

FOCUS ON REAL ESTATE ANALYSIS

Comments on the Concept and Definition of Highest and Best Use

BY JOSEPH S. RABIANSKI, Ph.D., CRE

HIGHEST AND BEST USE ANALYSIS DOES NOT APPLY SOLELY to appraisals; it also relates directly to real property market analysis. Appraisal literature may contain the majority of discussion and presentation of HBU analysis to date, but it is imperative to valuation methods that all types of real estate practitioners rely on.

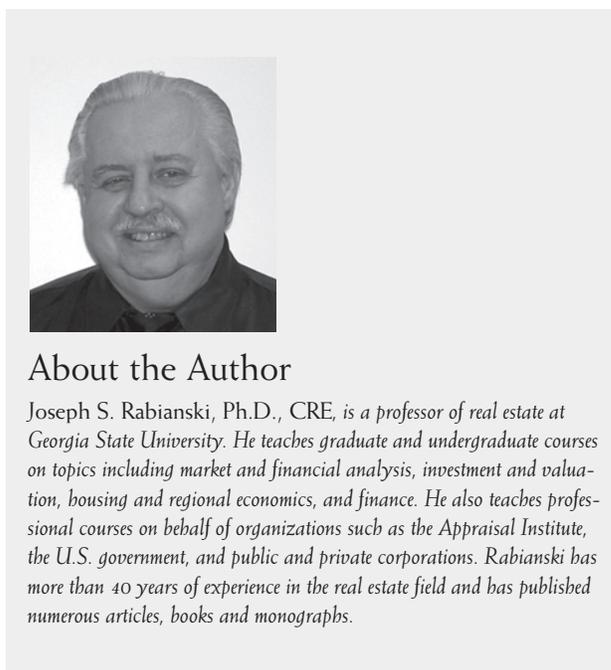
The 2001 edition of *The Appraisal of Real Estate* provides three definitions for HBU:¹

- General definition—The reasonably probable and legal use of vacant land or an improved property that is physically possible, legally permissible, appropriately supported, financially feasible, and that results in the highest value.
- For vacant land—Among all reasonable, alternative uses, the use that yields the highest present value after payments are made for labor, capital and entrepreneurial coordination.
- For improved property—The use of a property, as improved, that will maximize its value.

This general HBU relationship among legally permissible, physically possible and financially feasible can be depicted as a simple Venn diagram (see Figure 1). Each circle represents one of the three elements.² In this context, financially feasible must be defined in some clear and definite context. It could be all properties that generate a positive net present value at the investor's anticipated or required rate of return; the discount rate that meets the investor's financial needs; or an internal rate of return that surpasses

a predetermined hurdle reflecting the investor's perceptions of a safe rate, risk premium, illiquidity premium and administrative/management cost.

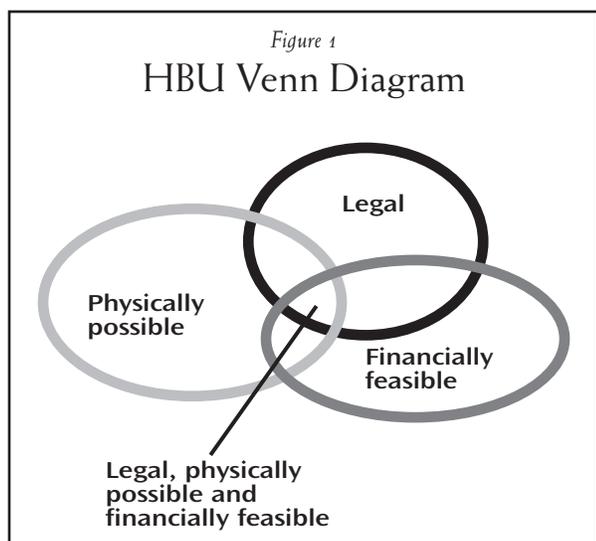
The intersection of the three elements can contain several different land uses for the property. To find the maximally productive option, the practitioner must identify the use in the intersecting area with the highest return—the use that has the best outcome when put to a financial test or guideline.



About the Author

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**THE LENNHOF AND PARLI CRITICISM**

Researchers have raised several concerns about the definition of HBU. One article by David C. Lennhoff and Richard L. Parli states the current HBU definition is “both ambiguous and redundant.”³ Their concerns refer to the phrase “reasonably probable and legal use.” The phrase is ambiguous because it “suggests that only currently legal uses that are reasonably probable be considered.” They continue: “Reasonable probability is both a tentative starting point and a conclusion if the use or uses that are ultimately deemed probable.” The test, they say, is the use that is ultimately probable.

