

## ABSTRACT

**In the current private and institutional real estate equity fund environment, periodic reporting of investment returns is both prudent and mandatory. This performance data is particularly important to pension and retirement plan investors in various open-end funds. Since participants (investors) are permitted to enter or exit open-end funds on a periodic basis, the interest(s) purchased or sold must be based on appropriate asset values effective at the transaction date. To increase accuracy, the valuation approach must facilitate the timely recognition of development/entrepreneurial profit achieved on a proportionate basis as the project progresses through the construction and occupancy stabilization process. This article explores some of the technical approaches to address this issue.**

# Timely Recognition of Development Profit: A Fair Value Perspective

*by Brent A. Palmer and D. Richard Wincott, MAI*

**I**n the current private and institutional real estate equity fund environment, periodic reporting of investment returns is both prudent and mandatory. This performance data is particularly important to pension and retirement plan investors in various open- and closed-end funds as well as single-client accounts. Also, Real Estate Information Standards (REIS) require that fund advisors report income and appreciation/depreciation return results on a quarterly basis; however, many funds now require that these returns be reported on a monthly or daily basis. Irrespective of the defined (or practiced) reporting frequency during a specified holding period for individual property investments, the measure of asset appreciation or depreciation is inextricably dependent upon the valuation or “mark-to-market” process.

For properties undergoing development, both the appraisal and reporting processes can prove difficult as many of the underpinnings of traditional valuation analysis are nonexistent. Few, if any, sales of comparable projects transacted mid-construction exist from which meaningful market value indications can be derived. As a result of this lack of relevant and applicable market data, a frequently employed approach used to quantifiably measure value tended to be based on the total investment dollars expended from land acquisition through the date of valuation. At present, current valuation practices vary significantly, with some advisors valuing development assets at the cumulative cost of construction until the structure is physically complete or a predetermined occupancy level is achieved. Once a designated threshold is obtained, the property is appraised and only then will any gain or loss be recognized. As a result, simply reporting aggregated construction costs as value tends to understate actual asset value, and waiting until an appraisal is obtained following project completion and/or stabilization will not recognize the profit (or loss) achieved during development and initial leasing.

Since participants (investors) are permitted to enter or exit open-end funds on a periodic basis, the interest(s) purchased or sold must be based on appropriate asset values effective at the transaction date. To increase accuracy, another valuation approach or methodology that facilitates the timely recognition

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of development/entrepreneurial profit achieved on a proportionate basis—as the project progresses through the construction and occupancy stabilization process—will be proposed.

## Overview

The focal purpose of this article is to: identify and discuss a number of issues or factors that frequently impact property value during development; recognize the primary risk factors affecting valuations of in-process construction; stimulate thought regarding the valuation process whereby appraisers and fund advisors are able to more appropriately and accurately reflect the periodic value of assets under development; and, supplement the position paper co-written by the same authors and adopted by the Board of Directors of the National Council of Real Estate Fiduciaries in 2005.<sup>1</sup>

While no single analytic or metric is currently and commonly employed to address the myriad issues involved, the need for accurate valuation and reporting of realized development or entrepreneurial profit during the development process remains critically important. The following are included to explain and illustrate appropriate integration of these essential concepts in the valuation process: (1) descriptions of key development risk factors (primary risk factors) together with clarifying analytical perspectives; (2) overview of magnitude and duration of each risk factor (development risk profile and graphs); and, (3) illustrative case studies. **Please note that the case-studies presented, together with attendant analytics, are intended to demonstrate various approaches to improve valuation accuracy and should not be construed as singularly approved or prescribed methodologies.**

## Primary Risk Factors

### 1. Entitlement Risk

- Risk of obtaining appropriate land entitlements, environmental assessments, construction permits, and possibly zoning variances. (This factor is event-driven and normally recognized as either zero or 100 percent completed.)

