Discounted Cash Flow Approach

Ram Kumar Kakani
SPJCM Singapore

FCFE Model

- FCFE = Current EPS − ((Capital Spending − Depreciation) X (1 − Debt ratio) − (Δ Working Capital) X (1 − Debt ratio)

- The Constant Growth FCFE Model

- To be used for: stable firms (say, Dhandapani Finance)

- The two-stage FCFE Model
- One needs to adjust the capital spending and depreciation for the stable period
- To be used for: companies having temporary edge over others (say, Punjab National Bank)

Punjab National Bank	2006	2005	2004	2004	2004
Current EPS	48.6	44.4	45.2	35.4	29.8
Capital Spending - Depreciation	57.6	62.3	43.6	54.3	
Debt Ratio	47%	31%	48%	42%	
FCFE	(7,866.3)	(6,569.2)	(3,796.7)	(3,089.6)	
Growth Rate	15%	6%			
Cost of Equity	14%				

Projected	2007	2008	2009	2010	2011	2012
PAT	1762	2026	2330	2680	3082	3267
Capital Spending - Depreciation	66	76	88	101	116	133
FCFE	1727	1974	2284	2622	2966	39169
PV of FCFE	1515	1519	1542	1552	1540	20343
Intrinsic Value Per Share	888					

- The E Model – A three stage FCFE Model
- A high growth phase, a transition phase, and a stable growth phase
- Caution – (a) capital spending vis-à-vis depreciation (b) risk
- To be used for: firms with very high current growth rates
- Let us try it on Hexaware Technologies
- High growth phase 40% (5 year); transition phase declining (6 year); stable growth phase rate 6%
- Current EPS = 38
- Current Capital Spending per share = 12
- Current Depreciation per share = 9
- Current Change in Working Capital per share = 26
- Debt ratio = 1%
- Current beta = ? Future beta = ?
- Assume capex = depreciation in the terminal year

FCFE Vs DDM

- For small investors – prefer using DDM
- Prefer FCFE over DDM when
  - The cash dividends are very high or very low (i.e., unrealistic)
  - Firms with a predicted change in corporate control
  - When there are large non-cash dividend benefits from owning the firm (say, salary)
- Firm's having operating losses could avoid using DDM and FCFE

FCFF

- FCFE and FCFF primarily defer due to the existence of financial leverage (and changes in financial leverage)
- FCFF Models
- Stable growth firm (use WACC instead of K_e)
  - Best use: firms with high leverage or changing leverage
- Please note that the debt has to be fairly valued
- Two stage growth model
  - Let us try this on South Asian Petrochemicals

Valuing a new firm in a cyclical industry!

South Asian Petrochem Limited	2006	2005	2004
EBIT X (1 - Tax Rate)	51	36	27
Capital Spending - Depreciation	0		
Change in Working Capital	91	85	

Attempting to Unlock Value

- Many ways …
- Say, using simulation (or heuristics)
- For, example based on Financial Leverage
  - You can give it a try on your assignment …
- Experiment with different DE ratios
- Compute levered beta
- Compute unlevered beta
- Compute the cost of equity at different levels of leverage
- Similarly, compute the cost of debt at different levels of DE ratios
- Combine and compute WACC
- Note, assume marginal tax rates & be realistic …

Special Situations ...

- Cyclical sectors
  - Path 1: Adjust the growth rate to reflect the economic cycle
  - Path 2: Use normalized earnings as base year earnings

Average PAT	162		
Normalized EPS	14.53		
(Capital Spending - Depreciation)	7.93	12.01	47.48
DE Ratio	45%	45%	43%
working capital/ revenue ratio	51%		

Moser Baer (I) Limited	2007	2008	2009	2010
Projected Revenue	2078.292	2493.9504	2992.74048	3142.3775
Estimated EPS	17.4309927	20.9171913	25.1006295	26.355661
less (Capital Spending - Depreciation) (1-DE)	4.54660375	2.64251583	1.59107696	1.67063081
less change in working capital	15.8420608	19.010473	22.8125676	15.7642806
FCFE	28.7264498	37.2851484	46.3221201	577.847297
Present Value @ 12%	25.6486159	29.723492	32.9711701	411.300292
Intrinsic Value	499.64357			