Price Versus Fundamentals
From Bubbles to Distressed Markets

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Article Summary

Appraisal of real estate requires recognition of two different economic concepts: 1) the capital - transaction market (buy/sell transaction market) and 2) the fundamental value of property use. This article will show that the two economic concepts can have differing value indications when either market is in great flux.

The problem is the two market segments are vacillating, at times, with some interaction with each other, and at other times are independent of each other. When the data overlaps or are not correctly recognized and/or analyzed, the value conclusions can be uncertain. The solution may be to not just pick one market segment to utilize in valuation - transaction only or fundamental data only - but to know when to use data from each market segment, that is, know when to mix and when not to mix the data, and when to use the two different market segments to check results gained from the other.

Biography

Stephen F. Fanning, MAI, CRE, AICP, has been in the real estate and city planning field for over 30 years including the last 25 years as owner of consulting firm in Denton, Texas specializing in planning, market analysis and real estate appraisals. Fanning has been an instructor and author for the Appraisal Institute for 25 years with emphasis on Market Analysis and Highest and Best Use.

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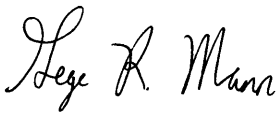
Certification

The authors certify that this is an original work and that publication is permitted without restriction.

Stephen Fanning 

George Mann 

John Blazejack 

Price Versus Fundamentals – From Bubbles to Distressed Markets

"*What needs to happen now is difficult, but we need to get real estate back to the values that it's worth."*[1] -- Todd Maclin, chief executive of commercial banking at JPMorgan Chase in a statement about the real estate market in January 2010.

"*Price is what you pay, value is what you get.*" Warren Buffett

The purpose of this article is to start a discussion about what these statements mean and the implications for real estate valuation. Both statements refer to hyper transaction markets with many purchasers buying on speculation in anticipation of rapid transaction price appreciation.[2] James R. Delisle, PHD, in his Spring 2009 Financial Views Article for The Appraisal Journal[3] summed up the characteristics of these types of markets. He noted that the current bubble (2005-07) was caused in part by government intervention that created "renewed interest in real estate as an asset class attracting a wave of new players who were not sensitive to the importance of underlying real estate market fundamentals." James went on to say in this article that the current real estate bubble is not new but similar to the 1980 bubble and consequently the downturn transaction market of the early 1990s.

Thus, the statements – *long term value, values that it's worth, value is what you get* - refer to the value obtained from the underlying fundamentals of the property as opposed to the price one might pay in the transaction market for that asset at any particular point in time.

The Difference Between Transaction Price and Fundamental Value

Fundamental Analysis is defined[4] as "*A study that focuses on the underlying factors that affect the property's actual use and the ability to economically support that use."*

[1] Todd Maclin, chief executive of commercial banking JPMorgan Chase was quoted in a January 20, 2010 Dallas Morning News Article concerning the current real estate market.

[2] Allen Greenspan called it "irrational exuberance" which Robert J. Shiller turned into a book title; in the 2nd Edition (2005 Princeton University Press) was among the first to warn of the global financial crisis that began with subprime mortgage debacle of 2007.

[3] James R. Delisle, PhD, "Too Much Pain, Too Little Gain" Financial Views, Spring 2009, The Appraisal Journal of the Appraisal Institute. James provides a very good historical overview of the how and why the previous real estate transaction markets have over heated and then bottomed numerous times.

[4] The Dictionary of Real Estate Appraisal, 5th Edition, 2010 Appraisal Institute

In other words, the term, *fundamental analysis* simply refers to the analysis of the economic well-being of a financial entity - in this case real estate - as opposed to only its transaction price fluctuations. For example, a restaurant can only afford to spend 7% of gross sales on real estate costs, so this income net of expenses capitalized then could be considered the fundamental value of the real estate for that use. The actual purchase price for this property might vary significantly depending on such things as too much investment capital chasing too little real estate, or speculation that the market is increasing so fast that a buy in and quick resell can make a profit.