### 2. Construction Risk

- Materials pricing—risk that the cost of materials may change significantly from the original

construction budget. (Typically, the use of guaranteed maximum price contracts is used to mitigate this risk; however, cost changes, enhancements, etc., can result in unmitigated risk needing to be addressed in the analysis.)

- Scheduling—risk that planned construction completion could be prolonged due to weather delays, labor disputes, material delivery delays, etc. (Scheduled development timelines are helpful although the percentage of construction completion is frequently used as the percentage of risk mitigated as of the valuation date.)
- Contingency—risk of cost overruns, change orders, unexpected delays, or other unanticipated issues arise that impact final completion cost. (As contingency cost budgets can be monitored and adjusted positively or negatively based on construction progress, risk mitigation for this item is measured similar to other construction factors; however, accuracy requires diligent monitoring.)

## 3. Leasing/Sales Risk

- Risk that forecasted absorption (leasing or unit sales) volume will not be realized. (Use of independent appraisal preleasing assumptions as well as actual preleasing activity at the project is utilized in the determination of both total risk as well as ongoing risk mitigation in this category.)
- Risk that early termination clauses would be invoked or that the property becomes encumbered by a long-term lease with below-market rent escalation provisions (frequency and/or amount of increase).
- Risk of market-driven restructures of leasing or sales commission rates.
- Sustainability risk—tenants and market participants may demand LEED certification status at a level greater than that attributable to the current project, thereby impacting rents, leasing velocity, tenant retention, etc. (While judgment is required for this factor, a thorough understanding of sustainability practices and resulting recognition, such as varying levels of LEED certification, is essential to ascertain the degree of risk and return associated with this characteristic.)

1. "Timely Recognition of Entrepreneurial Profit (or Loss) for Development Assets," position paper adopted by the Valuation Committee and Board of Directors of the National Council of Real Estate Fiduciaries, November 15, 2005.

#### 4. Operating Expense Risk

- Risk of a significant change in one or more fixed or variable expense categories such as insurance, electricity, real estate taxes, etc. (Active monitoring of market and operating expense trends and project budgets is needed to assess risk yet to be mitigated.)

#### 5. Credit Risk

- Risk that prelease tenants and/or tenant industry segments are negatively impacted during development. (Public investment ratings and other informational metrics are available to assist with this risk factor measurement and mitigation.)

#### 6. Partnership Risk (if applicable)

- Risk that accompanies any ownership interest comprising less than 100 percent due to myriad factors regarding control, revenue distributions, etc. (A review of disposition control, buy-sell agreements, rights regarding material asset-related decisions, strength of partner financial statements, development capabilities, and experience, etc., are essential.)

#### 7. Capital Market Risk

- Interest rates—risk of significant change(s) in interest rates during the development period that could affect both the cost of construction and owner or purchaser ability to obtain suitable long-term financing. (Trend analysis of leverage availability and pricing; identification of alternatives for various elements of the capital stack; and, determination of accretive financing solutions is imperative. Existing financing commitments at fixed interest rates would be assessed and mitigated differently than uncovered construction or permanent financing; however, many funds are not dependent on leverage for development assets and their risk factors may be analyzed differently.)
- Alternative investment risk—risk that investor allocations or rates of return for alternative investments will change, resulting in shifts in equity availability as well as capitalization and discount rates.
- Sustainability risk—risk that market participants demand LEED certification levels greater than that attributable to the project under development, thereby resulting in

“sustainability obsolescence” perceived by investors (and tenants).

#### 8. Pricing Risk

- Supply risk—risk that unanticipated competitive supply will impact the market before space absorption is achieved, resulting in short-, mid-, or long-term concessions, occupancy delays, pricing reductions, etc. (Ongoing monitoring of market supply and demand characteristics is essential and best accommodated through thorough market analysis contained in quarterly valuations.)
- Real estate cycle issues—risk that rental rates may be negatively affected by changes in market supply/demand dynamics as well as economic or other financial sector issues.

