum of interest bearing debt and equity, or
  - Sum of net assets less non interest bearing current liabilities

What is Economic Value Added - EVA?

- The Weighted Average Cost of Capital we have covered earlier in the course
- Blended weighted average cost of equity and cost of debt
- This is multiplied by the Capital Invested to derive the hurdle rate or Finance Charge

What is Economic Value Added - EVA?

- Lets look at a simple example…

What is Economic Value Added - EVA?

- Capital Invested in each of three years
- WACC is 10.4%
- Finance Charge = Capital Invested x WACC
- NOPAT in each of three years

EVA Example

Year	1	2	3
Capital Invested	US$55,000,000	US$57,000,000	US$60,000,000
WACC	10.4%	10.4%	10.4%
Finance Charge	US$5,720,000	US$5,928,000	US$6,240,000
NOPAT	US$6,250,000	US$5,500,000	US$6,300,000
Annual EVA	US$530,000	-US$428,000	US$60,000
Cumulative EVA	US$530,000	US$102,000	US$162,000
NOPAT Return on Capital Invested	11.36%	9.65%	10.50%
WACC	10.40%	10.40%	10.40%
Value Added/Shortfall	0.96%	-0.75%	0.10%

What is Economic Value Added - EVA?

- From this we can see the annual EVA = NOPAT - Finance Charge
- The Cumulative EVA is tracked here

EVA Example

Year	1	2	3
Capital Invested	US$55,000,000	US$57,000,000	US$60,000,000
WACC	10.4%	10.4%	10.4%
Finance Charge	US$5,720,000	US$5,928,000	US$6,240,000
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What is Economic Value Added - EVA?

- Note that in Year 2 the EVA is negative
- The NOPAT Return on Capital Invested = NOPAT / Capital Invested
- WACC
- NOPAT Return - WACC

EVA Example

Year	1	2	3
Capital Invested	US$55,000,000	US$57,000,000	US$60,000,000
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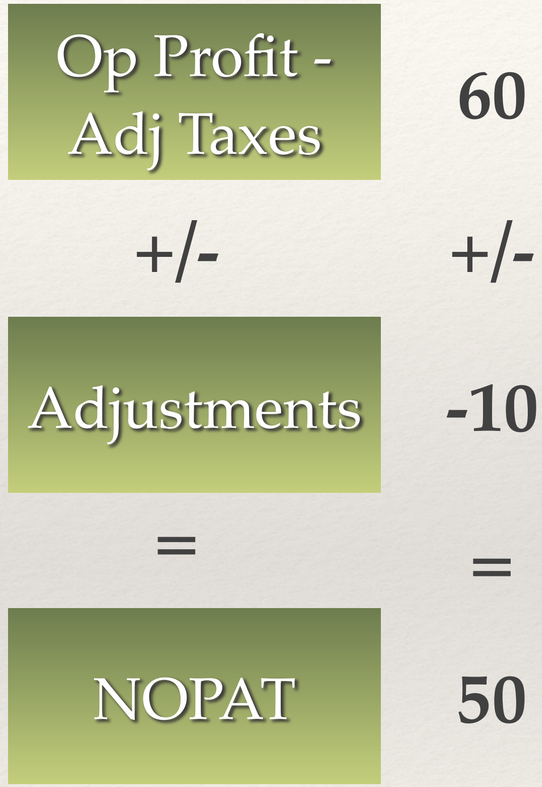
What is Economic Value Added - EVA?

- A copy of this spreadsheet is available to download from the Resources Section of this lecture
- In summary we can see year by year when the company makes an economic return on its invested capital

What is Economic Value Added - EVA?

- We can demonstrate this in another way
- We take the Operating Profit less adjusted taxes = 60
- Make the accounting adjustments = -10
- Equals NOPAT = 50



What is Economic Value Added - EVA?

- Weighted Average Cost of Capital 10%
- Invested Capital = 400
- NOPAT - Finance Charge = Economic Value Added

Op Profit - Adj Taxes	60	10%	WACC
+/-	+/-	x	x
Adjustments	-10	400	Inv. Cap
=	=	=	
NOPAT	50	40	Finance Charge

What is Economic Value Added - EVA?

- The Economic Value Added is the NOPAT - Finance Charge
- 50 - 40 = EVA = 10
- This means that the excess over NOPAT is the EVA

Op Profit - Adj Taxes	60	10%	WACC
+/-	+/-	x	x
Adjustments	-10	400	Inv. Cap
=	=	=	
NOPAT	50	40	Finance Charge
EVA	50 - 40 = 10		

What is Economic Value Added - EVA?