Lennhoff and Parli offer a new definition for highest and best use: “The probable use of land or improved property specific with respect to user and timing of the use that is adequately supported and results in the highest present value.”

This article advances the Lennhoff-Parli critique.

Their new definition moves in the right direction, but is also subject to evaluation, constructive criticism and reformulation.

First, the term “probable” should be replaced with a more explicit phrase such as “current or future” or “existing or prospective,” which represent fact instead of conjecture. Second, the term “adequately supported” is too weak and vague. Practitioners can interpret it as “just scraped by” or “just made it over the hurdle.” It also fails to answer the question: Adequately supported by what? Adding the

adjective “financially” makes the nature of the support clear. Furthermore, if it is just adequately supported, why should it generate the highest present value?

The definition should use the term “financially feasible” because it is the basis of the HBU test. Thus, an alternative definition for vacant land and improved property is:

- HBU is the current or future use of vacant land specific with respect to the user and timing of the use that is financially feasible and results in the highest present value to the land.
- HBU is the current or future use of the improved property specific with respect to the user and timing of the use that is financially feasible and results in the highest present value to the property.

This recalibrated definition suggests a very important change. The issues of legal permissibility and physical possibility do not appear. Instead, the definition relegates legal permissibility and physical possibility requirements to inferior positions relative to financial feasibility. It places greater emphasis on the analyst’s or appraiser’s expert judgment about a use to be developed in the future.

FINANCIAL FEASIBILITY ISSUES

Financial feasibility involves two underlying issues. The first is specifying the phrase in an unambiguous manner. The second is ensuring a free market environment where no particular agent or entity is able to manipulate a property’s financial feasibility.

The financial feasibility test is a critical element in HBU analysis. It needs to be clear, complete and as concise as possible. However, Lennhoff and Parli argue that ambiguity exists around the concept of financial feasibility. They make their point by considering two definitions found in Appraisal Institute publications:

- Financial feasibility is one of the four criteria the highest and best use of a property must meet: the ability of a property to generate sufficient income to support the use for which it was designed. See also economic feasibility. (*The Dictionary of Real Estate Appraisal*)
- As long as a potential use has value commensurate with its cost and conforms with the first two tests

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(for HBU), the use is financially feasible. (*The Appraisal of Real Estate*)

Yet considering only current market conditions is ambiguous and incomplete. The Principal of Anticipation tells us that current market value comes from future benefits, not the present or past. Following are the other definitions related to financial feasibility that appear in the appraisal literature.

- Feasibility analysis is a study of the cost-benefit (cost-revenue) relationship of an economic endeavor. (*The Appraisal of Real Estate*)
- Economic feasibility is the ability of a project or an enterprise to meet defined investment objectives: an investment's ability to produce sufficient revenue to pay all expenses and charges and to provide a reasonable return on and recapture of the money invested. In reference to a service or residential property where revenue is not a fundamental consideration, economic soundness is based on the need for and desirability of the property for a particular purpose. An investment property is economically feasible if its prospective earning power is sufficient to pay a fair rate of return on its complete cost (including indirect costs), i.e., the estimated value at completion equals or exceeds the estimated cost. (*The Dictionary of Real Estate Appraisal*)
- Economic feasibility analysis is an analysis undertaken to investigate whether a project will fulfill the objectives of the investor. The probability of a specific real estate project is thus analyzed in terms of the criteria of a specific market or investor. (*The Appraisal of Real Estate*)
- Economic feasibility analysis may be defined as an investment's ability to produce sufficient revenue to pay all expenses and charges and to provide a reasonable return on and recapture of the money invested. (*The Appraisal of Real Estate*)
- Economic feasibility is indicated when the market value or gross sellout of a project upon achievement of a stabilized condition equals or exceeds all costs of production. Market value applies to a planned rental property; gross sellout applies to a project

that will be developed as multiple units to be sold to multiple users. (*The Appraisal of Real Estate*)

After reading these definitions of financial and economic feasibility, the need for a clear, complete and concise definition for these two concepts is obvious. Practitioners might infer that "economic feasibility" and "financial feasibility" are synonyms. They also might get the impression two dimensions to feasibility analysis exist. One deals with

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costs (operating costs and debt service) and returns (investment analysis); the other concerns value (market valuation) vs. cost (development and construction costs).

