

The Essence of Analysis

Analysis is an elusive process; whether investor, appraiser, or student, understanding the essential points to consider is itself a difficult process. In this chapter, we introduce the fundamental methodology as a starting point for deciding whether an investment makes sense. We examine the question, Who uses market analysis and why? Finally, we demonstrate how raising capital for investment purposes must be premised on a foundation of solid analysis.

Knowing the right questions to ask is a wise starting point in any inquisitive task. Otherwise, we cannot identify the underlying assumptions necessary to arrive at an *informed* conclusion. A market analysis may have several different meanings, just as a *real estate market* is not necessarily going to mean the same thing to different people. We recognize a definition of real estate market as

the interaction of individuals who exchange real property rights for other assets, such as money. Specific real estate markets are defined on the basis of property type, location, income-producing potential, typical investor characteristics, typical tenant characteristics, or other attributes recognized by those participating in the exchange of real property.¹

We also need to recognize that *analysis* may fall into several distinct and separate functions within the broad function of market analysis.

BASIC MARKET ANALYSIS CONCEPT—AN OVERVIEW

We view *market analysis* as a broad overview of supply and demand attributes for property, including site-specific and local factors and current as well as emerging competition. To begin, we provide some basic definitions. Additional definitions may also be found in the book's Glossary. *Studies that focus on the market include:*

Analysis of local economies: Studies the fundamental determinants of the demand for all real estate in the market.

Market analysis: Studies the demand for and supply of a particular property type in the market.

Marketability analysis: Examines a specific development or property to assess its competitive position in the market.

Studies that focus on individual decisions include:

Feasibility analysis: Evaluates a specific project as to whether it is likely to be carried out successfully if pursued under a proposed program. May relate to developability. Most often related to financial feasibility.

Investment Analysis: Evaluates a specific property as a potential investment. Usually incorporates specific financing in the analysis, and may evaluate alternative financing options to select most appropriate financing or consideration of income taxes. Emphasis is on risk and reward, sensitivity analysis, and internal rate of return.

With these definitions in mind, the value of the market analysis becomes apparent. It is a study that tries to identify the market for a particular real estate product. Why would we want to understand the market? Real estate markets are *not* efficient markets like the stock market, and pricing does not occur every day.

Whenever someone undertakes a real estate transaction, a market analysis must be performed. This could range from an informal process to a two-inch-thick book.

Three key questions should be answered by the study:

1. Will there be users to rent or buy the proposed product?
2. How quickly and at what rent or price will the proposed project be absorbed in the market?
3. How might the project be planned or marketed to make it more competitive in its market?

In market analysis, three phases are involved: collection of data, analysis, and recommendations. It all starts with data, which may be found in many places.

Primary, or *raw* data is unanalyzed, often collected in person by the analyst. It may include reading classified ads, new development announcements and legal notices, or Census data. *Secondary* data has gone through the analytical process by someone else, who tells the analyst what to conclude. Secondary data has bias.

The analyst needs to consider bias for all types of data. For example, even primary data may include unintentional bias. Even Census data may include undercounts of immigrants, as one example. Secondary data helps the analyst develop a sense of the market, but primary data is much more valuable and accurate.

Think of the data as coming from two sides—demand and supply—and in that order. Why? On the demand side, the analyst includes:

- Population, number of households, and demographic characteristics.
- Income, affordability, and purchasing power.
- Employment, by industry or occupation.
- Migration and commuting patterns.
- Other factors.

On the supply side, the following are included:

- Inventory of existing space or units.
- Vacancy rates and character of existing property inventory.
- Recent absorption of space, including types of tenants or buyers.
- Projects currently under construction and proposed.
- Market rents/sale prices and how they differ by location and quality.
- Features, functions, and advantages of existing and proposed projects.
- Terms and concessions.

Information sources are not limited, either. Analysts may include, among other sources newspapers, Census and private databases, tax rolls, advertisements, and maps—in other words, any source that reveals something of interest.

The value of direct interviews should not be forgotten in this information-gathering process. The analyst may interview brokers, owners, urban planners, local officials, and so on. Interviews provide guidance and open the analyst's eyes. The goal in the interview is to ask as many people as many questions needed to understand the marketplace in order to synthesize a complete picture.

The data gathering process should be thought of as *competitive intelligence*. Market analysis should be tied in with an understanding of the psychology of the different players. In order to understand whether a proposed project is real, we need to understand the game of business. It is not enough to just say what is going on; we need to understand the players involved. Going even further, it is not just enough to know the players. The analyst also needs to know the local government. In the real estate business, government is your largest partner. If you want to do a project, you need to understand how the political framework either supports or hinders you based on the desires of elected officials.

Market analysis is generated by virtually everyone in real estate:

Private Sources of Analysis

Appraisers.

Brokers (leasing and sales).

Developers.

Investors.

Asset managers.

Lenders.

Public Sources of Analysis

Urban planners.

Economic development consultants.

Public agencies.

It is interesting to determine—and to study—whether private and public analyses mesh or even agree in their conclusions. There are certain ways that the two sides may be specifically biased. In the private sector, market analysis is used to maximize profits (and to reduce losses by reducing market risks). However, the goals of the public sector are often quite different, including a context of impacts beyond profitability or feasibility, such as density, traffic, or design.

Is there such a thing as an unbiased analysis? The answer: Yes. Which-ever one *you* are doing.

The serious analyst—absence of bias aside—should be keenly aware that the process itself invites bias. The analyst cannot fall in love with a project and remain objective.

One effective method for identifying market analysis is by taking note of which group or groups use the analysis. These may include

developers/builders, investors and lenders, designers, marketing managers, local governments, appraisers, assessors, tenants and occupants, sellers, purchasers, landowners, and property managers. Within the context of identifying the end-user, it also is important to note that the market analysis data feeds into the process of feasibility analysis. The two phases—market and feasibility—are directly affected by the analyst's conclusions about market area.

