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Feasibility Analysis- Overview

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Table of Contents

Feasibility Analysis Overview: 3
Feasibility Analysis is Hypothesis Testing 3
Feasibility Has Four Dimensions 4
Feasibility Analysis Has Multiple Audiences, Each with Different Concerns 5
Feasibility Changes as the Project Matures 6
Feasibility According to the F.I.G.R.S. Algorithm 7

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Feasibility Analysis Overview:

Most real estate projects begin as a search for:

- The right location to carry out a particular activity,
- The right activity for a particular location, or
- The right investment for available funds

Feasibility analysis informs each of these approaches. Feasibility analysis is a continuous assessment process that begins with vague questions such as:

- Where should we put our new factory?
- What can we do with that old building?
- Where will we get the best return on investment in an office or apartment building?

And reaches answers (and suggests specific actions) by:

- Applying increasingly sophisticated analytical procedures to increasingly specific and refined data and
- Matching resource commitments to the investment decisions' risk and reversibility.

Feasibility Analysis is Hypothesis Testing

Real estate feasibility analysis is a specialized form of hypothesis testing. Through feasibility analysis, we hope to verify the hypothesis that:

- Our project is legally, financially, physically, and socially "do-able" in the location we have chosen, and
- Our project provides adequate returns for the risks or commitments undertaken by each of its constituencies (investors, bankers, the public, and the body politic).

Along the way, we try to eliminate "false positives," i.e., undertaking a project that is not viable– called "alpha risk" (α risk) in hypothesis testing. We also minimize beta risk ("β risk"), i.e., rejecting a viable project.

Alpha (α) errors**:** In real estate investment, *α*-errors are always expensive and often lead to bankruptcy. "There is no way to manage or market your way out of a badly conceived project." Your best option is to avoid it in the first place. The cost of *α*-errors dictates the design of real estate feasibility analyses.

Simply put: ***In each phase of the project investment cycle*** [*] ***a properly designed real estate feasibility analysis:***

- Identifies the critical variables that govern the project and examines them first, and

[*] We use the acronym ***F.I.G.R.S.*** to describe the investment/ownership cycle for investment properties. Over the course of the investment/ownership cycle you will: ***F***ind the property, ***I***nvestigate, ***G***et, ***R***un, and ***S***ell it.

- Employs the least expensive data that is *reliable enough* to determine whether to proceed with the analysis or reject the project.

One of the explicit goals of a properly designed real estate feasibility analysis is to minimize the cost of the feasibility analysis itself without increasing α risk.

Phrases like; "I can't believe it isn't better than that!" potentiate Alpha Risk. When in doubt, underestimate revenue and overestimate expense. When there is no doubt, underestimate revenue and overestimate expense. Projects that are borderline or "judgement calls" at the feasibility stage get worse, not better, unless they undergo a major paradigm shift (pivot).

Beta (β) Errors: In contrast to α-errors, β errors seldom inflict excessive direct costs. Instead, β errors represent lost opportunities, and may even provide social currency. We often hear, "I could have bought that building for only $2 million three years ago," as if it mattered. Such social interchanges seldom acknowledge that the project the speaker had in mind for the location was not the project the successful investor pursued. It merely occupies the same space. Buyer's remorse, like hindsight, is always 20/20.

Beta (β) risk and our social exchange underlay the other premise of real estate feasibility analysis. ***A properly conducted real estate feasibility analysis***:

- Identifies and analyzes several alternative uses for a property, and
- Helps stakeholders identify and pursue the highest and best use for the property consistent with the risks they are willing to assume.

Feasibility Has Four Dimensions

Feasibility analysis assesses whether the project works in the chosen location:

1. Legally,
2. Financially,
3. Physically, and
4. Socio-economically/Socio-politically (market)

Ultimately, a proposed project is feasible only if it is feasible in <u>all four</u> dimensions.

Feasibility assessment begins as stakeholders consider routine questions such as:

- Can we get permits to build or operate what we want? (Legal feasibility)
- How much will the project cost and what will it return? (Financial feasibility)
- Does that building look sound to you? (Physical feasibility)
- Who will want to rent here? {Socio-economic (market) feasibility}

Initially, answers to each of these questions will be as vague as the questions themselves, e.g.

- The planning commission is pretty cooperative here.

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- I've done a placemat pro-forma[†] and the project is viable if we can get the building for $2 million and convert it for another $1 million (preferably followed by another statement, like; "I have an investor and a banker who will help").
- Another buyer inspected the building. They might give (or sell) us their report.
- A lot of import/export companies are putting office infrastructure here to take advantage of local warehousing.