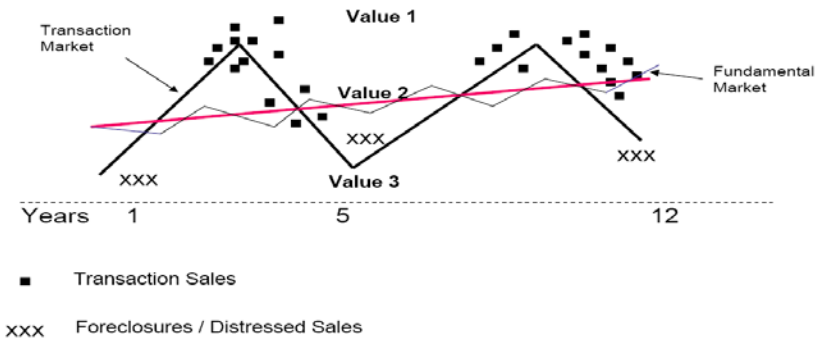
Historically, prices have not always been in sync with the underlying fundamentals,[5] but what has often happened is prices typically rose due to good fundamentals in the market. Then the prices tended to spike artificially due to such things as low interest and easy credit, a situation similar to what was observed in the recent bubble market.

Prices continue to rise above the fundamental base on the hope or speculation that someone can be found to buy the asset above its previous price. This bubble period usually ends by the realization that properties are inflated well above their fundamental value, leaving the market prone to instability. The transaction prices typically drop below fundamental economics after a high period. The market will then tend to slowly recover toward fundamental value. Then the cycle starts over again. However, the key equalizer is always the economics of the underlying fundamentals: jobs, population growth and increases in household income.

The following graph shows the various value concepts. The peak noted as value #1 represents high sale prices during very active markets such as in 2004-06 when financing was readily available from the CMBS products and real estate was bought at extremely low cap rates. The line called value #2 represents the underlying fundamental value, that is, what the property over time could support in terms of user ability to pay. Note that the fundamental line is not always a straight line, but over time it tends to cluster around a straight line. The low point (value #3) represents very low sale prices in the distressed transaction markets.

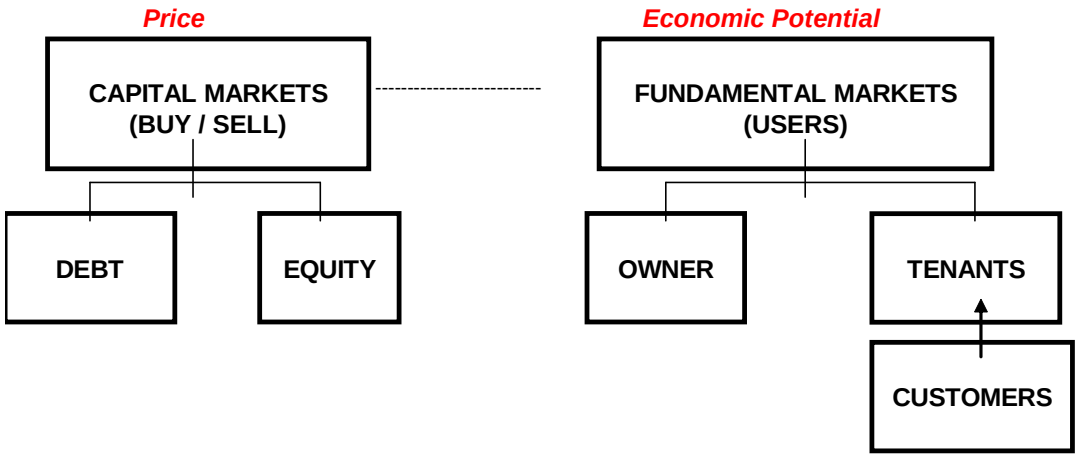
[5] Examples: The price of land in the 1980s prior to the S&L crisis, Dot.com's prices before the bust in 2000, subprime housing in 2006, etc.

Market Cycle Pattern



The following chart shows the two economic segments that operate in the market. At many times, these two markets differ greatly due to the availability of financing and investor motivation.

TYPES OF REAL ESTATE MARKETS[6]



[6] Adapted from 13th Edition of The Appraisal of Real Estate, page 174

Economic Literature: Thoughts on the Two Markets Concepts

The following offers a few examples of the economic literature on this subject.

Geltner & Miller started off their book, *Commercial Real Estate Analysis and Investments*[7] with discussion of real estate markets: "the two major markets that are relevant for analyzing commercial real estate: the space market and the asset market". The terms in the Geltner-Miller book are synonymous with the terms in this paper called the transaction market and the fundamental "user" market.

Flood and Graber, two University of Virginia professors, pointed out in 1980:[8] "When the actual market price depends positively on its own expected rate of change a bubble can occur. … In such conditions, the arbitrary, self-fulfilling expectation of price changes may drive actual price changes independently of market fundamentals."

