Modeling for ASRS

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1 Purpose

The purpose of this paper is to share standards and expectations on modeling for ASRS projects.

2 The ASRS model

ASRS has provided a standard model for stating forecasts. Please use it.

We have established a standard for the following reasons:

- It incorporates valuation and accounting mechanics in accordance with our requirements
- It provides quarterly performance measurement metrics in the form we require
- It incorporates a checklist of undewriting issues for quanitification
- It makes it easier to review and compare projects when they are submitted in a standard form.

The ASRS model is flexible. We will work with you to help understand how to use it and, to the extent you need our help, to customize it to your particular situation.

The ASRS model is designed around an investor perspective. It may not provide the type of detail an operator wants for its purposes. You can add that detail in separate tabs, or maintain it separately.

3 Modeling practices

- Models must be self contained. You may copy information from other files for your reference. *Please do not link to other files.*
- Follow color coding conventions. "Hard wire" numbers and assumptions should be color coded in blue. Formulas should be black.

- Avoid redundancy
  - Generally speaking, a hard coded number (color coded blue) should appear in the spreadsheet exactly once.
  - In the ASRS spreadsheet, we establish a timeline on a tab for that purpose and then refer to that by formula on every other sheet
  - Except for the timeline, avoid the temptation to copy data from one calculation sheet to another. It is less convenient when creating formulas to refer to other sheets, but if you create redundancy in your data to avoid that you will create a source of error.
- Use tree shaped data structures
  - More detailed tabs should feed in to summary tabs
  - A detail tab should feed in to only one summary tab
  - The exception is financial statement tabs where, for example, operating cash flow feeds to both the cash flow statement and the income statement
- Distinguish your calculation worksheets from your reports
  - All your analysis and data tracking should be done on calculation worksheets. These are the brown colored tabs on the ASRS model.
  - You then summarize and format that information for communication to readers of your analysis on separate report tabs. These are the blue, red and green tabs on the ASRS model.
    - avoid any additional analysis or calculations on your summary and report tabs

4 The point of modeling

From an investor perspective, the purpose of modeling is to assess the probability that a given project will earn an appropriate rate of return for the risks associated with the project. We want you to focus on what you might call the "big moving parts" of the risks that drive the returns. We consciously adopt risk in doing real estate projects. A good pro forma clearly communicates the risks you have decided to take and how you expect to be compensated for them.

So, in a typical real estate project the return is determined as follows:

$Return = f(Price, Rent, OpEx, CapEx, CapMarket)$

where:

- Price is the price you pay for the asset plus transaction costs and working capital balances (operating cash)

- Rent is the rent you expect to receive
  - Rent from existing leases, less credit loss
  - Rent from future leases, less free rent and vacancy on turnover
- OpEx is operating expenses
- CapEx is capital expenditures
  - Renovations
  - TIs and Leasing Commissions (amortized over lease terms in the model)
  - Replacements and betterments that would be capitalized under GAAP
  - Reserves maintained as cash if required under loans and then used for CapEx
- CapMarket is expected future interest rates and exit cap rates

So, the risk analysis varies depending on the project. A single tenant net lease project with a long term net lease is all about the credit of the tenant and the exit cap rate assumption. A multi-tenant building with, for the most part, below investment grade tenants should focus on market rents and reletting risks in the form of vacancy, free rent, TIs and leasing commissions and your model should clearly state (blue number) assumptions for each of those risk factors that allow you to then stress or test the sensitivity of the model to those risk factors.

What's important is contextual and there is no one right answer. We expect your models to be clear in laying out the important risks of the project and to then facilitate sensitivity analysis around those risks. We have provided in the standard model some hooks for that. We will help you customize the model for your situation if different risk drivers are needed.

Bottom line: We expect you to articulate the important risks of a project in the model design. If it's an important risk, it must have a "blue number" assumption cell that can be used to drive sensitivity analysis in your model.

5 Be Concise

5.1 Less is more

Focus your detail on the important risk factors for the situation and reduce detail elsewhere.

Argus runs are useful, but the mountains of numbers spewed out from that software cannot be confused for thoroughness or thoughtfulness.

5.2 Focus on big numbers

5.2.1 Rent

Usually rent is the biggest aggregate life cycle number on your pro forma and where a lot of your risk lies.

5.2.2 CapEx

CapEx is usually the other big risk factor. Incorporate your reserve study numbers in the forecast showing major expenditures for chillers, elevators, roofs, parking lots and the like. The model has a maintenance reserve feature that you should use. You can set reserves as a memo item or actual cash balance (often required by loans) in the model. We often see models that understate reserves and likely CapEx. Don't do that.

5.3 Summarize things that are homogenous or correlated

If you have an apartment complex with studios, one bedrooms and two bedrooms, it will usually make sense to group them by unit type and model occupancy and revenue by category considering the popularity of the unit types.

It's important to set operating expenses at realistic levels. Your "write up" on a project should include information on how you set those budgets and explain why they are reasonable. But the detail on operating expenses may not be strategic in the context of the investment pro forma. Operating expenses are often modeled as increasing with a single cost inflation factor; i.e. they are modeled as 100% correlated. If you think that is appropriate in your case (and it often is), then it is preferable to combine the OpEx to a single line. This makes it clear to the reader that you have treated OpEx as a homogenous category. In actual operations you will, of course, be much more granular but these distinction may not be strategic in the context of acquisition pro forma.

5.4 Separate things that are heterogeneous and non-correlated

If you are modeling a shopping center, you may want to show your major tenants separately and your shop space combined. CapEx is usually idiosyncratic and lumpy. It is usually a good idea to show more detail CapEx.

Bottom Line: Show detail on important risk factors, significant non-correlated, heterogeneous or idiosyncratic items. Summarize everything else.

6 Distinguish "facts" from "projections"

Most of the time when you buy property, you are buying subject to leases and various contract rights. So, in an office or shopping center situations you should segregate existing leases (known rent subject only to credit risk) from assumed future leases (market risk and credit risk). Similarly, if you have,

by way of example, long term fixed price leases or maintenance contracts on building equipment, you should segregate that so that you don't inadvertently change those numbers by changing a cost inflation assumption.

7 Capital Markets Assumptions

Capital markets influence outcomes, but they are beyond our control. We have been in an extended period of low interest rates, but believe rates will eventually return to historic norms. We don't know when. The forward curve provides information but has not recently been a reliable forecast tool. Generally, we will expect exit cap rates for a five to seven year horizon to be at least 100bp wide of current values. Interest rates for refinancing five to seven years out should be 200 to 300 bp wide of current rates.

8 When do I need to submit a model in the ASRS format?

- At "initial certification" stage. This is when you are asking ASRS to start spending money on a project.
- At "final certification". A final acquisition case model will be archived with the RCLCO certification report as part of the "permanent file" for the project.
- We will ask you to prepare annual updates to the model as part of the annual asset review

9 Questions and assistance

Eric Glass is project leader on assisting you with implementation of these models, but contact any of us.

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