Real Estate Valuation

“Real Estate Valuation” may refer to either (1) valuing individual properties or (2) valuing entire REITs.

There’s overlap with some of the methods, whereas other methods only apply to one or the other.

We’ll start with **property valuation** since it’s easier and there are fewer methodologies.

**Valuing Individual Properties**

This is easy because you rely almost exclusively on **Cap Rates** and, to a lesser extent, on the **Replacement Cost** method. You may also see DCFs for individual properties, but often they are provided only upon the client’s request or as a check for other analysis.

<table>
<thead>
<tr>
<th>Comparable Real Estate Property Sales - Manhattan Office Complexes</th>
</tr>
</thead>
<tbody>
<tr>
<td>($ in US Dollars as Stated)</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Transaction Statistics</strong></td>
</tr>
<tr>
<td><strong>Property Name</strong></td>
</tr>
<tr>
<td>Crescent Offices</td>
</tr>
<tr>
<td>Centerpoint Towers</td>
</tr>
<tr>
<td>Oak Road Offices</td>
</tr>
<tr>
<td>Mission Place Towers</td>
</tr>
<tr>
<td>Maximum</td>
</tr>
<tr>
<td>75th Percentile</td>
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<tr>
<td>Median</td>
</tr>
<tr>
<td>25th Percentile</td>
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<tr>
<td>Minimum</td>
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<tr>
<td>Hawthorne Offices</td>
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</tbody>
</table>

Public comps don’t make sense for properties because no properties are publicly traded – so you look at recent sales of similar properties in the region, and use that data to calculate the **Cap Rates**. We’ve already been over that concept in the Real Estate Development Key Terms guide, so please see that if you need a refresher.

The biggest problem with the Cap Rate method is that data can be spotty, especially in less populated regions. Also, people calculate “Forward NOI” (i.e. treatment of CapEx) and Purchase Price differently.

You may also look at the **Replacement Cost** for property sales – the idea there is, “How much would it cost to rebuild this entire property from the ground up?” If the Replacement Cost Per Square Meter or Per Square Foot exceeds the Purchase Price Per Square Meter or Per Square Foot, you might have a good deal.
Or it could mean that there’s something wrong with the property and you’re being swindled – there’s usually a reason for a property to sell at a discount to its Replacement Cost, because most of the time it’s worth more than that.

Generally Replacement Cost is used as a sanity check for the values implied by Cap Rates rather than as a strict valuation methodology.

You can use a Discounted Cash Flow Analysis (DCF) to value properties as well, but we don’t cover it in the course because Cap Rates are more important and because it’s not much different from a standard DCF.

You would start with Net Revenue and then subtract Operating Expenses and Property Taxes to get to Net Operating Income; to make it comparable to Unlevered Free Cash Flow you would then subtract Maintenance CapEx as well.

Then you would discount those cash flows by the appropriate discount rate (use whatever standard your group has, or look at a wide range of values if you don’t know) and add them up. For the Terminal Value, you could use an assumed Exit Cap Rate or the Gordon Growth method.

**Real Estate Valuation: Comparable Public Companies & Precedent Transactions**

Picking a set of comparable companies or precedent transactions for a REIT is very similar to how you’d pick them for any other company – here are the differences:

1. Rather than cutting the set by revenue or EBITDA, you would instead select the set based on Real Estate Assets, NOI, FFO, or AFFO (in addition to the normal geographic and industry criteria).
2. Instead of traditional metrics like revenue or EPS, you list the metrics and multiples that are relevant to a REIT: FFO, AFFO, NOI, Implied Cap Rate, Premium / (Discount) to NAV, and so on.

Please see the previous quick reference guide on REIT Key Metrics to see the full list and to learn how to calculate these metrics and multiples.
Precedent Transactions are similar as well – you use geography, industry, transaction size, and possibly real estate assets to select the deals and then use the REIT-specific metrics and multiples.

It’s better to stick to acquisitions of entire REITs if possible – but if there are not enough M&A deals in the set, you can expand the criteria to include asset deals and simply look at Implied Cap Rates, ignoring FFO and AFFO multiples in your analysis.