Dr. James A. Graaskamp noted in a 1981 symposium on Institutional Land Economics:[9] "Not only is there a two-tiered market for real estate as a tool of production and as a commodity-money standard, but the market is further fragmented by financing terms offered, income tax considerations, and motivations for investment or arbitrage (conversions, syndications, trade)."

As Youssefmir, Huberman and Hogg indicated in 1998:[10] "when speculative trends dominate over fundamentals then bubbles form leading an asset's price away from their fundamentals."

Clayton, Ling and Naranjo in 2008[11] pointed out - classical finance theory assumed that asset traded in relatively frictionless markets reflected rational risk adjustments to future income and there was no role to what they call "investor sentiment." However, they pointed out the inability of the standard present value model to explain the dramatic run-ups and subsequent crashes in asset prices led to the development of the "behavioral finance" approach to asset valuation. " In the behavior models investors sentiment can have a role in the determination of asset prices- independent of

[7] David M. Geltner and Norman G. Miller, University of Cincinnati, *Commercial Real Estate Analysis and Investment, (University of Cincinnati) pg. 3*

[8] Robert P. Flood and Peter M. Garber, " Market Fundamentals versus Price- Level Bubbles: The First Test "Journal of Political Economy, (August 1980) pg. 745-770

[9] Graaskamp, James A. – Richard B Andrews Symposium on Institutional land Economics, May 21,1981-proceedings re-published by Urban Land Institute, In 1991 in a book Graaskamp on Real Estate, pg. 138

[10] Michael Youssemir, Bernardo A. Huberman & Tad Hogg, "Bubbles and Market Crashes", Computational Economics, (October 1998) pages 97-114

[11] Jim Clayton, David C. Ling & Andy Naranjo, " Commercial Real Estate Valuation: Fundamentals Verses Investor Sentiment, Journal of Real Estate Finance and Economics, (July 17 2008)

market fundamentals."…" Thus, if relatively small frictions in the stock market can cause sustained periods of overvaluation, it seem plausible to posit that private real estate market are potentially more susceptible to such episodes."

FIRREA Recognized the Two Market Concepts in 1990

In the past, federal appraisal regulations recognized these two concepts in appraisal. In 1990 it was proposed that appraisals for mortgage lending be based on their "economic potential" (i.e., Federal Register, August 22, 1990, Section C, Section 1608.2) and stated that the defined "market value is designed to provide an accurate and reliable measure of the economic potential of property involved in federally related transactions".

Apparently the 1990 FIRREA economic potential requirement, either was not enforced or was eliminated since it appears most mortgage lending appraisals during the last decade were based on the transaction (buy/sell) market and not its fundamentals (economic potential). Appraisals based on the transaction market follow the big market swings as in 2005-07, which leads to very high mortgage lending appraisals, many times outstripping the underlying economics to sustain these values. In the current depressed transaction (buy/sell) market it seems the opposite is happening with extremely low appraisals based on current low transaction (buy/sell) market. On the other hand, if mortgage lending appraisals were based on a property's fundamentals (economic potential), values over time would tend to have more moderate swings and the underlying values would tend to be more sustainable over time.

Implications for Valuation Appraisals: Case Study Examples

The major implication for appraisal is that these two related but separate economic concepts are running parallel in real estate markets, and sometimes, cross-pollinating the data can lead to erroneous value conclusions. The following points out a few of the areas in valuation that may create problems and shows some potential solutions.

Two Schools of Thought in Valuation

One school of appraisal thought is that market value can and should be explained only by the transaction market. This method can sometimes create problems in valuation unless all three approaches are interconnected with the sales as the basis. The result is the three approaches are not independent and become another way to analyze the transaction market. In stable market conditions this methodology is usually reliable; however, unstable market transaction[12] data or lack of current transactions can lead to widely ranging conclusions.

The other school of thought is that the transaction market data should be separated from the fundamental market data for valuation analysis. This method makes the three approaches to value independent: these are then reconciled into a final value opinion.

In practice the method is not absolute in all cases but would vary with property type, data availability and market conditions. For example in the 2009 market when sales were scarce or non-existent, the value by the fundamental method may have been given more weight. However, in stable markets with numerous sales and stable prices, the sales comparison approach would probably be the leading value indication.

