Concise Most Probable Use

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Introduction

Recall that in order to meet the traditional definition of highest and best use, an analyst must be able to figure out the maximally productive use, and then it must be legal, physically possible, and financially feasible. We could actually simplify these criteria and use three: legal, physically possible and creating the highest net present value on the site, as this would combine financially feasible with maximally productive. The late James Graaskamp did not believe that appraisers, on average, could always figure out the maximally productive use, since that requires creativity or extensive research on new property trends that might reveal a use not common yet in the existing market. For example, would an appraiser know that a micro-fulfilment center would be the most productive use for an old outdated big box store? Or would they understand a medical clinic is now the best use of a bank branch being closed? They might, but if they were really great at spotting such trends, early on, they may be better suited to a role as an investor or developer, if they had the risk tolerance. If we presume a conservative set of sample data about potential uses, then it might be pragmatic to target the most probable use and not some outlier possibility.

Even the notion of what is legal is not that easy to ascertain. By legal we mean that it can meet zoning codes, building codes and other land use regulations. Many new developments or redevelopments require a change in zoning or an exemption from building codes. Should the appraiser try and ascertain the probability of a change in zoning via an analysis of the NIMBYs (not in my back yard) active in the local market? Or the likelihood of a permit from agencies overseeing flood zones or sewer permits? Generally, the conservative answer is to go with what is possible "by-right" with existing zoning and land use codes. Still, if the change in regulation is likely and probable, then that is what the appraiser should consider in proposing a new use for the site.

Last, in order to determine financial feasibility, the analyst must assess the likely return on investment and the value creation from the new use. The value created must exceed the current value, cost of demolition and cost to rebuild a new structure by a sufficient margin that is worth the risk and the time required. This is akin to new development analysis and so proposing a new use on the property, different from the existing use, will require a much deeper and more extensive analysis than presuming the current use is the highest and best use or at least the most probable use.

Why do we want to know the Most Probable Use?

The traditional answer to this question is that we want to value the land value separately and this is driven by the most probable use of the site. Also, when using the cost approach, a separate value for land is required. In reality, there is seldom a need to break out land value, while there might be a need to estimate replacement cost of the improvements for insurance purposes. There is one other reason to determine the most probable use (highest and best use) is because some properties have the possibility of converting uses and creating a higher total property value.

The value of all property can be viewed as the current use value plus the option value, if any, available when market conditions are right to change the use to something with greater productivity. Most of the

time this option value is zero or near zero, because it is not financially feasible to convert it to a new use. The net benefit of conversion is less than the cost.

Total Value = Current Use Value + Option Value from Conversion

What is this option value? It is the net gain in value after a property has been converted to a more productive use, considering all the costs and time required for conversion. The analysis should be a present value analysis based on the appropriate discount rate for investors/developers in such projects. The more intensely a property use the less is the option value, so high rise buildings are among those with the least or zero option value. On the other extreme, surface parking lots are those with the highest option value. Here is an example:

A surface parking lot of 10,000 square feet is nothing more than an asphalt covered lot with lines and numbered spots. A parking lot under analysis produces $60,000 a year in net income, after minor costs to monitor the lot, operate some machines that track parkers, and occasional maintenance. This income is growing at 3% per year on average. What is the parking lot worth if a typical investor wishes to achieve a 9% rate of return?

Assume that parking lot capitalization rates are 6% and that the parking lot net operating income is received at the end of each year. Assume there is no other use or option value. We will get something like this, a value of $983,465. Note that each income flow is discounted by the present value of a single sum or multiplied by $1/(1+rrr)^t$ where **rrr** is the required rate of return (9% in this case) and **t** is the year or years of compounding required to bring it back to present value. The net sale price in year 10 is based on the net operating income in that year divided by the 6% cap rate.

End of Year	Net operating income		Present Value
1	$ 60,000		$ 55,045.87
2	$ 61,800		$ 52,015.82
3	$ 63,654		$ 49,152.57
4	$ 65,564		$ 46,446.92
5	$ 67,531		$ 43,890.21
6	$ 69,556		$ 41,474.24
7	$ 71,643		$ 39,191.25
8	$ 73,792		$ 37,033.93
9	$ 76,006		$ 34,995.37
10	$ 78,286		$ 33,069.02
10 Net Sale Price	$ 1,304,773		$ 551,150.29
		Present Value	$ 983,465.49

Next let us assume that this surface parking lot is ready for prime time, as it is adjacent to an old retail center ready for demolition and together the parking site has many possibilities. Several developers wish to build a new mixed-use project with twenty plus stories of apartments and retail on the bottom. Similar projects have been paying up to $450 per square foot, for a prepared empty site. The analysts believe this $450 will be a good minimum estimate per square foot and it could reach a much higher

figure in the years ahead. As a parking lot, the current use value is $98.35 per square foot for the land, but based on a higher and better use, the land is worth $450 at present. The difference between these two figures, $351.65 rounding to $350 dollars per square foot is option value, and the site is actually worth $4.5 million US dollars.

