



Interest During Construction (IDC) in Project Finance:



How to Enter the Circular Reference Multiverse

Question the Other Day...



CO on Aug 17

I don't understand why IDC is being calculated even during the development period. I wanted to multiply the IDC calculation by the construction flag to ensure its only calculated during the construction period and for some reason that is incorrect? Can someone explain why? I thought interest only accrues when we enter the construction phase.

- **Broader Confusion:** What does “IDC” mean? How do you calculate it? When does it accrue, and when is it repaid?
- **Misnomer:** “Interest During Construction” does not mean *literally* just during the construction phase; it’s whenever the asset is *under development* without revenue/cash flows



IDC: Concept and Mechanics

- **Definition:** In real estate, project finance, and infrastructure, **IDC** refers to the interest expense accrued on Debt while the asset is under development; it is capitalized to the Debt balance in this period (and/or paid via Equity contributions)
- **Effects:** Increases the Construction Loan balance and boosts the amount that must be repaid when a refinancing takes place
- **Operations:** IDC is **depreciated** during the operational period, so it will affect the cash flows and the Debt sizing/sculpting, even after “construction” ends



IDC: Concept and Mechanics

- **Why:** ~99% of RE/Infra projects use a **mix** of Debt and Equity; Debt is cheaper, but lenders want Equity commitments to reduce their risk (e.g., 40% Equity and 60% Debt for a solar plant)
- **Development/Construction Phase:** Using Equity presents no issues, but with Debt, there are no cash flows to pay for Interest
- **SOLUTION:** Capitalize the interest to the Construction Loan principal; it could also be a mix of capitalizing the interest and paying for it via Equity contributions
- **Complications:** Lots of circular references! Need a workaround



IDC: Concept and Mechanics

For the files and resources, go to:

<https://breakingintowallstreet.com/kb/project-finance/interest-during-construction-idc/>

(This is a **summary** from our full [Project Finance & Infrastructure course.](#))

Plan for This Tutorial

- **Part 1:** How Do You Calculate IDC During Development? **4:37**
- **Part 2:** How Do You Account for IDC in the Operational Period? **8:29**
- **Part 3:** How/Why Do You Resolve Circular References from IDC? **10:00**

Part 1: IDC Calculations

- **Simple Method:** Estimate the **Construction Costs** and say that a certain % of Debt and Equity fund them (e.g., 60% / 40% split); Equity and Debt are “drawn” in each period to pay for these
- **IDC Calculation:** Construction Loan Interest Rate * Relevant Balance (Average or Beginning Balance to avoid circ ref's)
- **Adjustments:** Modify Interest Rate in quarterly/monthly models
- **IDC Treatment:** Could add *all of it* to the Construction Loan balance, or you could assume the IDC is also funded with a mix of Debt and Equity to maintain the 60% / 40% ratio

40%



Part 1: IDC Calculations

- **Sources & Uses:** The IDC should appear on the “Uses” side under the Construction/Development Costs (various other capitalized fees/expenses may also show up here)
- **Refinancing:** When the asset becomes operational and a Permanent Loan is issued to repay the Construction Loan, the Construction Loan balance will be higher
- **But:** This still *helps* the Equity investors because using Debt for development funding reduces their upfront investment



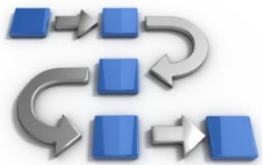
Part 2: IDC in the Operational Period

- **Main Effect:** Like the actual construction/development costs of the asset itself, the IDC must be **depreciated** over time
- **Result:** Even though this interest was not *paid in cash* during the development period, it still creates a **tax deduction** in the operational period, which changes the CFADS
- **Result:** This higher CFADS means that the asset can support *slightly higher Debt* in the operational period (but it's a small difference in most scenarios; re-size the Debt to see it)