Vague positive answers are enough for a first blush feasibility analysis because they can be reached by expending few resources, and they are reliable enough for the decision at hand.

The initial feasibility analysis will eventually be superseded by more detailed, precise, and much more expensive analysis. Answers will expand accordingly:

- We have approval to rehabilitate the structure and add a penthouse office suite, provided we add 32 parking spots in the existing lot and dedicate the front five feet of the property to the city for road expansion. In addition, the city wants us to…
- The pro-forma operating statements, cash flow, and capitalization plan indicate that the property will achieve full absorption within six months of completion of the renovation. The expected NOI and its rate of increase support an offer price of $2.195 million at the expected capitalization rate. Architectural estimates and renderings indicate it will cost about $1.2 million to complete the renovation and rehabilitation. An equity partner has been secured in return for 45% of the operating net income and appreciation. Bank financing will entail…
- A thorough inspection of the mechanical systems and utilities in the building indicate that all installed systems are in working order and can be expected to require only routine preventive maintenance for the next three years. All systems comply with current code, however, the data infrastructure and communications systems are outmoded. Replacement cost of these systems accounts for the bulk of the increase in our original refurbishment cost estimate…
- Three medium and one large import/export company have expressed interest and signed tentative letters of commitment for the complete ground floor and two thirds of the remaining office space. Consistent with other local properties' practices, we will charge…

Feasibility Analysis Has Multiple Audiences, Each with Different Concerns

Project originators invariably consider the project's feasibility—the building, development, or concept—in the first stages of analysis. In later stages, however, non-originator stakeholders must be given due consideration. The feasibility analysis must be conducted from the investor (bankers and equity holders), and the public sector (regulators, government bodies, neighbors) viewpoints.

Financial decision-makers' (bankers and equity investors) concerns about risk and expected returns must be accommodated. Two criteria drive their decisions:

- The property's value must provide adequate collateral to secure the loan (with some margin for market fluctuation). The loan to value (LTV) ratio addresses this issue; and

[†] Placemat pro-forma, napkin-noodling, and back-of-the-envelope-estimating are time honored approaches to preliminary financial feasibility studies. For a description of the process, see our website or get a copy of Miles, Berens, Weiss; *Real Estate Development, Principles and Practices*; Urban Land Institute.

- The expected income stream must be sufficient to pay all operating expenses and service the loan. The debt service coverage ratio (DCR or DSCR) addresses this issue.

Collateral value is typically estimated by

- Capitalizing first-year Net Operating Income (NOI) using capitalization rates extracted from comparable first-year sales, and/or
- Discounting expected income and reversion based on a discount rate that adequately reflects costs and risks associated with real estate investment.

Debt affects both equity and non-equity stakeholders' risk and return. The ability to service the debt is measured by the debt service coverage ratio = NOI/Total Debt Service. Lender policy defines the maximum debt service (amount and ratio) that the lender will accept. The maximum debt service is capitalized (by applying a mortgage constant) to produce a maximum acceptable loan amount.

Recent highly publicized events (the mortgage meltdown, global warming, energy shortages, or the millennium crisis) have re-formed and refocused the public's risk awareness and put pressure on public institutions to regulate or intervene in markets. One nearly certain result of these pressures will be to increase the participation of the public sector as a *de facto* stakeholder in real estate decisions.

This trend in turn, mandates earlier and more thorough consideration of the interactions between the project and the public sector. In future, properly designed feasibility analyses must, at the earliest possible stage in the project, address subtle, sometimes bizarre, interactions between constituencies. The possible interactions are legion:

- Politicians (and their patrons),
- Planning agencies (general and specific plan correlation, as well as codes, standards and practices),
- Organized growth-advocacy groups; fast, slow, or no growth advocates; growth agenda advocates (e.g. infill, green, or specific industry advocacy), and
- Local-often less than organized but always vocal- resident advocacy; Not In My Back Yard (NIMBY); Build Absolutely Nothing Anywhere Near Anything (BANANA); What About My Interests (WAMI) are prominent examples,
- Economic and environmental constituencies of all kinds

Project originators must assess and address any potential opposition (or enlist available support) before committing substantial resources to the project. Originators can only do this if the feasibility analysis has identified the risk or opportunity.

Feasibility Concerns Change as the Project Matures

As a project matures, feasibility shifts focus in two ways:

- From WAG, to SWAG, to "negotiated parameters," and finally to "real live data." Data and analysis becomes more specific, detailed, accurate and reliable and employs more sophisticated methodology.

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- The analysis shifts from tactical (object or project) to strategic (portfolio yields and risk) variables and concerns.