Property Value per square foot = $98.35 (current use value)

+ $351.65 (option value)

= $450 per square foot

= $4.5 million dollars based on $450 times 10,000 square feet

An investor might pay $4.5 million for this site and net only a 1.33% cash return until such time as the site is developed. The cap rate in the market would be only 1.33% based on current income but the total expected return is actually 9% based on the upside when the conversion to a new use occurs.

How far out should an analyst speculate as to new uses and higher values? To answer this question, we can use whatever is a typical time period for speculation in the relevant market. For single smaller scale uses, speculation rarely extends more than a few years. For large scale and mixed-use development, speculation may extend out several years. Speculating out two or three years would normally be reasonable. Speculating out ten years or further would generally be too extreme. If the new uses are not apparent, then there should be no assumption of a new use.

Other properties, aside from surface parking lots, will also have option value, but keep in mind that the new use must create enough value to make it worth tearing down a building, preparing the site, and building a new structure. If the cost of demolishing and rebuilding is not compensated by a net increase in value for the property, then highest and best use, as well as the most probable use, is the current use. This is the case in most instances.

Negative Values Can Exist

A traditional analyst might think that property can not have negative value, but that is not true. An obsolete use that requires more operational and maintenance expense than rent is economically better, when it is shut down and moth balled. In either case, the value of the property is what it would require to pay an investor to take the property on and do something financially feasible again. For example, an old office building was designed for a single tenant in 1980 with a single HVAC (heating ventilation and air conditioning system) that was based on very old technology and required the entire building to be heated or cooled without the ability to shut off parts of the system. Later on, the single tenant moved out and no single tenants were available in a market with 50% vacancy, and only small tenants available, if any were even considering the space. Unless the building was filled at least 60% the cost of operating the building was greater than the market rent, and it did not look like any single tenant would be found for years. Property taxes also were a large operating expense and despite appeals, they were only lowered a modest amount, resulting in a large negative cash flow, even if the building was shut down. Not only was this building worth less than the mortgage, it had a negative value equal to the cost to modify the HVAC system and appeal the property taxes once again sufficient to reach break-even. There are cases when it is rational for an owner to abandon a building and turn over the keys and this is one

example. An appraiser asked to value such a building would need to find out how much it costs to modify or replace the HVAC as a minimum, and still the market conditions might be such that the building has a near zero or negative value.

The Most Probable Use Opportunity Set May Depend on the Buyer

In Chapter 1 price and value were discussed as being driven mostly by the attributes of the property. But price dispersion tended to be driven by buyer and seller attributes. Buyers are particularly important as they may have different investment values (reservation prices) that are substantially different from one another. Aside from tax situations, access to and cost of capital, and risk tolerance, there are existing established relationships between owners and potential tenants that will drive value.

For example, consider a large national or global retail property owner, like Simon, with several well performing malls that is looking to entice a new tenant "Build a Dog" that builds robotic toy dogs on site based on a myriad of choices (size, fur, color, battery, speed, emotional responses). This new tenant is in high demand and interested in locating in several of the high performing Simon malls, but Simon is trying to improve sales at some of the more modestly performing malls. Simon says that in order to secure ten good locations in high performing malls Build-a-Dog must also take five spots in other newer malls. Such leverage in negotiating gives Simon a leg up on one off developers and owners. It also suggests that Simon will be able to take a property and more effectively lease it up than some other owners, providing a higher value. Will Simon, as a result of such leverage, bid more for a new site than other buyers? Generally, Yes! While there is no need to reveal investment value and all that Simon needs to do is outbid by a slight margin the next highest bidder, they have the ability to pay more and they will. The two points to remember here is that some owners of any type of property will have advantages over other owners and this will result in different potential bids and values for the same exact property. Market value is a range of possible prices based on the range of investment values we observe for different owners. A similar example could be constructed for ghost kitchens or industrial e-commerce-oriented portfolios, where buyer or seller circumstances can affect bids or willingness to sell.

When an appraiser is trying to determine most probable use, they need to consider not only what the market might put on the site, if the property became available, but also who the most probable buyers might be and how that might affect the use of the property.

How to brainstorm the most probable use?

It is pretty straightforward to presume when a use conforms to existing zoning within a single-family residential neighborhood, the most probable use will generally be the same. If the neighborhood is subject to recent changes in zoning laws, such as being permitted to have an ADU (additional dwelling unit) or several housing units instead of just one, then the appraiser needs to consider the marginal value added by these land use changes. They would first need to be sure there is room for an additional dwelling unit, and that the possible rents would more than cover construction costs. Once that determination is positive, they would need to estimate the value of the new additional unit based on the capitalized rent, and subtract the cost to create (physical, design, legal, financing all time adjusted) to get a net value result. If the net value result is positive, they would need to add it to the existing unit value, noting that the ADU might also negatively impact the existing unit value if it requires adjustments such as shared parking or less storage room or privacy for the owners/renters.