#### 9. Event Risk

- Risk of a material physical, economic or other event occurring that significantly impacts asset operations and value. Weather, discovery of previously unknown environmental contamination, exodus of major employment providers, material capital market changes, and terrorism comprise a sampling of such events. (While not a frequent occurrence, this risk must be evaluated and shown as mitigated when appropriate.)

#### 10. Valuation Risk

- Risk that a lack of applicable, current market data exists to accurately value the subject property. (Although this risk is not meaningful on a typical basis for general-purpose, institutional quality assets, dramatic market shifts resulting in a paucity of transactions may cause difficulty in the valuation process, thereby impacting accuracy and risk. For example, the recent recession resulted in a significant data shortage as well as similar asset sales price disparity that impacted valuation accuracy.)
- Risk that a lack of competency exists with the appraiser engaged to specifically address issues of property type, geography, valuation analytics, market research, etc. (This is easily mitigated through careful qualification, selection and engagement of appraisers and valuation consultants.)

As described, a number of risk factors can be fully or partially mitigated by contractual agreement (materials pricing and precommitted construction “take-out” financing), insurance (unknown contamination covered by environmental insurance, acts of terrorism and weather), etc.; however, many risks require ongoing assessment and analysis to accurately monitor how and when mitigation will be achieved during development.

### **Development Risk Profile**

Primary risk factors can also be divided into subcategories that reflect various aspects of a particular development. In addition, each of the factors will vary from project to project depending on the geographic, market (supply and demand), political and physical forces involved. Therefore, the risk profile for a particular project is unique and has a critical impact on the recognition of profitability, depending on the relative “magnitude” and “duration” of each risk factor.

The “magnitude” of each risk factor is relational and can similarly change from project to project as well as market to market. For example, entitlement risk can vary significantly, as evidenced by the arduous and lengthy process of obtaining land and project entitlements in cities such as Boston or Los Angeles—as opposed to other municipalities with less stringent approval requirements. As a result, the overall development risk profile should reflect these differences with an additional increment of development profit being added to compensate for the effort required. This premise is consistent with the fact that the value differential between land with and without entitlements in Los Angeles or Boston is markedly greater than in Houston. Construction risk will also vary depending upon labor characteristics, weather, materials availability and pricing, etc. Project delivery, relative to the current real estate market cycle, can also impact the magnitude of risk factors.

“Duration” of each risk factor and its influence also impacts recognition of development profit. Certain risk factors can diminish or remain constant over the course of development. Entitlement risk, for example, ceases its impact on uncertainty once approvals are received. Other factors, such as construction risk and leasing/sales risk, diminish in duration as each task is completed.

There are also certain risk factors that appropriately fall into the Yogi Berra category of “it ain’t over ‘til it’s over”; and, some risk factors such

as partnership risk and operating expense risk may continue after the development phase is concluded. Factors such as leasing/sales risk are not completely mitigated until the lease is executed or the unit sale is closed. Even hard-money, presale contracts for condominiums can contain an element of risk until final closing. This important issue results in the following question that must be addressed: “If the property will be sold prior to completion of construction, is the remaining development profit in the project sufficient to attract potential purchasers?”

Figures 1 and 2 present pictorials of the overall risk recognition, measurement, and mitigation process. The case studies that follow further illustrate how risk factors can vary by project, real estate type, and existing as well as changing market conditions (both positive and negative).

### **Property Type Risk Profiles**

Risk factors vary based not only on locational attributes, but the magnitude of increase or decrease is dependent upon property type as well. For example, construction risk is more significant for office properties than it is for industrial or multifamily residential assets, largely due to the more complex and complicated HVAC systems, elevators, significant tenant improvement obligations, and parking facilities. As a result, the construction component is more capital intensive and requires a prolonged delivery or construction completion cycle.

