The Dividend Discount Model (DDM): The Black Sheep of Valuation?

How to Value Companies When “Cash Flow is King”

Valuation Questions from Overachievers

My advice with technical interview prep is always the same: **focus on knowing the core concepts very well** and skip the bells and whistles.

That means “accounting, the financial statements, valuation, DCF analysis, and a bit of deal modeling.”

Valuation Questions from Overachievers

But we skill get questions about **more exotic valuation methodologies**, such as the Dividend Discount Model (DDM).

Students and career changers always want to go above and beyond the "boring" DCF, which leads to these questions.

Valuation Questions from Overachievers

If you want this tutorial in writing, along with screenshots, the Excel model, and the company documents, go to this URL (**pinned in the comments**):

https://mergersandinquisitions.com/dividend-discount-model/

The **Short** Answer…

- **Rationale:** When you buy a company's stock, you profit based on its **Dividends** and **potential share price increases**

- **Cash Flow:** Metrics like "Unlevered Free Cash Flow" do not correspond to anything in real life – companies do not actually distribute this cash flow to investors!

- **So:** It's most logical to value a company by projecting and discounting its Dividends and its future share price (or Equity Value) and summing them up

- **Dividend Discount Model:** Best for companies that *distribute Dividends predictably* using most of their available cash flows

The **Short** Answer…

- **Ideal:** Banks, insurance firms, and some REITs and MLPs → Legal requirements to distribute Dividends or must do so to manage "regulatory capital" (quite different model setup)

- **Can Work:** Other mature companies with predictable cash flow profiles and Dividend policies (e.g., power / utility companies)

- **Bad Idea:** Tech startups, biotech, and anything else in the "growth" category with unstable cash flows

- **Biggest Issues:** The DDM is *very difficult* to set up and use vs. standard DCF, and it requires more and better assumptions

The **Short** Answer…

- **Step 1:** Forecast revenue and expenses, as in a standard DCF

- **Step 2:** Calculate the "Distributable Cash Flow," and assume that some is distributed (Dividends), some is spent on growth (CapEx), and some is retained (Cash)

- **Step 3:** Project the changing Cash and Debt balances and the Net Interest Expense

- **Step 4:** Discount and sum up the Dividends (Cost of Equity) and calculate and discount the Terminal Value and add it

Dividend Discount Model (DDM): Lesson Plan

- **Part 1:** Revenue, Expense, and Cash Flow for DT Midstream **7:07**
- **Part 2:** Distributable Cash Flow Calculations **10:42**
- **Part 3:** Debt, Cash, and Interest Projections **13:10**
- **Part 4:** PV of Dividends, Terminal Value, and Implied Value **15:11**
- **Part 5:** Merits and Drawbacks of the DDM **17:18**

Part 1: Revenue and Expense Forecasts

- **Oil/Gas Pipelines:** Revenue is based on "Capacity" (in Billions Cubic Feet for natural gas or Barrels of Oil) * Per-Unit Fees

- **Expenses:** Operations, maintenance, etc., are all tied to Capacity as well, and they generally increase over time

- **CapEx:** Must be split into **maintenance** and **growth** for this type of company; company provides estimates in its presentations

- **Real Question:** How much does Growth CapEx boost Capacity? We can make some guesstimates…

Part 2: Distributable Cash Flow

- **Basic Idea:** Net Income + Non-Cash Expenses + Dividends from Equity Investments – Maintenance CapEx

- **KEY POINT:** You *must* split this Distributable Cash Flow into Dividends vs. Growth CapEx vs. Cash Retained

- **And:** If this sums to more than 100%, the company's Debt increases to maintain its Cash balance!

- **This is the #1 most common mistake in the DDM – people ignore the Payout vs. Growth vs. Retention assumptions**

Part 3: Capital Structure Projections

- **Cash:** Should stay in a tight range and grow modestly as the company's Revenue and Capacity grow (too high here)

- **Debt:** Want to see a modest reduction in Debt / EBITDA over time; 5.0x to 2.5x over 10 years might be too much

- **Interest Rates:** We've assumed slight increases as the Debt matures, gets replaced with more expensive Debt, and interest rates begin falling again

- **Other:** Non-Cash Interest and Taxes can be simple %'s

Part 4: PV of Terminal Value and Dividends

- **Cost of Equity:** Risk-Free Rate + Equity Risk Premium * Levered Beta

- **Here:** DTM's Levered Beta is only 0.80, but we're increasing it because its comparables all have higher numbers

- **Terminal Value:** Either the Growth Rate or Multiples Method, but use P / E since the DDM is based on Equity Value

- **Dividends:** Use the NPV function and the Cost of Equity for the Discount Rate

Part 4: PV of Terminal Value and Dividends

- **NOTE:** There is no Equity Value to Enterprise Value bridge here!

- **Why:** Since the DDM is based on Equity Value, it calculates the *Implied Equity Value* directly, and you divide by the share count to get the *Implied Share Price*

- **CONCLUSIONS:** DTM seems significantly undervalued based on our analysis… but how much do we trust these numbers?

Part 5: Is This Model Useful or Believable?

- **Issues:** The Cash grows to too high a level, the Debt barely changes, and the Capacity Growth numbers are questionable

- **BUT:** Despite all that, this company does seem at least **somewhat undervalued** (maybe not by 50%, though)

- **This Result:** Unusual because for *most companies*, the DDM tends to produce **lower values** than the standard DCF

- **Why:** Dividends are less than Distributable Cash Flow, Unlevered Free Cash Flow, Levered Free Cash Flow, etc.

Part 5: Is This Model Useful or Believable?

- **And:** The Cost of Equity is normally >= WACC, but the Terminal Value is not necessarily higher to compensate

- **So:** For most "normal" companies, the DDM tends to produce lower values unless the Payout Ratio is very high, or the Terminal Value is much higher

- **Biggest Issue:** It's very difficult to get the Cash, Debt and Distribution vs. Growth vs. Retention assumptions correct and **sanity check** everything due to limited disclosures

Recap and Summary

- **Part 1:** Revenue, Expense, and Cash Flow for DT Midstream

- **Part 2:** Distributable Cash Flow Calculations

- **Part 3:** Debt, Cash, and Interest Projections

- **Part 4:** PV of Dividends, Terminal Value, and Implied Value

- **Part 5:** Merits and Drawbacks of the DDM