Appraisal literature needs to settle on one or the other phrase—financial or economic feasibility. Financial feasibility carries more weight because it is a test in HBU analysis. The term can cover two aspects in its definition:

- Financial feasibility analysis investigates the ability of a real property equity investment to produce sufficient periodic revenue (effective gross income) to pay all expenses (operating costs and debt service) and a future period reversion (sales price less selling costs and the loan balance), and to provide a return on investment that entices the investor to acquire the property and recapture the money invested.
- Financial feasibility analysis investigates the ability of a real property equity investment to generate a market value that equals or exceeds the full cost of construction and development (direct and indirect costs) of the property.

These two considerations of financial feasibility analysis are related: The yield capitalization of the net operating income using the appropriate terminal capitalization rate in the appropriate manner, and the appropriate discount rate establishing the current market value of the investment.

FREE MARKET OPERATIONS

Financial feasibility of a specific use for a specific property is a function of the property market in which that use

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competes. In other words, the financial feasibility of a shopping center is a function of the demand for and supply of retail space in a retail market that establishes the rent and occupancy levels. Financial feasibility analyzes revenues and costs for that use from the property market, combines this information with data from operating expense markets, and generates cash flows and a measure of the rate of return. The property market is depicted in rents and vacancies in effective gross income.

Have financially infeasible and currently illegal HBUs been made legal by rezoning? Have financially feasible and currently illegal HBUs been denied legal status by a rezoning refusal? The answer to both questions is yes.

The operating expense markets consist of several economic resource markets. Each operating expense is determined in its own specific market with its own market characteristics. The demand for public services and the local jurisdiction's ability to provide services determine property taxes. The insurance industry's estimates of various hazards determine insurance rates. Property owners must purchase repair services, materials and supplies in a specific market.

The major point is that use, for the most part, does not influence markets or prices in these markets. The property owner can negotiate costs and rates, but these financial factors in the property and operating expense markets are determined by market conditions; they are not subject to manipulation by the property owner or any other party such as the local jurisdiction. Though the local jurisdiction controls property taxes, special assessments and exactions, it does not control the financial feasibility of the use for a property. However, the local jurisdiction can affect the financial feasibility of the property.

PHYSICAL POSSIBILITY ISSUES

Most development and construction projects on vacant land are physically possible. The governing considerations are site development and improvement costs. These expenses enter the financial analysis by setting requirements for rent, vacancy and operating expenses to make the project financially feasible.

If the construction and development costs are too high, they raise the feasibility rent to a level higher than

market rent and render the project financially infeasible. In the case of an improved property, rehabilitation, renovation and modernization costs also enter the financial feasibility analysis and the feasibility rent estimation. Many examples of these possibilities exist: old industrial space to residential, office space to apartments, small apartments to larger condo units, retail space to government office space and so on.

Analysts also must eliminate obvious physical inconsistencies in construction and development. For example, a one acre lot, which is 43,560 square feet, cannot hold a building with a 50,000-square-foot footprint. But at an additional cost a sloped site can become a flat site, a below-grade site can become an at-grade site and a load bearing wall can be modified or partially removed.

Still, financial feasibility should take precedence over physical possibility. As a cost factor in a cash flow format, construction and development costs are not subject to overt manipulation by the property owner or public officials. As always, differing estimates arise for the same construction or development task, but this is not manipulation. Contractors generate different bids for the project based on various methods of cost estimating, profit expectation, or construction quantity or quality.⁴