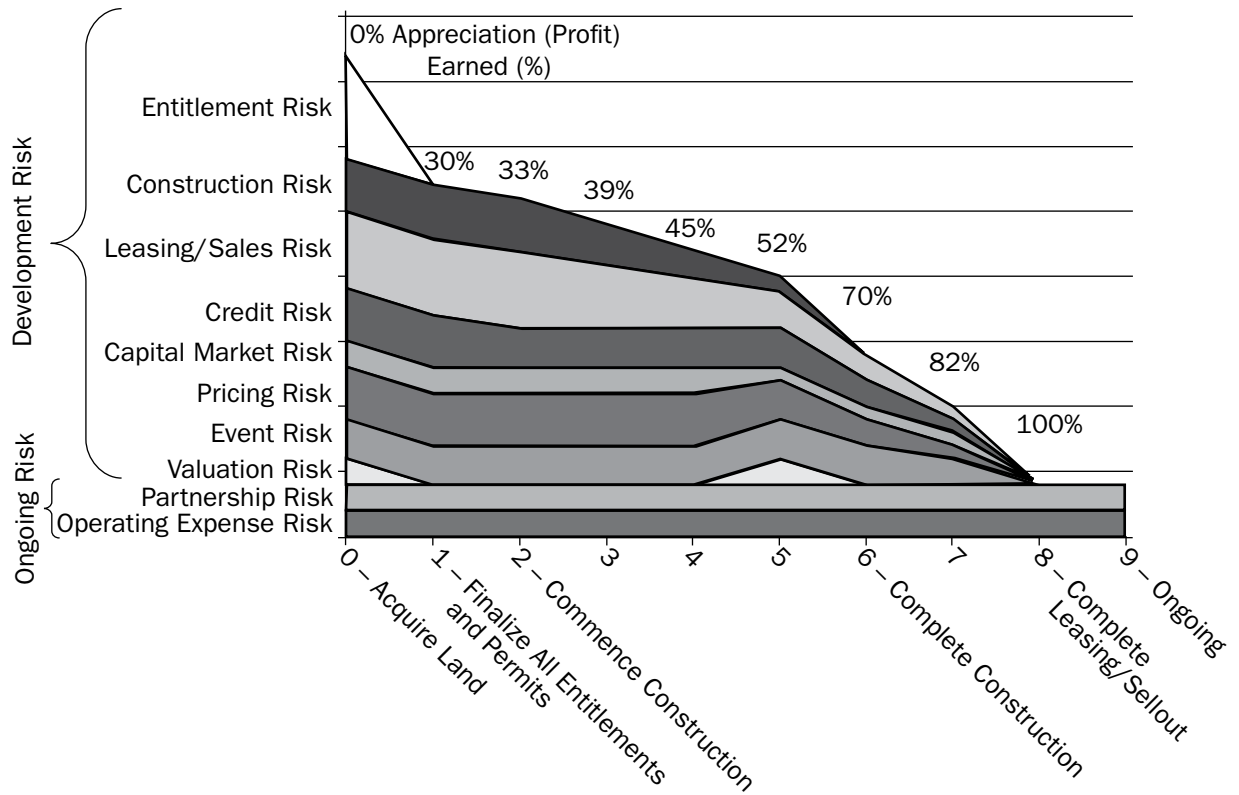
In addition, leasing risk is more pronounced for office and multi-housing developments simply because of the number of individual tenants required versus larger-scale industrial distribution properties or big-box retail assets.