Defining the market area can be broken down into attributes of the question, What location and physical space make up the market area? This includes natural features, constructed barriers, population density, political boundaries, neighborhood boundaries, type and scope of development, and location of the competition. This level of analysis next leads to a study of primary and secondary trade areas. Some important considerations define how accurate the analyst's work will be. For example, do you use geographic rings to define the trade area? Putting it another way, is the trade area a circle? In practice, trade areas are actually formed by travel time and other market factors, and true trade areas are rarely suitable to explain with the use of perfect circles. For example, residential zoning and commercial clusters may more accurately define the trade area.

Following the gathering of data, the next step is to analyze. A site's advantages and disadvantages can be studied and compared in terms of zoning and comparisons to the competition: location/linkage to other services and properties, rent or purchase price, unit sizes, occupancy costs, parking ratios, building/project amenities, technology, security, and maintenance (current expense level *and* any deferred maintenance).

In performing the range of analytical tasks, one aspect of real estate valuation within the broader scope is the more concentrated *analysis of local economics*. This study of supply and demand is viewed as specific to a narrowly focused region or city. Furthermore, whereas market analysis tends to be associated with the economic conditions affecting valuation of a particular property or property type, analysis of local economics applies to all real estate within a region.

We also want to make a clear distinction between market analysis and *marketability analysis*. The latter is a study of the relative competitive position of a project within the existing market and anticipated market trends in the near future.

While studies such as these (market analysis, local economics, and marketability) tend to be broad-view market studies, two additional types of analyses are more specific to a particular project. First is the process of *feasibility analysis*, which is intended as a study of whether the numbers work, given the current perception about how a project should proceed, what it will cost, and who will buy or rent the property. The range of

analysis includes a feasibility study, which we examine later in this chapter. However, the analysis is a larger process focused on financial questions but intended as a critical review. If the financial aspects of the project are impractical, it needs to be modified so that questions relating to financial feasibility produce more favorable answers.

A related process is called *investment analysis*, and it looks at the same financial questions but from the investor's point of view. Feasibility—usually associated with developers and project management—is a part of the developer's market analysis, whereas investment analysis takes the same issues and examines them with a different set of choices. A developer may tend to compare various projects, sites, and real estate markets; an investor is likely to compare potential real estate investments to nonreal estate alternatives as well. The investor will, of course, review financing considerations as part of the analysis; however, financing is not isolated to investors alone. Lenders and potential lenders will perform a variation of investment analysis to analyze risk and to identify the most appropriate type of project financing. Overall, investment analysis, whether performed on behalf of equity investors or potential lenders, will want to include an analysis of cash flow, tax benefits and costs, and comparative return analysis.

To what extent should analysis go? Is it expensive, formal, and time-consuming in all situations, or should the extent of the process be determined by the project? For an experienced speculator, for example, who is familiar with local conditions and trends, an analysis may include a quick and informal study of a specific property. For an outsider, analysis may involve a more detailed study. For someone requiring local approval or extensive financing, that analysis may be a thorough research on many levels.

An expanded definition explains how analysis continues to work after initial decisions have been made concerning where, when, and how to build a project. Market analysis and research are not isolated functions occurring only at the very front processes of the project but are best utilized throughout:

Market analysis is a crucial part of the initial feasibility study for a real estate project, but it does not end there. Market research continues to play an important role in shaping the project throughout its development and management phases. Market analysts are commonly consulted for repositioning strategies after a project is up and running and the developer realizes that absorption does not meet projections. As many types of market analysis exist as variations in development projects, stages of development, and interests being served.²

In its final form, analysis may be published as a market study or a feasibility study. In some cases, these are one and the same. However, we make a clear distinction. Market analysis, as a collective process, includes an identification of the timing for demand; the direct relationship between demand and supply (the analysis of which should consider the role of competition), and calculations of investment rates of return.

MARKET STUDY AND FEASIBILITY STUDY: THE DISTINCTIONS

A *market study* should always begin by answering specific questions that may be raised by lenders or equity partners, or by investors themselves. The document has added value as well. For example, regarding subdivision developments, a survey among developers and bankers concluded “that a well-documented market survey was a key component of the appraiser’s report.”³ Such a survey often is mandatory in defining the market area itself. That definition phase should be the first step, according to a real estate research company’s president, who also advises that “all market analysis should focus on three basic areas of evaluation: the site, the demand for the product, and the supply of comparable products.”⁴

The issues of site plus supply and demand analysis lead us to a series of critical questions:

1. Is there adequate demand for the improvements existing or proposed, so that assumed vacancies will be low? This should include analysis of population demographics, income, employment, and growth forecasts. Additional market components beyond the analysis of supply and demand may go to price segmentation and coordination with marketability (development concept in the context of the market, current available sites versus what end-users want, and market absorption analysis, for example).
2. Is there a market demand for such improvements and how readily will the development be sold on the market? How will the proposed development impact on current supply in the immediate area (local market) and the broader market (regional)?
3. How will the development be paid for, and what is the source of funds?

These three questions will be expressed in the next chapter in a somewhat different form, that of *supply and demand*. We recognize three forms

of supply and demand, involving tenants, real estate acquisition/sale, and financing. For now, we want to review these important questions and even expand upon them in defining the scope of a market study. To continue, a market study will also include the following questions, concerned with marketability rather than with the conditions of the market:

4. What competitive developments exist and how should *this* project be designed, planned, and marketed to effectively compete? In other words, what is the specific development concept in terms of site plan, architecture, design, and the proposed market itself (tenant, shopper, user)?
5. What relevant factors affect our determination of the market? (Consider the effects of local employment trends, population mix, and even the existence or lack of similar properties.) What is needed in the market today, and how does this development address that demand? Can the design and concept of this development be improved, and if so, how?