Appraisal Case Study #1 - Mixing Transaction Data and Fundamental Data in the Income Approach

The following compares the two different methods: 1) stabilized pro forma with overall rate derived from transaction vs. 2) DCF based on a fundamental forecast.

Consider an appraisal of a 100,000 square foot shopping center in 2006 at the height of the recent speculator-driven real estate boom. The subject center was in a good location but recently lost a couple of key tenants, thus current occupancy was down to 83%. However, the market was very active. Eighteen properties that sold from 2004-05 were reviewed and other centers similar to the subject with occupancy in the 80% to 95% range had sold with very low “pro forma” cap rates in the 6% range. Most buyers in this market tell you they buy in this location on pro forma as they expect to lease up within a year or less so there is no discount for occupancy. As an example,

[12] Transaction term is synonymous with the term property sales

one retail center in this market was 70% occupied at sale and sold for a 6.35% cap rate while many 100% occupied centers were selling for about the same cap rate. Properties in this market were selling on a bid basis, meaning a prospective buyer could submit a bid, then negotiate a final price if the bid was near the top of those received. The average occupancy in this market was over 90%. The buyers felt they could get this occupancy also.

With these factors in mind, the typical valuation by "stabilized occupancy" and using a cap rate from the sales method was as follows.

ESTIMATED VALUE BY OAR - OPERATING PRO FORMA				
DATA INPUTS				
Net Rentable Area	100,000 Sq.Ft.			
REVENUE			EXPENSES	
Gross Revenue	$20.50 Per Sq.Ft.		Property Tax	$3.35 Per S.F.
NNN Reimbursements	$6.12 Per Sq.Ft.		Insurance	$0.17 Per S.F.
Vacancy & Credit Loss	10% of Gross Income		C.A.M.	$2.60 Per S.F.
			Management	5.00% of EGI
			Reserves	$0.25 Per S.F.
			Misc.	$0.05 Per S.F.
DATA ANALYSIS				
Revenue				
Gross Rent Revenue	$2,050,000			
Add: NNN Reimbursement	$612,000			
Potential Gross Income	$2,662,000			
Less Vacancy & Credit Loss	$266,200			
Effective Gross Income	$2,395,800			
Less Operating Expenses		% of EGI		
Property Tax	$335,000	14.0%		
Insurance	$17,000	0.7%		
C.A.M.	$260,000	10.9%		
Management	$119,790	5.0%		
Reserves	$25,000	1.0%		
Miscellaneous	$5,000	0.2%		
Total Expenses	$761,790	31.8%		
Net Operating Income	$1,634,010			
Value at 6.5% Cap Rate	$25,138,615			

A fundamental study of this market found that other developers knew this was a good location and were building or planning to build more product in the market. The transaction market even used this common knowledge as a marketing tool to claim that this was such a good investment market as evidenced by the large demand based on

all the recent building activity. The implication, as told by the buy/sell brokers, is the buyer of the subject could expect to resell in a few years at a profit in such an active market.

However, the fundamentals showed that there was not enough buying power in this market for so many shopping centers and that the subject could not compete as well as some of the newer properties with better locations and anchors coming into this market. In fact, the subject would be lucky to have 80% occupancy in a few years. Thus, the value by the fundamental method was $17,800,000 (rounded), about $7.3M less than the sales comparison by cap rate method.

The following shows the DCF fundamental method based on the appraiser's Market/Marketability study forecast of the subject potential occupancy and rents.

Shopping Center - by DCF Analysis of Fundamental Forecast of Subject - Mid Range Forecast

DATA INPUT					
	INCOME			OCCUPANCY	
Est. Market Leases/With Reimb.CAM\SF->			$ 26.62		
	Year	Rent Increase	Future Rent	Year	Occup.
Wt. Avg. Leases->	2006	3%	$ 27.42	2006	83%
Wt. Avg. Leases->	2007	3%	$ 28.24	2007	83%
Wt. Avg. Leases->	2008	3%	$ 29.09	2008	83%
Wt. Avg. Leases->	2009	3%	$ 29.96	2009	80%
Wt. Avg. Leases->	2010	3%	$ 30.86	2010	80%
Wt. Avg. Leases->	2011	3%	$ 31.79	2011	80%
Wt. Avg. Leases->	2012	3%	$ 32.74	2012	80%
Wt. Avg. Leases->	2013	3%	$ 33.72	2013	80%
Wt. Avg. Leases->	2014	3%	$ 34.73	2014	80%
Wt. Avg. Leases->	2015	3%	$ 35.78	2015	80%