Some of the transition is mandated by stakeholders' interests. For instance:

- Equity partners need assurance that their money won't be lost. Unless those assurances take the form of precise answers to their questions, they won't write a check when the time comes;
- Lenders need to be assured (at every step) that they will get their money back and a reasonable return. This concern doesn't change much as the project matures, but bankers become more anxious as closing approaches. (Lenders can be amazingly cavalier after closing about issues that would have forced interminable paper shuffling prior to closing—provided you keep paying on time); and
- Politicians and advocacy groups are with you always—even unto the end of your days. These groups can be shockingly indifferent to (or unaware of) the costs of mid-course corrections. The best defense is to get them on your side as early as possible. Solicit their input early and listen to them over the course of the project. The price of indifference can be the loss of a project.

More subtly, project success dictates shifting the feasibility orientation from:

- Project details in the Find, Investigate, and Get stages, to
- Market factors in the Run stage, and to
- Portfolio considerations in the Sell stage

What you consider remains very much the same throughout the process. It's how you consider it that makes or breaks a project.

Feasibility According to the F.I.G.R.S. Algorithm

We developed the ***F.I.G.'.R.S.*** algorithm to impose (a semblance of) order on the sometimes chaotic process of buying, developing, or leasing commercial property.

Each step of ***F.I.G.'.R.S.*** applies

– increasingly sophisticated analysis to
– increasingly specific and refined data to
– match resource commitments to
– your decisions' inherent risk and "reversibility."

The Marquis of Queensbury (and the Nevada Boxing Commission) suggests you "protect yourself at all times." In each step, the algorithm identifies your exit strategies; the "3 Strategic Bs:" Bear On (go forward), Begin Again (go back), or Bail (exit). Here is how ***F.I.G.'.R.S.*** works:

***F*ind:**

The "***F***ind" step is about ideation, refining your conception, locating prospects, and preliminary (rough) feasibility assessment. Objective: "***F***ind" one or more properties that may serve your needs. Eliminate those that clearly cannot serve your needs.

- Use guided imagery to discover: What you want, what you need, where and when you want (and need) it, and opportunities to make your idea better.
- Use database resources to determine that such a property exists, is for sale or lease (or can be developed), and can be converted or modified to fit your conception. Along the way, gain market insight about its highest and best use.
- Walk through the properties to identify obvious issues.
- Create a rough financial model to verify that the proposal makes business and portfolio sense and to evaluate its financial strengths and vulnerabilities.

Exit plans don't get much simpler than this! At this point you have not committed a lot of resources and have gained a good deal of market and financial insight. You have three choices:

- (Bear On) If you have identified properties that may (with some modification) fill your need, continue on with the "***I*nvestigate" step**.
- (Begin Again) If you haven't identified properties that may fill your need but are still hopeful, begin again.
- (Bail) If the hand has written "Abandon hope all ye who enter here," revise your plans and expectations and start again.

*A*lways make the Strategic B decision that is best for you. **Some of your most successful investment scenarios will be the ones that never happened!**

***I*nvestigate**:

The "***I*nvestigate**" step identifies options and sharpens your feasibility analysis.

- Consider how your project affects all the stakeholders (including the local populace and politicos). Seek their input, assistance, and support.
- Study and compile local and regional demographic - economic trend data. Determine how you will market your property. Consider alternative uses and marketing strategies.
- Develop a proposal and "mediate" it with friends, family, advisors, and stakeholders.
- Combine your demographic and economic data with operating cost data to develop a financial pro-forma. Test its sensitivity to: changes in basic variables; alternate use scenarios; financing assumptions, and; energy efficiency or environmental variables.
- Begin your Due Diligence. Identify negotiating points you will address during the "***G*et**" step.
- Consider how this investment affects your other portfolio decisions. Does the vehicle (entity) you choose affect the investment parameters? Should you go it alone or syndicate?

A network of professional contacts and access to specialized database information earns its keep in the "***I*nvestigate**" step. Do you need an architect, appraiser, attorney, energy rater? Get to know several of each! We recommend that you get your accountant, architect, and attorney involved as early in this process as feasible.

You have done "the fun part," expended a few more resources, and narrowed your choices to the most likely few. It's time to consider the Three Strategic Bs (bear on, begin again, or bail) again. Bearing on requires increasing commitments and risk. You have two options to begin again: repeat the "***F***ind" step or change your parameters and repeat the "***I*nvestigate**" step. Your efforts may have created asset value (information is an asset) that allows you to bail – and recover some of the funds you have expended.

Get:

In the "***G***et" step you create an option or offer to purchase, negotiate, perform due diligence, remove contingencies, finance, contract up, and close. This is, by far, the "scariest" and most complicated step in the ***F.I.G.'R.S*** algorithm.