For most commercial uses, the appraiser needs to consider again all possible legal uses. If it is zoned commercial retail or mixed use, then what types of developers or retrofits do we observe in the region? Is the existing use financially self-supporting? Can the existing use carry a typical mortgage with the typical leverage (loan-to-value ratio)? If these answers are Yes, then the existing use will likely be the most probable use. If the returns are low or declining, then a new use might be warranted. The question is what types of properties and uses are currently attracting investment funds? Commercial brokers and bankers will be one source of information for such market trends, along with scanning the data bases of sales from data vendors and trade associations or major brokerage houses.

An example of a property type in transition during much of 2000 through present have been big box retailers. Many of these have not been able to compete with e-commerce vendors and have closed up. What is the most probable use of a site where a large-scale big box store of 80,000 square feet or so, once operated? One can examine the uses which appeared on other big box stores. We would observe many that converted to self-storage and sold off out lots (excess parking) to fast food restaurants or medical clinics, fitness centers, ghost kitchens and micro-fulfilment centers, so these would be logical candidates to consider as uses and the value of such a site would be what other investors paid for similar sites.

An example of a property type likely to be in transition for the next few decades are bank branches. As we move to a cashless society, deposit checks on line with our smart phones, and send money to others with Zelle and Paypal, and a host of similar apps, there is much less need to ever visit a bank. More centralized banks can handle the customers that want to meet in person and discuss loans or investments. What will we do with all these branches? Most banks are about the right size for restaurants and child care centers and well located in urban areas. This will be a frequent question over the next few decades.

Other property types that may go by the wayside are newspaper and magazine printing facilities, book warehouses, large university campus dorms, custom clothiers as we move to less formal society, and there are certainly many others. All of these have a higher and better use that requires systematic analysis, data search and brainstorming. The uses considered must be legal, fit the site reasonably well with some retrofitting, be physically possible, and achieve the highest net rent relative to the cost of transition. Note that it is not always the highest rent that matters but the highest net rent, after operating expenses. For example, a multifamily property use might achieve more gross rent than a self-storage center but if the self-storage center allows the selling off of excess parking space and has much lower operating expenses, it could still be the most productive new use for the property.

H&B Use Analysis for an Empty Site

Empty sites are rare, except in the fringe areas of metropolitan areas, and then the common use is either agriculture or preservation open land. Surface parking lots are the closest use to an empty urban site. The process for evaluating the most probable use is the same as for an existing building, except we need not consider demolition costs or conversion costs as part of the analysis.

Sometimes a higher and better use is hard to spot. An empty surface lot near a noisy railroad track in Cincinnati was used by a business that sold used tires. The vendor set up a sturdy tent, bought tires and sold tires and paid the owner of the site $250 dollars a month. The owner asked an appraiser to value the property. The appraiser estimated a growth rate for the rents and concluded it was worth $45,000 US dollars based on $3,600 a year in net rent divided by an 8% cap rate. The railroad vibration and noise seemed to make the site unusable for anything the appraiser could imagine. The owner sold it for $50,000 happy to get $5000 more than the appraisal. A new owner immediately leased the site to a self-service car wash, which required simple construction and paid $1,500 per month on a long-term lease. Using the same cap rate of 8%, the property was now worth $225,000 or more. The point of the story is not to suggest that appraisers cannot spot higher and better uses, but rather that sometimes it is hard to spot a new use. The appraiser did nothing wrong with assuming the existing use was the highest and best use, or at least the most probable use. There were very few alternative uses that would tolerate the occasional blasting noise from trains and the associated vibrations.

The Relevant Geographic Market

Relevant markets depend on the type of use being considered. For example, a convenience store may have a market reach of five minutes in any direction. A regional mall may pull from within twenty minutes access time. A bulk storage regional warehouse may serve a market area of three- or four-hours driving time or more. When determining the relevant market, one should first consider how far away other properties could be that would compete with the subject property.

For single family residential the question is simply, where else would typical buyers of homes like the subject property consider? School districts, physical boundaries like highways, lakes, all come into play when defining the relevant market, as long as they affect the typical buyer of such property. Property tax rates and services may also come into play or city and state political boundaries. Generally, an appraiser would define the relevant market or neighborhood by considering homes within a reasonable margin, plus or minus of the size, age, quality, and price range of the subject property as well as political and physical boundaries, and the school district if it has buyers that care about school quality.

Research on zip codes by the author and colleagues suggest there are ten to twenty neighborhoods within the typical zip code at the 5-digit level, and that postal carrier routes are a good rule of thumb for defining a neighborhood.

For commercial uses the neighborhood or relevant market is sometimes defined by brokers based on commercial districts and the boundaries around such markets, again highways or major roads, lakes, schools, residential neighborhoods, mountains, and access to transit along with similar zoning and land use controls. Data vendors also will define relevant markets and peer properties. A geographic area is part of the relevant market if it contains a peer property that competes with the subject property or likely use of a site.

Conclusions: The Current Use is Nearly Always the H&B Use or Most Probable Use

Highest and best use or most probable use is most often the current use for a site that has significant structures on it and is financially providing economic returns, sufficient to maintain and operate the property. When the use is less physically intensive, or easily convertible, then higher and better uses

might be alternative uses. Values with alternative uses may be substantial increases over the current use and this differential is called option value.