These five questions—involving questions of supply and demand—are at the heart of the market study. In comparison, a *feasibility study* focuses on financial aspects of a proposed development or acquisition. While the financial aspects of market analysis and valuation may be viewed as coldly factual, a lot of room for interpretation is likely to be found. The numbers reflect varying forms of reality, but the whole question comes back to supply and demand and the marketability of a project concept. Expressing this in market terms, “three possible courses of action . . . exist in real estate feasibility: (1) a site in search of a use, (2) a use in search of a site, and (3) an investor looking for a means of participation.”⁵

What is the purpose of the feasibility study? If we view it simply as a means for crunching numbers, then the value of the report will be limited. In fact, number crunching can and should provide a developer, builder, or potential investor with a far more important outcome: the determination of whether the risks of proceeding are justified. A skeptical approach—assuming a project will *not* work—is often a smart approach. One business consultant explained this aspect of feasibility:

*The first goal of a feasibility study or business plan should be to determine whether or not the potential entrepreneur should actually take the plunge . . . the default conclusion should be that the [project] will not succeed. Thus, the plan must convince potential investors [and] lenders . . . that the [project] will succeed.*⁶

Another expert has observed that the process of feasibility analysis should relate more to what will work and less to what the costs will be, a concept that often is forgotten in numbers-oriented feasibility work. That expert observed that

*... the steps necessary to evaluate the economic feasibility of a project are frequently confused with a variety of other tasks. Often this confusion leads to the recital of various statistics dealing with population size, growth rates, average income, median home selling price, employment growth, unemployment listings, and the like. Too often the result is that pure statistical information is substituted for the analytical process necessary to determine the economic feasibility of a project. . . . Some believe the [analyst's] role should be limited to answering the question "what is it worth?" and leaving the question "will it work?" to others."*⁷

We can accurately define *feasibility*—at least in part—as the matching between various elements of supply and demand, expressed in terms of cost and benefit. The kinds of questions you will find in a feasibility study are broader in scope because these various elements are complex; however, the primary areas involved will include:

- What is the target market for the proposed development? (In retail projects, the target has two components: potential tenant stores, and shoppers, so the target needs to be evaluated with both of these groups in mind. In residential projects, the target may be either a home-buying family or a renter, depending on the project and scope envisioned in the development process. Mixed-use projects are especially complex regarding target markets. For example, in urban areas such as Manhattan, some projects involve retail shopping areas and hotel, residential, and recreational features in a single complex.)
- What comparable properties are on the market, and how will competition affect pricing in our case? (If a lot of similar properties exist, does it make sense to build another? If so, why?)
- What is the performance level and market demand of the competition? (This may include vacancy rates in multi-family complexes or sales in a mall, for example.)
- What level of *financial* performance is projected? Specifically, the feasibility study works like the well-known business plan model in its projection of cash flow, intended to demonstrate that the proposed project will remain solvent even with a reasonable assumption about vacancy rates, market rental rates, and seasonal variation. Both investors and

lenders will also be keenly interested in conclusions drawn concerning the cash flow impact of debt financing *and* the impact—positive or negative—of taxes.

- What risks are faced in investing in this project (for equity partners) or in lending money to finance this project (for lenders)? The range of risks may involve negative cash flow caused by high vacancies and unanticipated expenses, changes in the local economic climate, and reversal of current demographic trends; the feasibility study should raise all of these questions.

WHAT SHOULD A MARKET AND FEASIBILITY STUDY CONTAIN?

While there is no set format for the study document, the typical market analysis will contain the following items:

Cover page—The type of study, address of property, and names of the team members.

Letter of transmittal—Major findings, conclusions, and recommendations.

Table of contents—A list of all the sections.

Nature of the assignment—Description of the assignment, methodologies, and approaches used, and the scope of services undertaken.

Economic background—Establishes the market framework; discusses the larger market areas first (i.e., regions and/or cities) and the smaller market areas last (i.e. neighborhoods). Analysts should be sure to cover all the influences: physical, economic, governmental, and sociological.

Description of the property and proposed development—A description of the site and improvements should be provided separately. This section explains the physical and economic plan proposed for the site.

Competitive developments—While the economic background will include market data on the competitive supply, this section should include details on the development's most significant competition (existing, planned, and proposed). It should include rental rates and sale prices, vacancy rates, size of projects, and other information.

Market potential—Here the analyst establishes how well the proposed development will capture demand in light of the economic back-

ground and compared to the competitive developments. This is the place to quantify demand for the development. Where does the demand come from for the proposed plan? How is your proposed plan different or the same as the competition?

Conclusion of marketability—This section should not include any new data. This is the part dedicated to pure analysis. Everything included in the body of the report analysis so far is used to make a case for how the proposed development will compete in the marketplace.

A 10-year pro forma should be used, based on an assumed sale of the property at the end of year 10. The pro forma will require certain assumptions about rental rates, vacancy rates, absorption rates, and operating expenses. If the proposal is for a condominium development, the concept is the same, but an appropriately shorter holding period should be used.

Addendum—This section is used for any supporting documents such as site plans, maps, and material supporting other sections of the report.

Exhibits—In specific sections or as an appendix, include valuable additional items, including a map identifying the location of the subject, competitive developments, and the market area; photographs of the subject property, its block front and the block facing it; and schedules of competition (size, rent/sale price, and vacancy).

This format is meant only as a guideline. Actual format should be dictated by materials needed to make the case; the unique attributes of the proposal; and a mandate given to the analyst as part of the assignment.

The reporting format may include both market and feasibility study features. The distinctions between the two types of studies demonstrate that the range of requirements for thorough market analysis is comprehensive. An important difference to remember is that the market study may remain relevant for a considerable period of time, whereas a feasibility study is likely to evolve as financial realities change, including employment, construction and land costs, and other economic data (market rents for residential, lodging, office, and industrial properties, for example). The problem of reliability in a feasibility study in the lodging industry has been expressed by a market expert:

Are feasibility studies accurate? They probably are at the time they are performed. But hotel markets are highly dynamic, and unforeseen changes . . . can have a devastating effect on a hotel's future

operating performance. With all these interrelated factors (positive and negative) occurring in a highly random pattern, predicting the future income and expense of a hotel is like determining the Dow Jones average three years from now.⁸

THE FIRST STEP IN THE MARKET STUDY: MARKET AREA

The market study is usually the result of thorough market analysis; but what form does this report take? In order to make this study useful to the reader (whether approval-granting agencies, equity partners, or lenders), the study should be organized in a logical manner, so that information presents a clear picture of the market in all of its meanings; so that important information can be easily located; and so that decisions can be made.