In Europe, the Premium / (Discount) to Net Asset Value is a common metric for public comps and precedent transactions. In theory that would be good to include, but in practice you would have to estimate an appropriate Cap Rate for each company in your set, which is arbitrary and prone to error.

If you absolutely must include Premium / (Discount) to NAV, you can estimate Cap Rates based on what equity research analysts are saying, or based on the company’s historical Cap Rates.

FFO and AFFO (to a lesser extent) are based on historical figures and consensus forward estimates, so we prefer to use those for REIT valuation.
Common Add-Backs and Non-Recurring Charges

With REITs you don’t have to worry about add-backs and non-recurring charges as much because there’s a standard definition for FFO, and with AFFO you’ll use your own definition.

It’s easiest to follow the company’s own FFO calculation, and then adjust for Maintenance CapEx and anything else you want to – common adjustments are for Stock-Based Compensation, Amortization of Financing Fees, Impairment Charges, the Gain or Loss on the Sale of Land, and the Early Retirement of Debt – to calculate AFFO.

Depending on the REIT, you may also adjust for the straight-lining of rent in AFFO (or use AFFRO). If it’s applicable to the REIT you’re analyzing, you’ll see it as a line item in Cash Flow from Operations.

The main points to watch out for are that (1) You use Net Income to Common for FFO or subtract Preferred Dividends if you use Net Income and that (2) You use a consistent definition for AFFO or AFFRO – decide on what it is upfront and apply it to all the companies, or you won’t have an apples-to-apples comparison.

Discounted Cash Flow Analysis

You can still build a DCF model for REITs, but it is less common than the Net Asset Value (NAV) model.

Similar to AFFO, there is no “standard” way to build a DCF for a REIT and you’ll see all sorts of variations on what we cover in the course.

Some people base everything on AFFO and argue that it’s close to Levered Free Cash Flow; others attempt to use a variant of Levered Free Cash Flow, and others might even attempt to use Unlevered FCF.

Here, we use Levered Free Cash Flow, otherwise known as Free Cash Flow to Equity, which we define as, “How much cash could common shareholders potentially receive in dividends and share buy-backs?”

\[
\text{FCFE} = \text{Cash Flow from Operations} + \text{Cash Flow from Investing} + \text{All Non-Debt-Related Items in Cash Flow from Financing} + \text{Additional Debt Borrowings} - \text{Mandatory Debt Repayments}
\]

Some people ignore the last 2 items on debt borrowings and repayments when calculating FCFE, and others include all debt repayments rather than just mandatory ones.

But if you define FCFE the way we have above – how much cash the common shareholders could potentially receive in dividends and share buy-backs – this definition makes the most sense.
For the Terminal Value, you would assume either a Terminal FCFE Multiple or a Terminal Growth Rate.

The Discount Rate should be the **Cost of Equity** because FFO, AFFO, and FCFE are all Equity Value-based metrics, and you calculate it based on public comps as you would for any other company.

**Dividend Discount Model**

You could also use a Dividend Discount Model to value a REIT, but the output is often similar to the output from a DCF.

For a DDM, you normally look at FFO or AFFO, assume a dividend payout ratio, and use that to calculate the dividends issued each year:
The Terminal Value might be based on a Terminal FFO or AFFO multiple, or a Terminal FFO or AFFO Growth Rate.

You still use Cost of Equity for the Discount Rate, and it’s still calculated in the same way as it is for normal companies.

You may see DCF and DDM analyses for REITs, but the Net Asset Value (NAV) model is far more common.

**Net Asset Value (NAV) Models**

The Net Asset Value (NAV) model is the most common intrinsic valuation methodology for REITs.

The underlying idea is that the private real estate markets move more quickly than the public markets for REITs, and so you can value a REIT by valuing its real estate assets and then adjusting for its other assets and subtracting liabilities.