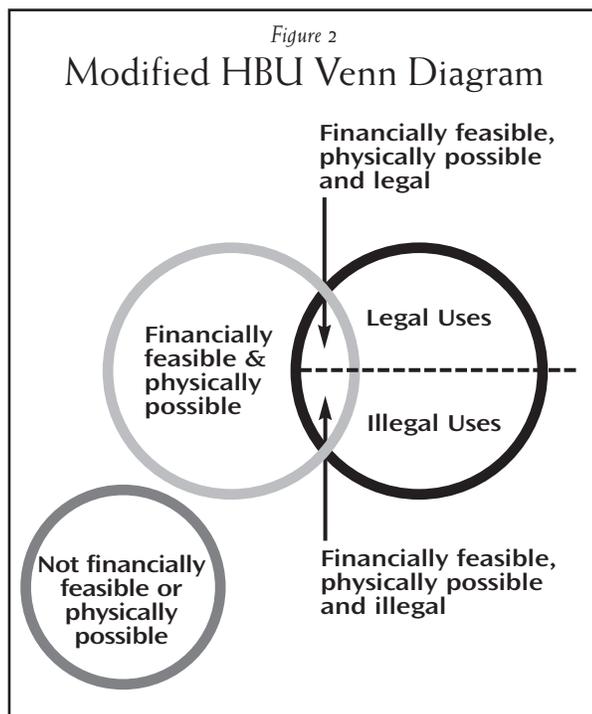
LEGAL PERMISSIBILITY

Legal permissibility encompasses many things but the most dominant is the land use restriction section of the zoning ordinance.⁵ Land uses at a specific point in time are either legal or not. There is no "somewhat legal" or "almost legal."

The problem is that determining what is legal is subject to manipulation. A preordained process solely in the hands of local authorities determines the zoning ordinance. Have financially infeasible and currently illegal HBUs been made legal by rezoning? Have financially feasible and currently illegal HBUs been denied legal status by a rezoning refusal? The answer to both questions is yes. Two additional truisms are that the current use of the property may not be the HBU of the property, and the HBU of the property may not correspond to the existing land use allowance.

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In a simplified form of the Venn diagram in which financial feasibility takes precedence over physical possibility, the diagram only has two circles: legal and the financial. But the legal circle should have two parts, one for legal and one for illegal uses (see Figure 2). Moreover, the illegal side should be partitioned according to the probability of rezoning or, stated differently, the probability of becoming a legal use. Financially feasible uses will appear on each side of the legal/illegal divide, but only one of these will be the maximally productive use, or the HBU.



MARKET MANIPULATION

In many rezoning cases, local authorities attempt to limit HBU analysis to land uses consistent with the existing comprehensive zoning map. In its noblest intent, this tactic seeks to eliminate an undesired land use that may be a financially feasible—or even the maximally productive—use but generates negative externalities to other properties.⁶

Property rights are in conflict with societal rights. This concern has always been an issue with zoning ordinance. However, authorities often make these legal permissibility decisions for less than the noblest reasons. Society's desirable land uses have often been denied, and society's undesirable land uses have often been permitted.

Manipulation of the legal permissibility criterion distorts the market, is a barrier to entry and, thus, a violation of the economist's competitive market concept. Remember that the current definition of market value is based on a competitive market. That definition is:

“The most probable price, as of a specified date, in cash or in terms equivalent to cash, or in other precisely revealed terms, for which the specified property rights should sell after reasonable exposure in a competitive market under all conditions requisite to a fair sale, with the buyer and seller each acting prudently, knowledgeably and for self-interest, and assuming that neither is under undue duress.” (*The Appraisal of Real Estate*)

Economics discusses two forms of a competitive market. The first of these is the purely competitive market that requires two conditions:

- Large number of buyers and sellers such that no one buyer or seller can influence the price in the market
- Barriers to the entry of new firms or exit of existing firms do not exist

The perfectly competitive market adds two more conditions:

- All market participants have perfect knowledge and information
- Resources and products are perfectly mobile signifying costless transport over space

The legal permissibility activity of the local jurisdiction can be a barrier to entry of new or different land uses. If the barrier to entry is established, it is a deliberate act to affect the value of the land. In eminent domain cases, the requirement to conform to the existing zoning map could be a deliberate act to minimize the fair compensation offered to the property owner by limiting uses that are financially feasible in the future but not legal today.

In contract law, to have a competitive market the transaction must meet the reality of consent requirement: The agreement reached in the contract cannot be based on undue influence, menace, duress, mistakes of fact, misrepresentation or fraud.

Undue influence is the situation in which one party in a relationship uses that relationship to influence the other

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person to agree to the transaction. Menace is the threat of force. Duress is the use of force to influence the other person to agree to the transaction.⁷ It is also defined as forcible restraint or restriction.⁸ Some see the local jurisdiction's ability to determine legal permissibility as undue influence and, as such, a violation of the economist's competitive market conditions.

CONCLUSION

Analysts can estimate the financial feasibility of illegal uses for a property in the same way they estimate the financial feasibility of the property's legal uses. This process requires consideration of the property market as well as the various resource markets that affect operating expenses. As in perfect competition, no market participant can affect the outcome; manipulation does not occur, nor does it affect physical permissibility. However, legal permissibility is subject to manipulation because the local jurisdiction has sole control over it.

