MVA: PV(FCF) vs. PV(EVA)

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$FCF = EBIT \times (1-t) - \Delta NWC$

Note: V "value of firm"

Definitions: $V = PV(FCF) + Cash$?

$MVA = V - Invested\ Capital = PV(EVA)$

$EVA = NOPLAT - Capital\ Charge$

$= EBIT \times (1-t) - Inv\ Cap \times WACC$

Assumptions: 1. Cash = 0

2. All variables constant and continue into perpituity

Derivation:

$MVA = V - Inv\ Cap$

$= PV(FCF) + \cancel{Cash} - Inv\ Cap$

$= PV(EBIT \times (1-t) + Dep - \cancel{\Delta WCR} - NCE) - Inv\ Cap$

$= PV(EBIT \times (1-t) + \cancel{Dep} - \cancel{\Delta NFA} - \cancel{Dep}) - Inv\ Cap$

$= \frac{EBIT \times (1-t)}{WACC} - Inv\ Cap$

$MVA = PV(EVA)$

$= PV(EBIT \times (1-t) - Inv\ Cap \times WACC)$

$= \frac{EBIT \times (1-t)}{WACC} - Inv\ Cap$ ✓