REIT valuation

Real estate finance
(a) Basics
Basics

- Real Estate Investment Trusts
  1. buy, sell and hold real estate assets on behalf of a diffuse shareholder base
  2. manage these and other assets
  3. are not taxed at the corporate level

- Three basic types: equity, mortgage, hybrid

- Can be public or private

- UPREITs (U for “umbrella”) hold positions in corporations that invest in real estate, including other REITs
Brief history

- **REIT act, 1960**: REITs may be treated as untaxed, pass-through entities provided they satisfy a number of requirements

- **Current requirements include**:
  1. 75% of holdings in RE, cash, or US paper
  2. 75% of income must come from rents, dividends, mortgage interest, gains from the sale of qualifying assets or holdings in other REITs
  3. **90% of taxable income must be distributed to shareholders***
  4. At least 100 shareholders
  5. Top 5 holders cannot hold more than 50% of shares

- **1986 tax reform removed two big downsides of REIT structure**:
  1. Management activities were severely restricted
  2. Other forms of incorporations (LPs, especially) enjoyed preferential depreciation rules

- **1991 Kimco Realty IPO ushered in a new era for REITs**
Market capitalization of Public REITs
(a) Financial metrics
Standard ratios

- REITs prepare the same accounting statements as all corporations hence standard financial management principles apply

- As usual, a quick snapshot of financial situation should center on:
  1. Profitability and market ratios (EPS, ROIC, operating margin…)
  2. Liquidity ratios (current assets/current liabilities…)
  3. Leverage ratios (D/E, DCR…)
  4. Payout ratios and dividend yields
Principles of valuation

- Firm value = Value of Operating Assets + Value of Non-Operating Assets

- REIT Value = Value of Revenue Generating Properties + Value of Management Services + Value of Land and Properties under development + Value of other idle assets (cash, e.g.)
Valuing operating assets (a la McKinsey)

- **Value of Operating Assets**
  \[ \text{Value of Operating Assets} = \text{PV of FCFF at WACC} \]

- **Return on Invested Capital (ROIC)**
  \[ \text{ROIC} = \frac{(\text{NOI} - \text{Depreciation})}{\text{Invested Capital}} = \frac{\text{Net operating profits}}{\text{IC}} \]

- **Net Investment (NI)**
  \[ \text{NI} = \text{NOP} \times \text{Investment Rate} = \frac{\text{Gross Investment} - \text{Depreciation}}{\text{Addition to IC}} \]

- **Note**: FCFF = NOP – NI

- **Note**: analysis usually uses NOPAT rather than NOP, but T=0 for REITs, except for operating taxes already included in NOI

- **Also note**: IC is invested capital in operating assets
Basic sources of value

Assume that IR, ROIC are constant and that both NOP and FCFF grow at rate \( g \). Then, one shows:

\[
g = \text{ROIC} \times \text{IR}
\]

and

\[
\text{Value of OA} = \frac{\text{NOP} \times (1-g / \text{ROIC})}{\text{WACC} - g}
\]

so that

\[
\text{NOP multiple} = \frac{[(1-g / \text{ROIC})]}{[\text{WACC} - g]}
\]
Amaze your boss: the 10mn-route to value

- Define IC = Property / Plant / Equipment, Total (Net) - (Land + Construction in Progress) + Net receivables - Net Payables

- NOP = GOP - Depreciation

- NI = Change in IC

- Calculate 5-year average of ROIC, NI, use to guess g. Get NOP multiple (req WACC.)

- Value of firm = NOP x multiple + Book Value of other assets*

- Subtract market value of debt, divide by number of shares, compare

- Bim boom, badaboom: value-per-share estimate in 10 clicks
A company creates value by investing if and only if \( \text{ROIC} - \text{WACC} = \text{Economic Value Added (EVA)} > 0 \)

Ideally, ROIC on new investment vs. “target” WACC

Bloomberg provides a snapshot of all these objects (<WACC>) and the spread between them, but you need to check them

Should be part of any fundamental analysis
REIT-specific measures: FFO and AFFO

- FFO (Funds from operations), the industry’s preferred measure of earnings, is a moving target, read statements carefully

- $\text{FFO}^* = \text{Net income} - \text{Gains (Losses) from sales of property} + \text{Depreciation/Amortization} + \text{FFO from joint-ventures} \approx \text{NOP + Depreciation -Interest}$

- $\text{AFFO} = \text{FFO} - \text{CAPEX} + \text{Adjustments for accrual items} \approx \text{FCFE}$?
**FCFF and FCFE**

- Somewhat oddly, the industry takes AFFO as FCFE and uses it as the basis for most DCF or multiple analysis (Why?)