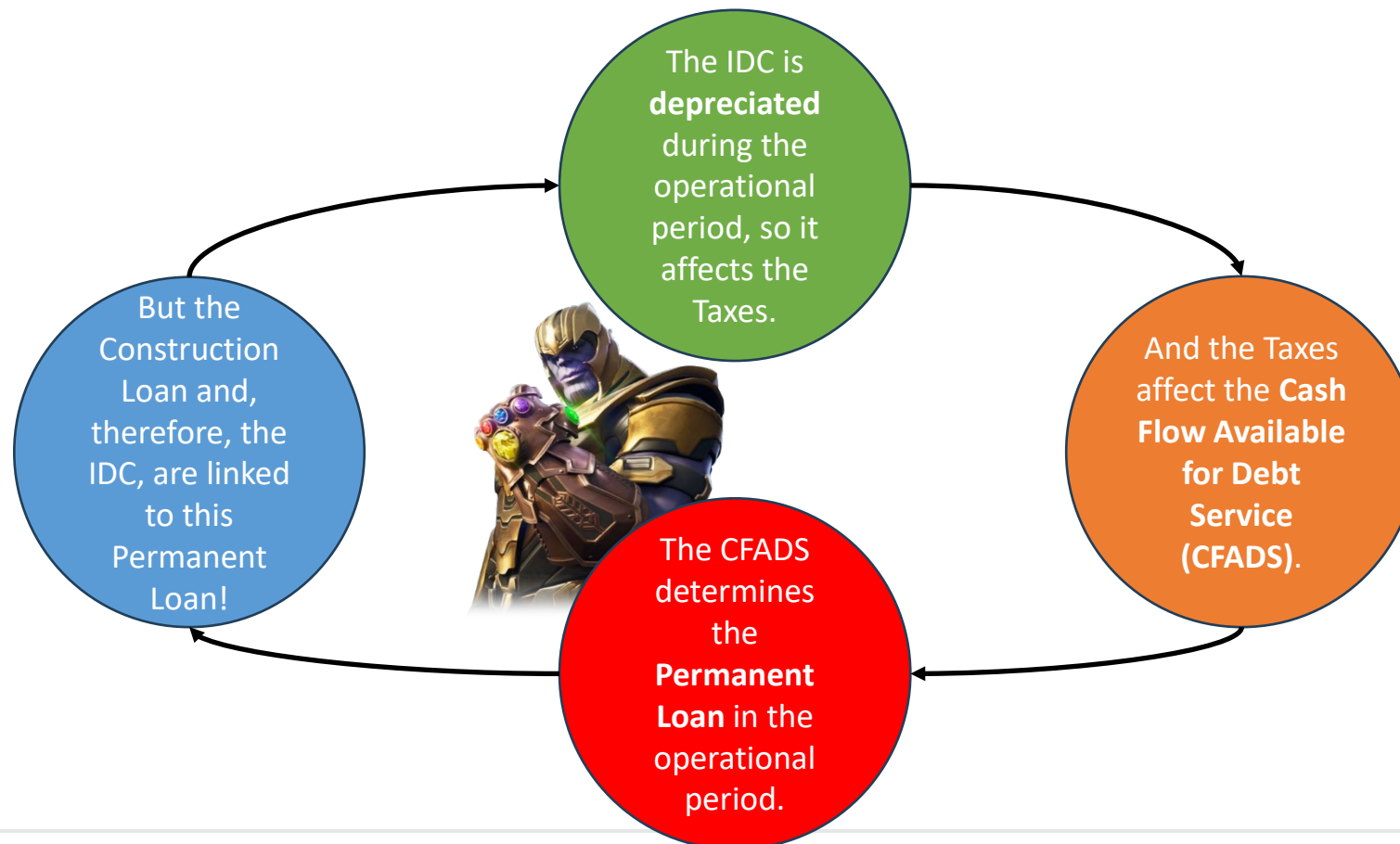
Part 3: Circular References from IDC

- **3 Circular Reference Methods:** 1) Average Loan Balances; 2) Debt Draws constrained by “Max Debt Size”; and 3) Debt Draws constrained by the Permanent Loan
- **Resolution:** First issue is easy – just use the Beginning Loan Balance instead, as in LBO and credit models
- **Other Issue(s):** Harder to resolve because the “Max Debt Size” is based on the *Total Development Costs*, including the IDC (so, IDC → Total Loan Size, but Total Loan Size → IDC)



Part 3: Circular References from IDC

- **OR:** The Max Debt Size is linked to the Permanent Loan, which is sized and sculpted based on the operational cash flows... which also depend on the IDC and the tax deduction it creates!



Part 3: Circular References from IDC

- **Typical Resolution Method:** Like Debt sizing/sculpting, the best approach is a **copy/paste macro** using VBA (combine with any existing Debt sizing macros)
- **Approach:** Copy the “Total Development Costs” from the Construction tab
- **Then:** Paste this version into the next row, and link to this *pasted version* in the Construction tab
- **And:** Link the Equity and Debt draws to the *pasted version*, and iterate ~100 times until you approach a solution



Recap and Summary

- **Part 1:** How Do You Calculate IDC During Development?
- **Part 2:** How Do You Account for IDC in the Operational Period?
- **Part 3:** How/Why Do You Resolve Circular References from IDC?