EXPENSES - Same as previous Cap Rate Method and increasing at 3% per year for inflation

FINANCIAL	Low	Mid	High
Discount Rates->	9.50%	10.00%	10.50%
Terminal Cap Rate	9.00%		
Selling Expenses	3.00%		

Case Study #1 (continued) - Fundamental DCF Method

DCF ANALYSIS	1	2	3	9	10
Year->	2006	2007	2008…..	……2014	2015
Potential Gross Income					
Total Inc. Rent +CAM	$2,741,860	$ 2,824,116	$2,908,839	$ 3,473,306	$ 3,577,505
Less Vacancy	466,116	480,100	494,503	694,661	715,501
Eff. Gross Income	$2,275,744	$ 2,344,016	$2,414,337	$ 2,778,645	$ 2,862,004
Less Expenses					
Mgt./Misc	$ 113,787	$ 117,201	$ 120,717	$ 138,932	$ 143,100
Reimb./CAM	$ 635,510	$ 654,575	$ 674,213	$ 805,045	$ 829,196
Total Expenses	$ 749,297	$ 771,776	$ 794,929	$ 943,977	$ 972,297
Net Opr. Income	$1,526,447	$ 1,572,240	$1,619,407	$ 1,834,668	$ 1,889,708
Plus Reversion					$ 20,366,850
Less Tenant\Capital	$ 25,750	$ 26,523	$ 27,318	$ 32,619	$ 33,598
Total Cash Flow	$1,500,697	$ 1,545,718	$1,592,089	$ 1,802,048	$ 22,222,959

Present Value @->	10.00%	$17,844,640

Case Study #1 - Cap Rate Versus Fundamental Income Approach – The Reconciliation

The reconciliation of these indicated values depends on the assignment question of the client. If the question is, “What is the expected transaction price today?”, then the value is probably around $25M, but if the question is, “What is the underlying value of this property?” It is probably around $17.8M.

In comparing the results of the sales cap rate method to the fundamental DCF method, a typical reaction is- the discount rate and/or the future occupancy of the DCF did not reflect the buyer’s perception; and if it had, then the DCF would have about the same value as the sales cap rate method. From the sales comparison point of view this may be true, but the property fundamentals point of view indicates that the underlying value also can be reflected by the fundamental DCF method, which is based on fundamental forecasts and discount rates derived independent of the transaction market.

Reconciliation of Shopping Center Case Study Value Indications

The traditional dilemma is that many times we cannot agree about which method – sales or fundamentals – yields market value. Perhaps the value could be derived from both. If the appraiser's job is to analyze the real estate and not make decisions for clients, then the appraiser could simply show both methods.

Regardless, the purpose of this article is not to debate the discount rate or to decide if appraisers should put the buyer's forecast or the appraiser's market/marketability study forecast in the DCF. The message of this article is to consider the implications that might occur when the DCF is being mixed with data from the buy/sell market and the appraiser's forecast. Both methodologies have a place and can be used. The key seems to be understanding the differences in the transaction data and the fundamental data and the bearing of each on the value conclusion.

Case Study #1 Post Script

Cap rates in this market have increased about 2% points. If the previous pro-forma net income is capitalized at 9% then the value is back to fundamental value. (NOI pro forma $1,634,010/ .09=$18,155,667). If the pro forma is adjusted to a realistic average occupancy (about 80%) then the value would be in the $15M range. The fundamental value inputs would not significantly change and the fundamental value in 2009 is about the same as in 2006. However, between 2006 and 2009, the buy/sell market dropped at least 30%. This is consistent with activity in this market in late 2009. This also shows that the buy/sell market overreacts both up and down as now the buy/sell market is below this property's fundamental value.

Appraisal Case Study #2 - Using Sales as Evidence of Fundamental Demand - Value Implications

Another example of a problem created by mixing the transaction (sales) market and fundamental market data is using only sales as the basis of the value conclusions. Appraisers may inadvertently accept that because there are recent sales of land to users who build, for example, convenience stores, it must be financially feasible to build a similar convenience store on the adjacent subject property, so therefore that is the value of the land.

In a relatively stable market of buy/sell (transactions) and fundamental factors (i.e., steady demographic growth) this conclusion of more convenience store demand may be correct. However, in a market with the transactions market or fundamental markets out of balance, the demand for more convenience stores may not be indicated by the transaction market.