- FCFF and FCFE can be (should be) computed according to standard approach

- FCFE = Net increase in cash and cash equivalent
  + Distributions to shareholders
  - Net Proceeds from share issuance

- FCFF = FCFE + Interest Expense

- Note: AFFO $\approx$ FCFE – Net borrowing

- Fine as a proxy for FCFE if capital structure is stable
Alternatively

- FCFF = Cash Flow from Operations + Interest Paid – Net Cash Used for investing Activities

- FCFE = FCFF – All interest expenses
Typical accrual corrections

1. Depreciation
2. Impairment charges (write-offs)
3. Amortization of deferred costs
4. Straight-line rent adjustments

- Let the consolidated statement of cash flow do the leg-work for you, but do read footnotes
(a) Multiples
A very odd question

- What is a REIT worth?

- Question makes sense for a private REIT, but for a public REIT?

- What is wrong with market cap? How on earth could an analyst know better than a continuum of people who are putting their money where their mouth is?

- So why do we play along?
  1. That’s what people do and we need to understand what people do
  2. Yields interesting questions: why do some REITs trade at low FFO multiple? What creates value?
  3. A useful framework for thinking of company’s strengths and vulnerabilities
Method

- Compute the ratio of market capitalization to:
  1. FFO
  2. AFFO
  3. Net revenues
  4. NOP

- Then, compare to peers, and to own history

- Trivial, yet compelling

- What determines multiples? (Research and use in your analysis/presentation)
Method

- Break down operating revenues in subcategories, preferably in 12-month looking forward terms:
  1. NOI by segment and location
  2. Management income
  3. JV income*

- Apply relevant cap rates to each, be very conservative for last two (20% cap rate, say)

- Estimate value of inactive assets: undeveloped land. Use Morris’ data for adjustments to land book value. Watch out for land impairment provisions (read footnotes and pay attention to consolidated statement of cash flows.)

- Add up to get Gross Asset Value, subtract market value of debt* to get Net Asset Value

- Compare NAV premium/discount to peers and own history

- Massive sensitivity analysis is a must
Impairment charges

- GAAP requires that companies estimate fair value of assets and write-off big losses vis-à-vis book value

- Most REITs recognized massive impairment charges in 2009

- For those, book value may approximate fair value decently

- Impairment tests are weak however and only require action when gap between book and future cash flows is severe (we’re ok at this juncture in most cases)

- Note for future reference: past impairment losses may be reversed
Market value of debt

- Assume that the company got finance from a zero with 10 years to maturity issued at a yield of 5%

- A ten year zero for this firm would now cost 10% (what could cause this?)

- The ratio book value to market value is \((1.1/1.05)^{10}\)

- Conclusion: adjust book value of debt whenever the cost of debt has changed significantly due to market conditions or firm events

- If only Bloomberg did it for us…
(a) DCF
Method

- Calculate current FCFE and FCFF
- Project forward (i. naively, ii. fundamental item by fundamental item)
- Calculate cost of equity (CAPM) and cost of debt
- Discount FCFE at required return on equity, discount FCFF at WACC
- Get two market numbers for each set of parameters, plus get two growth rates implicit in current valuation
- Perform massive sensitivity analysis, compare to NAV numbers, discuss, do the same assuming that AFFO is FCFE...
- Compare premia and discounts to peers and history, explain differences
How to forecast FCFF an or FCFE

- Start from the top: revenue growth

- Then, provided other basic components of FCFF are a stable fraction of revenues, impute them

- Otherwise, forecast them separately too
Factor approach

- Decide what main factors drive revenues within the set for which readily available forecasts exist: GDP, IP, PCE...

- Estimate the historical relationship of revenue growth to these factors

- Project forward, with fudge/judgment corrections
Physical approach

- Rental revenues = Capacity (SF) x Rent/SF x (1 - Vacancy Rate)

- Three objects to forecast

- First one is fairly easy to gauge from past behavior and annual report fodder on acquisition plans

- Last two require market analysis, segment by segment
In practice...

- Make explicit forecasts for up to 5 years or use off-the-shelf estimates
- Calculate residual value using standard perpetuity formula
- Defend your g from fundamentals (ROIC and NI)
WACC

- Use current cost of debt and projected cost of debt if available from 10-K
- Or use industry data (as in Bloomberg)
- Use CAPM for cost of equity, trying a couple different benchmarks
- Use book value for D/E ratio first, then measure the effect of market value adjustments for debt
- Discount FCFF at WACC, discount FCFE/AFFO at the required return on equity
(a) Analysis
Key problem/opportunity areas

- Tenant quality

- Lease composition (locked-in leases can be both good and bad, depending on market conditions)

- Debt composition (future access to finance and cost)
Sources of value/growth

1. Income from existing properties (ROIC)
2. Acquisitions (NI)
3. Development (NI)
4. Service income (ROIC)
5. Financing (clean up/refinance costly debt, e.g.) (WACC)
Conclusion

- Triangulate: measure value in as many sound ways as you can think of
- Focus on critical assumptions and big items, on “what moves the dial” (to quote Mike Dubis, our resident REIT expert)
- Compare to peers