Expect to do some, or all, of these "***G***et" functions simultaneously:

- Craft an option or purchase offer on terms that make sense. Include contingencies that insulate you from the things you don't already know. Be prepared to field counteroffers, investigate their implications, and negotiate their terms.
- Contract for, perform, and evaluate a plethora of inspections, title searches, surveys, market studies, financial analyses, "Et cetera. et cetera. et cetera …" Renegotiate deal points as you learn more about the property.
- Decide how you will optimize debt & equity. What vehicle (entity) is best for your purpose: corporation, LLC, something else? Should you go it alone or syndicate? Work with your accountant and attorney to analyze options and draft the required documents.
- Establish lender relations, pitch your project, take and evaluate offers, negotiate and finalize your financing. Complex projects often require several rounds of financing {acquisition, development, construction, and permanent ("take-out") loans} and multiple lenders or finance instruments {e.g. primary, subordinated, mezzanine, and gap financing}.
- Test market the project and pre-lease available space.
- Finalize your contractual arrangements with contractors, subcontractors, critical suppliers, and the whole host of people and companies that will convert the property that exists into the property you envision.
- Stay in touch with your stakeholders: investors, bankers, current and future employees, the local populace and politicos. Now is a good time to start negotiating contracts with your key operating personnel.

Eventually, you will either close on the property (bear on), decide to pursue other options (begin again) or run screaming for the exits (bail). Whatever you decide, you will need input, oversight, knowledge and expertise, experience, and (occasionally) emotional support throughout the "***G***et" step. Marshal your contacts and in-house capabilities to help you make the right choices. (Need a good psychotherapist? We know a few of those, too.)

***R*un:**

In the "***R***un" step you: system up, staff up, lease out, and make run-time decisions. Depending on the decisions and plans you made in the previous steps, the "***R***un" phase of your investment may last anywhere from a few days to a lifetime (and maybe even beyond). Ironically, the one thing you probably can't do during the "***R***un" step is "run for cover." (Though, you can usually proceed calmly toward the exits.) You will do (a few) operational things repeatedly during the "***R***un" step:

- Collect and analyze market data: refine your business / investment / marketing model,

- Advertise vacancies, interview potential tenants, vet potential tenants, lease space, and collect rent,
- Routine maintenance, extraordinary repairs, and scheduled replacements,
- Advertise career opportunities, interview potential employees, vet them, hire them, train them and retain them,
- Develop accounting and management systems,
- Pay for it all, and
- Meet with the lawyer if it all goes bad (or extraordinarily well).

While dealing with the operational details, you will also keep track of “big picture” issues:

- How does the property fit in your portfolio (or does it)?
- How does its performance measure up to your expectations and your competition?
- How do business, economic, investment, and social infrastructure changes affect your investment?
- Retain, refinance, syndicate, exchange, or sell?

Investors often delegate the “***R***un” step's strategic and tactical tasks to a professional management company rather than honing their do-it-yourself skills.

If you adopt the professional management approach, expect to pay your management company somewhere between 2% and 10% of the property’s gross income.

If you choose the do-it-yourself route, reconsider the decision every time “cute little Johnny in unit five” flushes his yellow bathtub ducky at two o’clock in the morning.

***S*ell:**

The “***S***ell” step is almost a mirror image of the “***G***et” step and often invokes “***R***un” step procedures as well. When you sell, you evaluate the property, value it, list it, market it, receive and negotiate options or offers, close, and reinvest the proceeds or “say goodnight Gracie.”

Pre-sale evaluations employ a portfolio decision model that addresses your marketing, property improvement, and strategic options and ends with a “retain, refinance, or sell” decision. Note the similarity to the “***R***un” step. Often, the “***S***ell” step procedure differs from the “***R***un” step procedure only by virtue of its “reversibility.” The central concern in both cases: Can your resources be put to better use in other investments?

As **Buyer, Developer, and Lessee representatives**, Steven Roy Management is seldom directly involved in listing, marketing, negotiating, and closing investment property sales. We, rightly or wrongly, consider it a conflict of interest to represent both buyers and sellers, potentially in the same transaction. We will gladly assist you and your selling broker with the pre-sale analysis and re-investment decisions.

***C*redit where *c*redit is due:**

Our algorithm owes a great deal to James Graascamp’s pioneering 1981 work for the Urban Land Institute, *Fundamentals of Real Estate Development* and to Miles, Berens, and Weiss’s Eight-Step-

Development Model outlined in _Real Estate Development_, also from the Urban Land Institute. We adapted their principles to develop a model that addresses the needs of our primary constituency: commercial investors, commercial owner-operators, and commercial developers.

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