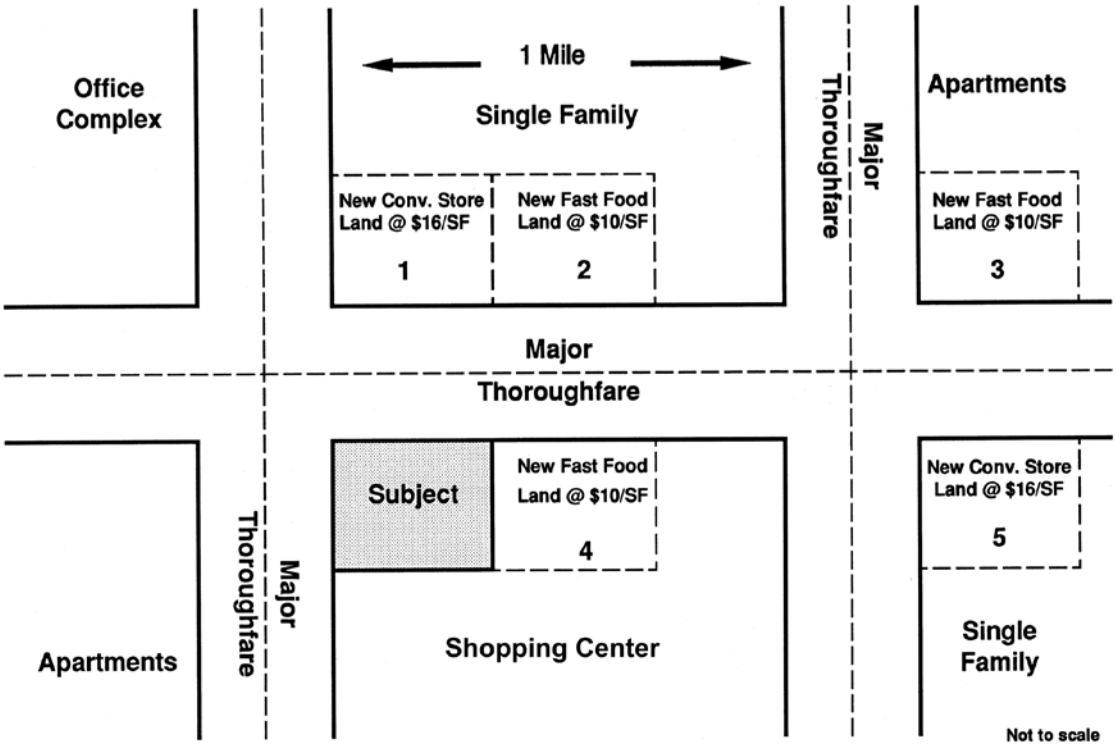
For example, if the transaction market is in some type of bubble, the buyer/developer may be motivated by other factors than fundamentals, such as unique financing times (as seen in the 2006 period) or have a client that has to "get money into real estate now and this is the only way." On the other hand, there may not be a bubble market but fundamental demand may show this market is oversupplied. The last sale of a convenience store satisfies demand in this market and now it is not financially feasible to build any more convenience stores.

This latter situation was found in an appraisal some years back of a vacant, one-acre pad site on the corner of two major thoroughfares.[13] The subject pad site was part of a grocery anchored shopping center and the assignment was to find the market value of the vacant one acre pad site.

Within six months prior to the appraisal date, three pad sites sold across the street: one for a 7-11 convenience store, another for a Pizza Hut, and one adjacent for a Kentucky Fried Chicken. The convenience stores consistently sold for about $16 per square foot and the fast food for about $10 per square foot. The following graphic shows the location of the sales and their sales prices.

This shows all the typical qualities of a clear-cut appraisal. All of the sales were recent and were similar in size, zoning, utilities, curb cuts, location etc.; that is, they were alike in all ways except some were on a corner and some were not. The sale to users can be an indicator of more demand for this use so without further study the subject highest and best use is concluded as convenience store and its value is $16 per square foot.

[13] Stephen F. Fanning, Market Analysis of Real Estate, (Chicago: Appraisal Institute, 2005) 399-402



However, sales to users can also be an indicator of oversupply, with the last sale satisfying near-term demand for this type of real estate product at this location for some time. The over or under supply question usually cannot be answered by just looking at the transaction market activity. Some fundamental analysis is needed.