As with all well-organized reports, the body of the report should be in a narrative form, with supporting documentation within the report provided in graphic forms; and with detailed supporting documentation provided in appendix form. This format makes the report easy to read and digest; it keeps the body of the report fairly short (even when the supporting back matter is voluminous); and it highlights and explains four key areas of evaluation: overall market area, location-specific factors, demand factors, and supply of comparable properties.

These four aspects of the market analysis are designed to ask critical questions. In other words, if we are able to demonstrate that the market area, location, demand, and supply elements favor proceeding, then it would make sense to others as well. Equally important, if in the process of performing market analysis, we are unable to make a convincing case for the project, then why would anyone else want to proceed? The purpose to market analysis is to critically evaluate the underlying questions, and to determine whether or not the market is situated so that the project should proceed.

The starting point is a study of the *market area*. This is the range in which supply and demand operates. Traditionally, market area has been analyzed on the basis of studying the land physically. Today, however, new technology has expanded the potential of market area analysis, explained in one real estate book as being a new tool to assist market analysts in many ways:

Although analysts have traditionally been forced to approximate market areas by using census tracts, zip codes, or county boundaries because of data limitations, emerging geographic information

systems (GIS) technology, or electronic mapping, is liberating real estate decision makers from relying on arbitrary boundaries.⁹

This new technology enables the analyst to look at geographical information from a truly big picture view. Artificial boundaries do, indeed, obscure the true market area in many instances. For example, a retail shopping center would be designed to serve a specific population and geographical market area, which also makes it possible to estimate the reasonable assumptions concerning traffic volume and potential sales. However, a careful study of the market area may point out that the results are not always as obvious as they may seem at first glance.

Everyone will agree that market area is an important starting point. You will want to identify the regional realities defining the potential

CASE STUDY: BELLIS FAIR, WASHINGTON STATE

In the typical market area analysis for a retail shopping center, we would study local population in order to determine whether a project is supported by the market. This does not always work, however; you also need to study the specific area to determine how market forces work. In Bellingham, Washington, the regional mall called Bellis Fair opened in 1988 on Interstate 5 in Whatcom County. At the time, many people criticized the plan for this development, arguing that the local population could not support the mall. Population at the time in the largely rural county was only about 120,000 (as of 2004, Whatcom County, Washington's population is 157,477). However, Bellis Fair has been a huge success.

Daily shopper traffic exceeds 35,000 people. The mall has 150 stores, with anchors of Bon-Macy's, J.C. Penney, Mervyn's, Sears, and Target. Overall, Bellis Fair has 768,906 square feet of leaseable store area on its single level, and 4,730 parking spaces.

How is it possible? The location—Bellingham—is the largest city, but its population is less than 70,000. The closest large city in Washington is Seattle, nearly two hours to the south. Bellis Fair is not a destination from that distance, so where is this market coming from? The answer: Canada. Bellis Fair is a mere 23 miles from the busiest border crossing, known as the Peace Arch. Here, U.S. Interstate 5

(Continued)

CASE STUDY: BELLIS FAIR, WASHINGTON STATE (Continued)

crosses into British Columbia. The metro Vancouver region (the area encompassing the border, north to the suburbs of Vancouver itself) has more than four million population. This is the dominant *market area* for Bellis Fair. A majority of shoppers in Bellis Fair come from Canada. The current exchange rate is 80 cents of Canadian to U.S. dollars, so Canadian shoppers enjoy a 20 percent discount by taking a short trip south. Given the added impact of high Canadian sales taxes, shoppers have even greater incentive to shop south of the border. British Columbia sales tax is 7.5 percent (as of 2004), plus federal taxes of 7.0 percent paid by all Canadians. So shopping at home costs 15.5 percent on top of the retail price, compared to a Washington State tax rate of about 8 percent.

Conclusion: Any *market area* study must look realistically at the effective market. The border between the United States and Canada (or between any two states) is artificial in terms of market area. It would be inaccurate for Kansas City, Kansas, to draw conclusions limited only to Kansas residents; obviously, the larger Kansas City, Missouri, market would dominate the market area. The same rationale applies in the case of Bellis Fair. The local population could not support a larger retail mall (daily traffic exceeds one-fourth of the county's population). The success of this mall has to be defined in terms of broader economic and demographic forces.

market itself. One modern tool worth using for the more complex market area studies is Geographic Information Systems (GIS). These systems may include any database with the ability to indicate a geographical location or spatial dimension for the variables in the database. . . .¹⁰ Given the case history of Bellis Fair, it is clear that such regional factors are not always obvious. In any modern market area study, GIS would very likely uncover valuable insights for similar project studies. Additional market analyses may also be required beyond the geographic location of a perceived market. Some guidelines:

- Identify the region not only in geographical terms, but also in terms of where the market exists.
- The market area for tenants may be drawn from the immediate area as well as from other areas. For example, with residential projects this

could be related to the location of employment and ease of access to transit lines.

- Any project's analysis should include consideration for how the new project will affect existing projects. For example, meeting an assumed demand for residential housing may lead to higher vacancy rates in existing multi-unit developments.
- Be aware of the differences between artificial boundaries (county lines, state borders, etc.) and built boundaries like freeways that cut through neighbors, thus defining or restricting a market area.
- Be aware of historical patterns of development based on ethnic or cultural ties. These boundaries change and evolve over time, but they are remarkably persistent.
- Be cautious in making undocumented assumptions concerning the appropriate size of a development *or* the size of an existing market area. Initial assumptions should be studied critically and conclusions should be subjected to testing.

THE SECOND STEP IN MARKET ANALYSIS: SITE EVALUATION

Studying the market area enables us to take a broad view of the region. Clearly, the features of one area over another will vary considerably, and the factors are not always obvious. The features within an area affect the conclusions. For example, an interstate freeway, major border crossing, or employment trends in one city or region are going to significantly impact your conclusions about the market area. This leads into the second step, the more specific site evaluation.