To avoid dealing with this market imperfection—this barrier to entry—the analyst and appraiser should focus on the financial feasibility of legal and illegal uses. If the HBU is an illegal use under current zoning, the analyst and the appraiser should report the most financially feasible legal use as well as the financially feasible illegal use. In other words, the appraiser should ignore legal permissibility and focus on financial feasibility of any and all land uses that can be supported by current and future market conditions.

A reworking of the existing definitions for HBU as vacant and HBU as improved could be:

- The HBU of vacant land is the most financially feasible use from all uses supported by freely competitive and (legally and physically) unobstructed current and future property market conditions generating the highest present value to the land.
- The HBU of an improved property is the most financially feasible use from all uses supported by

freely competitive and (legally and physically) unobstructed current and future property market conditions generating the highest financial return to the property.

The definitions should be accompanied by a matrix that identifies the structure of the HBU analysis. For example, consider a vacant property zoned for single-family, apartment and retail uses. The HBU analysis matrix is:

Market	Legal Uses	Illegal Uses
Current	Vacant	Office Industrial Hotel/Motel
	Apartment	
	Retail	
	Single Family	
Future	Vacant	Office Industrial
	Apartment	

The appraiser would need to determine the most financially feasible use for the vacant site in each of four cells to determine the maximally productive use, the HBU. Assume that an analysis reveals that the uses in bold text are the most financially feasible uses in each cell, and that the maximally productive use turns out to be office space use in both the current and the future market.

Yet the property can become office space only if the local jurisdiction permits it. This monopolistic control is not the action of a free competitive market. If local authorities do not grant the rezoning request for office, the land likely will be used for a suboptimal retail use and the HBU will not be achieved.

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Consider a property improved with an apartment structure and currently zoned for apartment and retail uses. The HBU analysis matrix is:

Improved Property HBU Analysis		
Market	Legal Uses <i>Legal Action</i>	Illegal Uses
Current	As Is Apartment	Office
	Retail <i>Demolish Apartment</i>	Industrial Hotel/Motel
Future	Rehabilitated apartment	Office
	New Apartment Retail	Industrial Hotel/Motel

In this example, the four cells can be created as they were for the “Vacant Land HBU Analysis” with the addition of a legal action inserted in the current market/legal use cell. As in the case of the vacant land, the appraiser would need to determine the most financially feasible use for the improved site in each of four cells. The resulting statement is that the appraiser would have to report an HBU in three of the cells, the current and legal as well as a future HBU that is legal or illegal.

The reworked definitions of HBU as vacant and HBU as improved bring in the issues of use and timing as suggested by Lennhoff and Parli. Practitioners should check all options—legal and illegal—to find the most financially feasible use in today’s market as well as future markets.⁹

The discussion of legal permissibility presented in this article leads to a related topic: the probability of rezoning. An upcoming edition of will address this issue. ■

ENDNOTES

- 1 Appraisal Institute, *The Appraisal of Real Estate 12th edition* (Appraisal Institute, 2001).
- 2 Terry V. Grissom, “The Semantics Debate: Highest and Best Use vs. Most Probable Use,” *The Appraisal Journal* (Appraisal Institute, January 1983).
- 3 David C. Lennhoff, MAI, and Richard L. Parli, MAI, “A Higher and Better Definition,” *The Appraisal Journal* (Appraisal Institute, Winter 2004).
- 4 Construction companies can collude but only with great difficulty. The construction industry is not a pure monopoly or even an oligopoly. It can be best described as a monopolistic competitor, and collusion in this market situation is difficult because the number of firms on the supply side is large.
- 5 Other related restrictions include subdivision regulations and development standards, construction codes, ADA codes, etc.
- 6 These negative externalities could be such things as traffic congestion, over burdening public utility systems, high development densities, etc.
- 7 Donald Epley and Joseph Rabianski, *Principles of Real Estate Decisions* (Prentice Hall, 1986).
- 8 Webster’s New Collegiate Dictionary.
- 9 HBU analysis now is exclusively a private property consideration. No consideration enters the analysis with regard to the costs a land use will inflict on adjacent and proximate properties or even on the community as a whole. The negative externalities a land use might generate are ignored in the present format of HBU analysis.