You do that by taking a REIT’s forward Net Operating Income – across different segments if applicable – and then dividing by an assumed Cap Rate to calculate the implied value of its Gross Real Estate Operating Assets.
Then, you add in their other assets, adjusting where necessary, and subtract liabilities to get the REIT’s Net Asset Value.

**Step 1: Apply Cap Rates to Each Segment of Forward NOI**

The most common segments are NOI from Wholly-Owned Properties, NOI from Management Fees and Miscellaneous Sources, and NOI from Equity Interests or Unconsolidated Joint Ventures (since they’re unconsolidated, the NOI is not included in the REIT’s Wholly-Owned Property NOI):

Generally the 3rd Party Management Fees receive a lower valuation and therefore a higher Cap Rate than the other segments, because the contracts supporting those are easily cancelable and revenue is less certain.

Picking Cap Rates for the other segments is more art than science, and to properly estimate those you have to look at their individual properties and geographies, what equity research analysts are saying, and ideally speak to the management team as well.

In more complex models you might even break out the NOI by geographic segment or property type and assign a different Cap Rate to each one of them.

The total value here corresponds to what a REIT’s **Gross Real Estate Operating Assets** should be worth if they were valued properly. That number may be more or less than what’s listed on their balance sheet for Gross Real Estate Operating Assets.

**Step 2: Add the REIT’s Other Assets, Adjusting Where Necessary**

Most often you adjust the Construction in Progress or Land for Development figures – you might assume that they become completed properties in the future and calculate their NPV, for example. In equity research you frequently see “back of the envelope” estimates where they assume slight premiums to the balance sheet values, as we have done here:
You don’t adjust the non-real-estate assets by much – the only exception is the Unconsolidated Joint Ventures or Investments in Equity Interests line item. There, if you’ve already included the NOI from Equity Interests in the Capitalized Income section above, you set this to $0 so you’re not double-counting it.

If you haven’t included the NOI from Equity Interests, you keep this in to reflect the value of these assets.

**Step 3: Subtract the REIT’s Liabilities to Calculate Net Asset Value**

This is not terribly complicated – you just subtract all the liabilities on their balance sheet, including Noncontrolling Interests and Preferred Stock.

**Be careful with Redeemable Noncontrolling Interests** – if you are already including OP Units in your diluted share count, you should not also include Redeemable NCI.

In equity research that is the standard treatment (don’t subtract Redeemable NCI and include OP Units in the diluted share count), so that is what we follow here.

Once you’ve subtracted the liabilities, you get the Net Asset Value of the REIT.
Step 4: Divide the NAV by the Diluted Shares to Get NAV Per Share, and Compare That to Share Price

This part is straightforward – just take the diluted share count (common shares + RSUs + dilution from options/warrants/convertibles + OP or DownREIT Units) from elsewhere in the model, and divide NAV by that number:

<table>
<thead>
<tr>
<th>Net Asset Value:</th>
<th>$ 4,785</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diluted Shares:</td>
<td>100.0</td>
</tr>
<tr>
<td>OP Units &amp; Restricted Shares:</td>
<td>5.0</td>
</tr>
<tr>
<td>Total Diluted Shares &amp; Units Outstanding:</td>
<td>105.0</td>
</tr>
<tr>
<td>Net Asset Value Per Share:</td>
<td>$ 45.57</td>
</tr>
<tr>
<td>Current Stock Price:</td>
<td>$ 30.00</td>
</tr>
<tr>
<td>Premium / (Discount) to NAV Per Share:</td>
<td>(34.2%)</td>
</tr>
</tbody>
</table>

You can then compare this value to the REIT’s current stock price. If the stock price is above NAV Per Share, the REIT is trading at a premium to NAV and is arguably overvalued; if the stock price is below NAV Per Share, the REIT is trading at a discount to NAV and may be undervalued.

The biggest problem with the Net Asset Value analysis is picking Cap Rates in the first place – if you don’t get those right, your entire analysis will be wrong. And to get them right, you need to do a lot of research and know the market and company very well.

As with most financial analysis, the concepts are not difficult but getting the appropriate data may be extremely difficult depending on the REIT and the markets it operates in.