A *site evaluation* should include comparative analysis—site to site—of physical properties such as topography, shape of the land, surrounding uses, and proximity to important features (such as transportation, for example). Comparative analysis helps you to assess a particular property or series of potential sites with features in mind. A shopping mall situated near a freeway exit would, naturally, have greater potential than one outside the city limits and away from the visibility of potential shoppers, the convenience of access via roads and transit stations, and the overall practicality of siting a shopping mall on well traveled routes. For residential property, local transit and access to conveniences such as schools and shopping, also play an important role in comparative site evaluation. While it may be obvious to some, it is important that the analyst walk the

site. Sound real estate analysis cannot be done thoroughly from a desk or, for that matter, from behind the wheel of a car.

The question of zoning cannot be overlooked in site analysis, either. We cannot simply assume that, given the acquisition of land for a specific purpose, a rezone is automatically going to be granted. Lower-priced property may be so priced due to its current zoning, and local authorities (not to mention citizens living nearby) are likely to resist a rezone merely for the convenience (and profit) of development interests. On the other hand, in some cases approval for rezoning is relatively easy to obtain if the new project will benefit the community and local government through increased tax revenues. The potential problems of investing in land when zoning problems may arise is one risk factor in the site evaluation. You may need to compare overlooked but potentially profitable land with more obvious sites. The cost of already-zoned commercial land may be far higher, but the risk of antigrowth movements among citizens, or denial of rezone applications by local governments, is largely removed when zoning issues are not on the table.

The many questions that arise in site evaluation apply to every type of land use. The questions include whether a particular site is appropriate for the planned use; whether it is the best available property; whether there are amenities close by (public recreation, shopping, schools, etc.); and the larger question of whether citizens and local government would welcome your planned use.

Potential resistance to your proposal may exist even when zoning is in place. Those states that have enacted growth management legislation may impose restrictive growth limitations.

For example, a common principle in growth management laws is that a specifically identified urban growth area (UGA) should be in-filled before any new development is to be allowed outside its boundaries. While intended as a means for preventing urban sprawl, the actual result may be draconian density within the urban fringe with little or no growth on the outside.

For the purpose of site evaluation, it is crucial that you also check state

Valuable Resource

A web site linked to many of the state growth management sites, and identifying additional useful publications on the topics, is <http://www.realtor.org/sg3.nsf/pages/landusezonegrowmgmt?OpenDocument>

and local laws beyond mere zoning. The zoning itself is meaningless if, due to GMA legislation, you will not be able to gain approval for your project because the site lies outside the UGA.

Growth management rules may further require that you *prove* the need for the development you propose as a precondition for approval. For example, you may need to evaluate a site within the context of a county's inventory of land sharing the same zoning. How much of that land is developed and under operation? Can you establish a demand for additional lands both zoned and developed in the same way? You may discover that opponents will use GMA rules to prevent new development, even when zoning is appropriate. While we may assume in most cases that properly zoned land is implied approval for your development, it is not necessarily so. You may win the point, but delays and legal fees could make it less feasible. In comparing one site to another in GMA states, you may need to limit your site evaluation to available land inside the existing urban fringe, or be prepared to prove the need for your development outside that boundary.

THE THIRD STEP IN MARKET ANALYSIS: DEMAND FACTORS

Closely related to the site evaluation and the practicality of developing a specific piece of land is the question of demand. Demand may be a factor of current zoning, inventory of lands zoned in that manner, and the boundaries of an urban area that has access to reasonably priced municipal services. It may not be limited to the widely understood definition of market demand.

Because *demand* does not necessarily mean the economic version of demand, we need to be cautious in interpreting statements made by others. For example, a local politician or antigrowth activist may state that "there is no demand for a project like this" in the area. What does that mean? In fact, it could mean that forces are at work to *prevent* such projects, whether market demand exists.

Economic demand is a form of demand in which consumers need and want more of a commodity or type of outlet (shopping center, apartments, houses, etc.) or, when that demand would be likely to follow if and when the development occurred. For example, a community may reside 60 miles from the closest large-scale regional mall. The lack of such a mall right in town does not prove that there is lack of demand; in fact, were such a development to be built, it is logical that shoppers would arrive almost immediately at that destination rather than traveling 60 miles.

So a study of demand should include an understanding and study of market forces and trends, but it is not necessarily so limited. We may face a more political definition of *demand* as well. At times, the real agenda may be to prevent change in any form; in that environment, appropriate zoning and municipal code provisions may not be enough to gain approval for your project. This is understandable; development is change, and change is often resisted for no other reason than because it is perceived as negative by some people. You may need to include as part of your demand analysis the local *political demand* for development. In some jurisdictions, political demand is at zero. From a development perspective, regardless of the economic demand, the project may simply not be feasible because of politics.

This problem is prevalent in many areas, but the range of problems associated with antigrowth sentiment in residential development (and most notably against low-income housing) is especially severe. As a matter of public policy, slow growth policies may ultimately prove the point that when government tries to control growth, it causes only badly planned growth but cannot truly prevent it. This problem is aptly described in one GMA-oriented web site, observing:

Jurisdictions are not accommodating growth because they either refuse to comply with the law, need political cover from NIMBY mentality, or lack the resources necessary to provide infrastructure, amenities and low income housing. During times of high demand, jurisdictions must do more to accommodate the need for housing. While the private sector determines the market for housing, each jurisdiction determines the availability of land to develop through comprehensive plans, zoning codes, permit requirements, fees, taxes, and other costs that may serve to encourage or inhibit growth.¹¹

THE FOURTH STEP IN MARKET ANALYSIS: EXISTING SUPPLY FACTORS

The concept of *supply* is as complex as that of demand in areas where legislation has been drafted in an attempt to control or even to prevent growth from occurring.

In an economic sense, *supply* is well understood. It is in reference to the available properties designated for a specific use. When economic supply is high, prices will soften because demand lags behind. When supply is short and demand is greater, prices are driven up. This basic economic concept is not complex, at least when viewed in its theoretical definition.

