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INDEPENDENT POWER PLANT VALUATION.

TOPIC 2 – DISCOUNTED CASH FLOW – FCFE AND FCFF

1. INTRODUCTION AND OBJECTIVE

This article attempts to discuss on some basic principles that should be considered to conduct an equity valuation of an investment in power plant, whether for brownfield or greenfield, using discounted cash flow technique. **Two methods** are available using the Discounted Cash Flow (**DCF**) namely, as follows:-

Method	Explanation
Free Cash Flow to Equity (FCFE)	FCFE derives the equity value attributable to the equity project sponsors. The Internal Rate of Return (IRR), as determined using the net cash flow from FCFE is known as the equity IRR.
Free Cash Flow to Firm (FCFF)	FCFF derives the enterprise value attributable to the stakeholders which comprise of both the equity and debt providers of a proposed power plant under evaluation. The Internal Rate of Return (IRR), as determined using the net cash flow from FCFF is known as the project IRR.

2. METHOD OF VALUATION

Key differences between the two approaches, FCFE and FCFF are as follows:-

	FCFE	FCFF
1. Measurement	FCFE measures the equity value of an independent power plant project, to the equity contributors.	FCFE measures the Enterprise Value (EV) of an independent power plant project, to the debt and equity contributors. To arrive at the equity value, deduct the net debt from the EV. Mathematically, it can be presented as follows:- Value of equity = EV – Net Debt or Value of equity = EV – (Debt – Cash) or Value of equity = EV + Cash - Debt
2. Discount rate	Uses the equity discount rate, K_e	Uses the Weighted Average Discount Rate, WACC
3. Cash Flow	The annual projected cash flow to be used prior to be discounted with the equity discount rate, is the net cash flow attributable to equity providers.	The annual projected cash flow to be used prior to be discounted with the WACC, is the net cash flow attributable to equity and debt providers.
4. IRR, %	The IRR so determined is actually the equity IRR, %.	The IRR so determined is actually the project IRR, %.

THANKS FOR READING.