In this case, the Highest and Best Use conclusion by fundamental analysis was convenience stores were oversupplied while fast food was not. Thus, the value was $10 per square foot. It turned out an Applebee's restaurant was built on the subject site and paid just under $10 per square foot. This shows the appraiser's dilemma of using sales transactions as indicators of fundamental demand and how the two can sometimes be at odds with each other.

Appraising in Markets with No Sales

Fundamental methods of valuation become a necessity in markets with few transactions.

For example, in 2006 the average household in California spent 53% of income on housing. When the bubble burst there were very few house sales and many people said value of these houses could not be determined. It is more difficult, but it isn't impossible to value houses in such a market.

One fundamental method to consider is to take the average household income in a neighborhood and utilize the proven criteria of 27% can be spent on housing. The maximum loan amount is added to a standard down payment and the result is the average house price in that neighborhood. Each individual house can be adjusted from that.

Likewise, with commercial property the fundamental approach becomes the guiding approach and then the cost approach and sales are adjusted off the results of the fundamental value. There are various methods that could be used[14] but the most explicit method is a discounted cash flow based on a Level C market/marketability study. This method estimates what an investor could afford to pay for the property based on the current market economics and the most likely user's ability to pay for that use. Richard Ratcliff called this the simulation method[15] - use of the income approach to simulate what a buyer and seller would most likely pay for this property in the current market. Grissom/Diaz[16] called this "The Behavioral Approach". This article calls it the fundamental value approach, but all are different labels for a method that finds an appraiser looking at "feasibility and market analysis, forecasting, and the estimation of normal occupancy levels, effective demand, competition, reasonable projection periods and rates of capture and absorption."[17]

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[14] Examples in Appraisal Journal Articles:
- Terry V.Grissom, MAI, PhD & Julian Diaz III, Phd. ,"Valuation without Comparables: *The Appraisal Journal* (July 1991), pg. 370-376
- Judy Baumgarten, " Market Value When There is No Market", *The Appraisal Journal (*October 1978), pg. 79-80
- Bruce R. Weber, Market Value Without A Market" *The Appraisal Journal* (October 1990) pg. 523-532)

[15] Richard U. Ratacliff, *Valuation for Real Estate Decisions* (Santa Cruz, Calif: Democrat Press, 1972) pg. 79-83

[16] Terry V.Grissom, MAI, PhD & Julian Diaz III, Phd., "Valuation Without Comparables: *Appraisal Journal* (July 1991), pg. 370-376

[17] Ibid, pg. 372

Consider the previous case studies in this article, but now assume they are in a down market.

The first case study had numerous sales and building activity but that all stopped in 2009. Lending stopped, sales stopped and the planned projects did not come on line. This had an interesting effect; the rents went down because of income loss of the retail customers in the trade area. The lack of capital, however, for new construction was a positive for future absorption prospects as no new competition was expected for many years. Also, this market continued to grow in population in spite of the economic downturn. Thus, even though rents decreased about 15%, future occupancy prospects were higher than the previous high market cycle of 2006 because of lack of new competition and growing customer base. The result of the fundamental value of the shopping center was about 10% to 15% lower according to the fundamental value method. This was in contrast to expectations of local brokers and experts that indicated if the property sold in this down market it would have to be discounted up to 40%.

The second case study was a land appraisal. Assume now all the sales were three years old. The current market is like the 2009 market with no current sales transactions. In that case the three year old sales would have to be adjusted down for market conditions. Say the fundamental study found it to be three more years until new demand for fast food and eight more years until a new convenience store would be needed. Based on a 15% discount rate, the present value of the case study ($10 per square foot fast food and $16 per square foot convenience store) user sales would be $6.58 per square foot for fast food and $5.25 per square foot for convenience store. Thus, the value by fundamental value method would be about $5.25 to $6.50 (rounded) per square foot. The value by this fundamental approach would then need to be reconciled with the market transaction approach, which means adjusting old sales, conducting broker interviews, and other similar techniques that might be used to gauge the potential transaction prices in a down market.

Appraisal Methods and the Two Market Implications

Right or wrong, appraisers are criticized for providing appraisals based solely on the buy/sell market data. Usually this is what the client requests in the assignment, but that is seldom remembered when extreme market cycles reverse themselves. We hear, for example, that appraisers only tell clients what the market value was last year.