There are three specific kinds of real estate supply: already built, under construction, and proposed. Each of these has a different level of reliability, and the variables should be discounted by the analyst. For example, developers sometimes announce a project that they do not have tenants for, only as a way to scare off other developers or to try to attract a potential tenant in order to drive the development; most downtown office buildings cannot be built or financed without a committed tenant. So it is a common practice among developers to announce construction more as a marketing ploy than as a statement of fact.

In a written market study, the questions of supply and demand may be limited to a purely economic analysis. If a market study is undertaken to convince lenders of the viability and cash flow strength in a proposed project, those economic analyses are quite appropriate. The same is true when the study is designed to attract equity partners or to gain approval for tax credits in low-income housing, for example. However, if the purpose of a market study is to determine whether a project is viable both economically and politically, we need to look beyond the economic version of supply.

In residential developments, antigrowth conflict is often associated with questions of supply. Antigrowth forces may argue that there is an adequate supply of housing and it is not necessary to construct more. This argument is made even when economic demand is evident. However, the antigrowth argument continues: If we build more houses, more people will move here. That means more traffic, higher crime, the need for improved roads, larger schools, and other consequences of growth. So *supply* may come to mean *need* rather than a purely economic study of whether there are enough buyers available.

For commercial developments, the question of supply is equally complex. A market study would review buying trends, traffic patterns, logistics, and site-specific questions in order to convince the reader of the study that a mall, for example, would succeed at a specific site. Included in this study would be commercial vacancies, affected by shifting traffic and shopping trends, local and regional competition, and typical rental rates in the area.

Demand for either residential or commercial developments also needs to include a study of the trend in net absorption or, in the case of single-family homes, real estate sales trends in recent months.

Net absorption can be expressed as the square footage of *available* space over time, modified by vacancy levels. More specifically:

$$\begin{aligned}\text{Net absorption} = & \text{space occupied} - \text{space vacated} + \text{space demolished} \\ & - \text{construction of new space}\end{aligned}$$

For example, in a particular city, residential vacancies have consistently run below 5 percent; however, in the past two years, several hundred new apartments have been added to inventory and today, vacancies range seasonally between 10 percent and 15 percent—a substantial increase. So net absorption has diminished. The question next becomes, How long will it take for the market to absorb the oversupply so that net absorption will improve? This estimate would have to be based on economic and demographic trends in the area.

In the case of properties for sale, demand is judged based on several forms of analysis. Checking with local lenders and Multiple Listing Service (MLS) offices, we find statistics concerning housing sales over the past one to three years. What is the trend in the inventory of properties? (*Inventory* is the number of homes available for sale, expressed in terms of the months of demand. For example, if 200 homes are sold per month and there are currently 600 homes on the market, then there is a three-month inventory.) The trend in inventory levels reveals the demand. If the inventory level is growing, then demand is falling. The trend reveals the health of the local housing market.

A related test is the *spread* between the asked price and the final sales price for properties. The wider the spread, the softer the demand. In markets where demand is exceptionally high, spread tends to be low. So again reviewing the trend, we would analyze demand in terms of whether the spread is expanding or contracting.

The third important test is time on the market. How long does it take properties to sell? In a high-demand market, well-priced properties sell very quickly and, of course, when demand is soft, even bargain-priced properties may remain on the market for many months. What is the trend? The answer reveals the level of demand and, more revealing, the trend in that demand.

Developers hiring outside firms to prepare market studies should ensure that the firm is qualified in the particular type of development being studied. The study should also identify specific factors given the market in question, rather than relying upon some generalized formula. For example, many studies are prepared based on markets defined via radius (three or five miles are common markets in such studies). But this method is not applicable in most areas. A real market may consist of people living along a highway as far out as 10 or 15 miles while few other potential buyers or consumers will be found within a mile-based proximity. The underlying assumptions of the study should be based on the geographical and local features rather than on a formula that almost certainly does *not* apply. For example, *drive time* is often a more reliable indicator of markets than actual physical distance.

One expert has noted that one significant error

*is the failure to recognize that a new development will be able to capture only a share of the market, rather than the entire market. New projects do not necessarily create new demand. Many analysts incorrectly assume that if there is sufficient demand in the competitive market to absorb five lots per month, a new project will automatically capture all this demand.*¹²

The same argument applies to economic modeling within the market study. Broad-based assumptions should be rejected and the market study based on the local realities and economic mix. This is essential if the study is to truly identify the market in terms of supply and demand. Such economic features cannot be formula-based because every region and municipality is unique in terms of its demographic and economic mix. The market study should analyze the area, rather than be designed to impose generalized assumptions on all areas. A competitive analysis within the market study should be prepared along similar lines: The market study should involve analysis of specific competitive forces rather than upon generalized observations about the nature of competition.

How can you determine whether a particular consulting firm uses boilerplate assumptions or actually goes into the field and studies the market? One effective method is to ask to see copies of recent market studies and to compare them. Since many such studies are publicly available and not proprietary (such as studies prepared for government program clients), a consulting firm should be willing and able to provide copies of recent market studies.

THE VALUE OF THE FEASIBILITY STUDY

The market study is intended to examine conditions of the local market and to demonstrate, by way of compelling supply and demand factors, that the development proposal is justified. In comparison, a feasibility study questions the financial aspects of the proposed development—tax features, cash flow, and likely profit or loss—in order to show potential lenders (or equity partners) that the numbers will work.

While the question of feasibility may be largely financial, it is more than an accounting exercise. The typical accounting revenue forecast, cost and expense budget, and cash flow projection is limited to documenting possible outcomes; the feasibility study, in fact, is far more. It is financial in nature, but it should be compelling beyond what the numbers reveal. A lender reviewing a feasibility study should be able to conclude that the *risk* of financing the

project is acceptable. *Feasibility* should not translate to an attempt to show that there are no risks; a lender or potential equity partner would not accept such a premise, and, under any standards, such a claim would not be supportable. However, the question of risk is going to be on the minds of anyone approached by developers for financing or investment purposes.

Feasibility, in its most reasonable definition, is part budget and part disclosure document. It is properly treated as part of a test of the financial potential, risk, and financing required. All of this, which is part of the *due diligence* process, is aimed at testing the assumptions underlying the project. Part of that process—and a crucial part for the lender or the investor—is identifying risk. This risk may come not only in the most obvious forms of net loss or negative cash flow. In some instances, a far more troubling risk may be the possibility that initial financing will not be adequate to complete the project.

The feasibility study presents a pro-forma version of what is expected to occur during the acquisition, construction, completion, tenancy, and eventual sale of the project. What happens if initial financing or equity investment is not enough to complete these steps? Where will additional funding be acquired? Of course, the fact that the study attempts to show how currently known facts *might* look in the future—in other words, a forecast—should be accepted as one of many possible outcomes. We should be aware of an important distinction:

A forecast is not a prediction. Predictions require a leap in logic and are not necessarily based on known or knowable current information. A prediction does not attempt to show how the future relates to the present; it is stated as a fact, independent of and unrelated to what currently exists. A forecast, on the other hand, logically links current information with events that are expected to occur. In a forecast the future is not unrelated to the world as it currently exists or will exist; rather, current and future events are viewed as inexorably linked in some logical way.¹³

The difference between these two is central to the theme. Consider, for example, the point of view of the people who are asked to bring money to the table—lenders or investors. Because the initial financing is the basis for identifying potential return to investors (or cash flow to lenders), if that financing is inadequate, it presents a very serious dilemma. More financing will be necessary if the initial lender or investor is to profit; however, the assumptions all change if and when additional funding will be needed. With this risk in mind, the feasibility study has to address the financial risk in very comprehensive terms.

As a planning document, the feasibility study serves as a risk disclosure summary within the due diligence process. It should follow the market study. Clearly, disclosure has to be based on market assumptions, so a feasibility study cannot precede a test of the market itself. In the market study, the big question is, Does it make sense in this market to proceed, given site attributes, supply and demand, and competitive realities? In comparison, the feasibility study should ask the questions, Can we *afford* to build the project as originally conceived, or do we need to examine costs with market and financial attributes in mind?

The market study indicates how the project should be completed in terms of improvement size and scope (thus, cost). So the assumptions that go into the feasibility study are based on the market study. That is the entire assumption base, in fact, for studying risks and determining whether or not a lender can reasonably expect timely payments or an investor can expect a return and, ultimately, a profit.

If a developer prepares an in-house market study and feasibility study and then goes forward to find financing, it would be normal for the picture to be optimistic. And many development firms do, in fact, prepare their market and business planning documents on their own. However, the real test of feasibility is achieved when an outside, independent consultant looks at the same questions objectively. As long as the developer pays the bill, we may expect a degree of bias and that is unavoidable. However, an outside consultant should adhere to certain standards and that is an important feature of the independent feasibility study. An appraisal firm may offer market and feasibility services but may lack the accounting skills to prepare a comprehensive cash flow analysis; their emphasis would likely be restricted to cost/value questions. An appraisal firm with a qualified real estate department that specializes in feasibility studies or a consulting firm with demonstrated experience in preparing feasibility studies, may be the best source for preparation of this feasibility study. A word of caution, however, is offered by a principal in one such organization:

Once you have identified qualified feasibility consultants, there are other factors that need to be weighed in making the selection. The most important factor is whether or not the chemistry is right and the match is a compatible one. This doesn't mean hiring a firm that will always agree with you. It means hiring people who have the integrity to tell the truth as they see it, and at the same time work with the people in your organization in a team effort that is not adversarial in nature. You must feel that you can trust the judgment of the feasibility consultant that you hire, without feeling that you can't challenge their interpretation of the data gathered.¹⁴

The feasibility study is most effective when it includes three key features. First, the pro-forma number crunching has to be based on realistic underlying assumptions about financing, costs and rents, and these assumptions have to be critically examined to ensure that they are fair and accurate. Second, the assumptions used in the feasibility study must be an outgrowth of the market study. Why? Because “recommendations regarding overall project size, unit sizes and mix will drive the overall project cost as reflected in the development budget.”¹⁵ Third, a feasibility study should include a series of metrics so that the reader can better understand the cash flow statement. This could include time value of money calculations such as the Internal Rate of Return (IRR) or Present Value calculations. Other metrics that examine return for both investor and lender should be examined (such as cash-on-cash on both leveraged and unleveraged bases; loan-to-value; and debt service coverage ratios). Finally, a competent analyst will include sensitivity analyses that show how small changes in underlying variables (i.e., capitalization rate) may result in large changes in project value.

Feasibility cannot be studied in a vacuum but should serve as an outgrowth of competitive analysis as well as an understanding of supply and demand locally; if the market study shapes the development as it should, then the feasibility study shapes the financial questions in a meaningful way, including risk assessment as well as acquisition and development cost levels and cash flow.

One possible outcome of the feasibility study is the conclusion that, in fact, the project as originally conceived does not work out financially. If the investment cost is too high based on potential cash flow, the conclusion may be that the whole project will have to be scaled back. In the most extreme case, the idea may have to be abandoned and the land used for other projects (or if land has not yet been acquired, the whole project would be abandoned). In those instances, it is far less expensive to pay the cost of a market study and a feasibility study, than it would be to attempt to finance the project. The cost of proceeding when the numbers do not work would be far greater for all concerned.

WHO USES MARKET ANALYSIS?

Should market analysis be performed only as a means for obtaining financing? The market study and feasibility study are essential for raising money for a project, but is that the end of the process?

In fact, market analysis and the output obtained from it are valuable

planning documents. These can and should be utilized throughout the project by architect, engineer, and the project planning team. In developing the raw material, the individual or firm preparing a study considers population, income, employment trends, commuting and traffic patterns, and more. But the market and feasibility studies should evolve beyond a summary of raw data if they are to be effective. Many ineffective reports end up gathering dust in the project manager's office, because they are not designed as action tools. Thus, the cost and effort that go into market analysis may be passively organized and presented, so that no meaningful use will be made of it. As an alternative, the document may be designed to provide vision and guidance to the many participants in making the project a reality.