There could be many solutions to this problem but perhaps one is to start with making sure the clients know when they are asking for value based only on market analysis of the transaction market (i.e. buy/sell market) and when they are asking for value based on the market/marketability analysis of the fundamental market and when they are asking for both.

Another solution might be for appraisers to *disconnect* these two market segments in the appraisal analysis and then connect them as appropriate in the final value reconciliation analysis. The disconnect would be to make the three approaches more independent and consequently give a good base for the reconciliation.

The Income Approach would be based on fundamental (users) demand for space - i.e,. what the users of the real estate can afford over time. This income valuation method would not use cap rates from sales (remember we want to disconnect and cap rates are a sales unit of comparison which will be used in the sales comparison section). Thus, we would use some type of yield capitalization such as DCF with the income forecast based on data of market/marketability fundamentals - not what buyers and sellers are forecasting, but based on the appraiser's interpretation of the market fundamental data. Discount rates could be based on data such as historical real estate yield spread to treasury bills, or alternative investments, or variations of the old lender cap rate method of NOI/Coverage Ratio, etc.

The sales comparison approach would be just that - sales comparison. It would try to reflect what those types of properties are selling for at that point in time, whether in a bubble market or in a greatly depressed market. The appraiser could include the cap rate approach here.

Alternatively, put the cap rate method in its own section if the income pro forma[18] is the appraiser's forecast; then the cap rate approach could be considered a hybrid between the sales comparison and fundamental income approaches. This would depend on how the cap rate is generated and how the income forecast is made. If the cap rate is unadjusted for occupancy and adjusted only for consistency in expenses then this is a straight ratio of the sales and is a pure sales comparison approach. However, if the income occupancy of sales and subject or adjusted by the appraiser based on his/her forecast of the subject and sales then it is a more hybrid approach of the sale/income methods.

The last approach, cost approach, is treated as always for land value - sales comparison and physical and functional obsolescence, but external obsolescence (or benefit) presents a problem. Keeping the approaches separate requires that depreciation from sales, or depreciation from capitalizing lost income cannot be used. One solution is to exclude external obsolescence, and the cost approach then becomes an analytical tool. For example, this type of value by cost approach without external obsolescence could be considered the value of the property in a stable market with a property competitive equally with all other properties. This will give a good analytical base to compare the results of the other two approaches in reconciliation. Another variation might be to make the cost approach part of the income section analysis by applying the capitalized income loss method of depreciation.

[18] Many appraisers pro forma comps for cap rates then pro forma subject to apply cap rates. These pro forma are the appraiser's forecast for the comparables and the subject and thus is a form of fundamental analysis since the income pro forma is the appraiser's forecast of their view of the future market for the comps and subject. Note this is not necessarily a recommended method but is a method observed as practiced by many appraisers.

Reconciliation Becomes the Capstone to the Appraisal

If the three approaches are separated into independent valuation techniques, the reconciliation becomes the appraiser's instrument to reconnect the three approaches. In a stable market the buy/sell and fundamental market value by the three approaches should be similar. In relatively stable markets this is usually not hard to achieve, but in unstable markets (high or low extremes) the three approaches can have very different conclusions if they are analyzed independently of one another. The appraiser then becomes an analyst for the client instead of just a comp researcher. The appraiser can conclude his/her opinion of which of the alternative values he/she considers to be market value, but the three approach method also gives the clients (the ultimate decision makers) information to make their own informed decision. As a by product, the three approach method explains the apparent contradiction of varying value indications - which is no contradiction at all - it is just simply two different markets at work –the transaction (buy/sell) market and the underlying fundamental (user markets).

Conclusions: Concepts of Two Market Data In Appraisals

The problem is that in real estate two market segments are vacillating with, at times, some interaction with each other and then at other times independent of each other. When the data overlaps or are not correctly recognized and/or analyzed, the value conclusions can be uncertain. The solution may be to not just pick one type of data to utilize in valuation - like transaction only or fundamental data only - but to know when to use data from each market segment, when to mix the data, when not to mix the data, and when to use the two different market segments to check results from the others.

Dr. Graaskamp may have said it best: "Appraisers would do well to always remember that real property prices are simply a reflection of the market's optimism or pessimism (aka greed or fear) of the future. Prices do not always, and more likely rarely, coincide with the value of the underlying asset."[19]

[19] This quote was found in notes of one of the authors of this article - with reference to Graaskamp but no source. Regardless, whether or not Graaskamp said this, we consider it a true and significant statement to the point of this article.