A lot of emphasis is placed on *marketability analysis* of a project, either in terms of rental cash flow or—if the developed property is to be sold—how to maximize market value. But marketability analysis is only a small part of the larger concept of *market analysis*. The latter is effective when it includes the elements of the market study and feasibility study; but it becomes exceptionally effective when the information and conclusions are presented in a way that provides the project vision that is so important. Elements of that vision include community involvement along with planning at the municipal level; innovative design; sensitivity to local concerns; and the feasibility of the project in every way and not solely in terms of financial outcome.

The utilization of market analysis is so critical to a project's acceptance locally because no two projects are the same. Any attempt to use a cookie cutter method of developing projects is certain to meet with resistance. Variation in style, site planning, and price range should be based on a list of local attributes. These include citizen involvement and/or resistance to the development, local political mood, and the far more tangible site-specific attributes: topography, proximity to traffic patterns, and surrounding zoning, for example.

In considering the many diverse uses of market analysis, the most effective studies are those that meet the needs and answer the questions of each of the interested parties: lenders or equity partners (capital formation), developers or contractors (project generation), architects and designers (those responsible for creating aesthetic qualities as well as meeting local code requirements within the site), marketing interests or users (buyers or sellers, landowners and tenants, or consumers), and maintenance interests (property managers).

It is useful to review the end-user on a matrix of objectives, as shown in Table 1.1.

TABLE 1.1 Market Analysis Users and Their Objectives

Objectives	Lenders Partners	Developers Builders	Architects Designers	Buyers/ Sellers	Property Managers
Promotion and initial marketing efforts.		x			
Communication with local politicians and decision makers for project approval; outreach to land use and community groups.		x	x		
Employment and relocation of corporate tenants/buyers.		x	x	x	
Investment strategies or financing efforts.	x	x			
Project planning and design, long-term.	x	x	x		
Cash flow projections and financial analysis for investor profitability and lender risk assessment.	x	x	x	x	
Due diligence, multiple levels of review.	x	x	x	x	
Management of completed projects—tenant matters and maintenance.					x

THE GOOD AND THE BAD ON STUDIES

The analyst needs to remember who usually commissions the market study: the developer. Do not confuse the market study or feasibility study with the more independent and objective appraisal, for example. Some guidelines:

- *The analyst must remain objective.* There is nothing wrong with a study concluding that the site is not great and/or hard to build on.

- *Take caution if and when the developer's objectives are not clearly defined.* The analyst cannot be expected to know the purpose of the study without a clear definition.
- *The drive for profits by the consulting company blurs objectivity.* Be wary of the consultant that produces a glowing report promising high profits, but that glazes over the risk.
- *The study should be performed as a team.* No one person should be expected to produce an objective summary of all of the market and feasibility issues. The team not only assigns work to members based on expertise; it also provides a good checks and balances system ensuring overall objectivity.
- *Many projects suffer from fragmented development planning.* In all too many instances, the planning phase is finished before anyone figures out what the demand is. The process cannot be broken up and performed piecemeal. It has to move forward in an intelligent way. As the saying goes, Don't put the cart of desired results before the horse of as yet unknown demand.
- *Lack of strong personnel damages the process of market analysis.* A lot of damage can be done by a staff that is afraid to give the boss bad news, lose a profitable client, or fear sounding negative. Telling the truth based on a well-researched report and fully documented findings provides integrity to the process.

The analyst should also make note of 10 common weaknesses in the market study process:

1. *Inadequate analysis of indirect economic forces, such as environmental, social, and political.* It may be possible to build the project, but what is the community's stance on development? Research the political issues locally, in the early stages.
2. *Using best-case numbers.* It is far more valuable and realistic—from marketing as well as fiscal points of view—to use a range of possible outcomes: best, moderate, and worst-case.
3. *Ignoring the importance of sensitivity analysis.* Some numbers, if tweaked a little bit, can dramatically change the projections. Cap rate is a typical one. When dealing with highly sensitive numbers or exceptionally long-term projections, a sensitivity analysis is appropriate—a good place to insert a worst-case analysis.
4. *Underestimation of infrastructure cost.* Among the more expensive possible problems is the failure to realistically appraise the operational costs of the project. Remember, the devil is in the details. But the details are expensive.

5. *Inadequate analysis, particularly of cash flow.* To many analysts, cash flow is too elusive to fully document. This is an error. Carefully document all of your assumptions, so that if and when the numbers start to vary, you can go back and identify the cause. You will need to pin down the variance specifically: as related to market data, tax calculations, debt service, for example.
6. *Excessive use of statistics without any hard, realistic conclusions.* Numbers are great, but only to the extent that they lead you somewhere. Avoid the temptation to replace difficult conclusions with confusing numbers and test runs using estimates only.
7. *Failure to edit data properly.* When reports depend on irrelevant data, how do we find the relevant parts? Market data is hard to get. So when you have limited data, be honest about it. The disclosure of these limitations is far more valuable than the use of numbers that simply do not help. At least then, the reader can ascertain what the situation is. A lack of clarity increases the risk; and if nothing else, the analyst's job is to highlight where those risks lie.
8. *Conclusions drawn on numbers but lacking consumer surveys.* Such surveys may be expensive and time-consuming, but they are often invaluable in what they reveal.
9. *Overvaluation of land.* The method you use to set value of land versus improvements will affect all subsequent ratios and financial tests—for lenders and investors, not to mention potential tenants or buyers. Depend on appraisal documents to set a fair value, and avoid the temptation to alter the numbers.
10. *A failure to critically assess management.* Who is the development team? What is their experience? Even the best market analysis is useless unless management knows how to make it work. This problem may be more relevant to the developer than to the analyst, who has no direct power to make changes. But as a part of the analysis, it does not hurt to emphasize the importance of professional management as a linchpin of a project's success.

In Chapter 2, we take these concepts to the next step and provide you with the means to put analysis to work to make the project succeed.