### **Office Building Case Study**

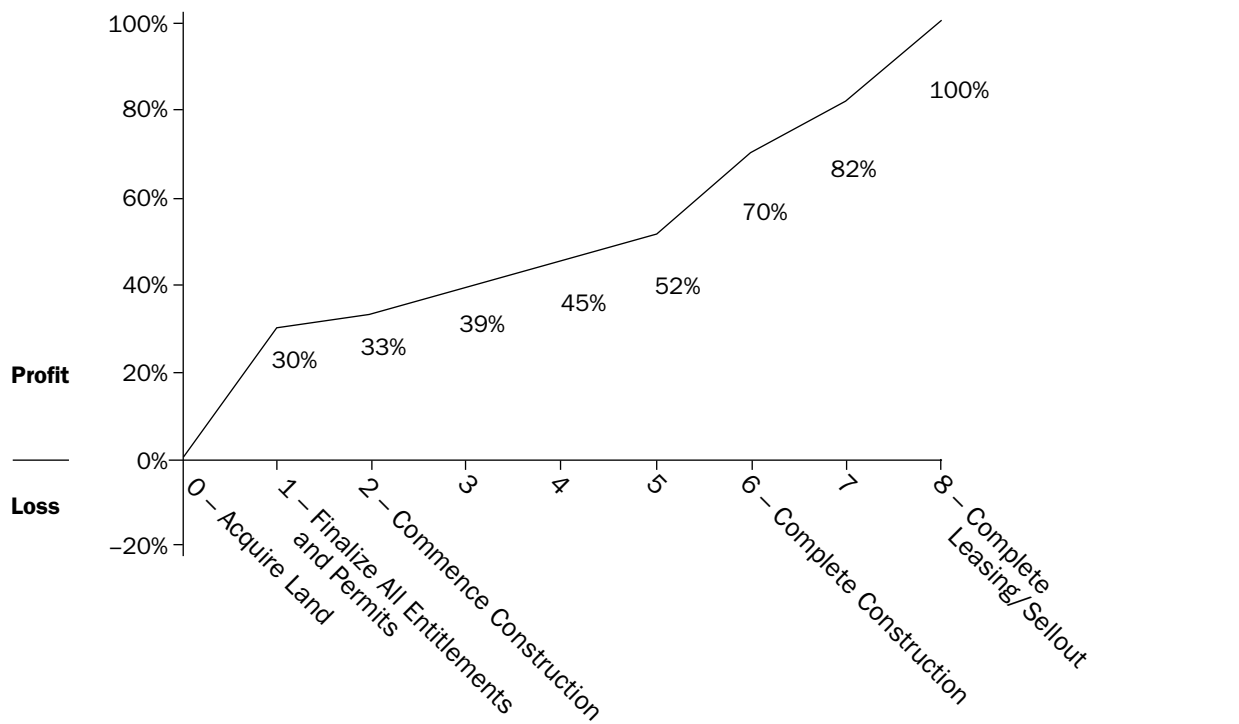
The purpose of this case study is to demonstrate the progression of value creation during the development process not only from the expenditure of capital, but also from recognition of value created from the entrepreneurial effort required during the development process. It is not meant to present a definitive methodology for completing the valuation process, but rather a sample of how to approach the issue when periodic valuations are required in an institutional investment environment for assets under construction.

The case study example is a proposed office building in Smallville, USA. As discussed in the body

**Figure 1 Risk Profile**



**Figure 2 Cumulative Development Profit**



of this article, the weighting of risk factors will differ between property types and locations. Basic case study assumptions are as follows.

### Timing

The example illustrates the entire development process from vacant land acquisition through sale of the finished asset upon achieving stabilized occupancy. The analysis is presented in quarterly increments similar to reporting requirements of the typical open-end, comingled real estate fund (Figure 3). To demonstrate the dynamics of the development

process, there are three significant dates pertinent to the case study:

- Development Begin Date                      Quarter 0
- Completion of Construction                Quarter 5
- Stabilized Occupancy and  
  Asset Sale    Quarter 7

### Asset Details

Figures 4, 5, and 6 summarize the asset level detail and market assumptions utilized in the initial Case Study.

**Figure 3 Development Risk Profile**

Milestones	Quarterly Begin	Quarterly End
Acquire Land	0	0
Entitlement Process	0	2
Construction Period	2	5
Fixed-Price Contract	yes	
Leasing	4	7

**Figure 4 Property Statistics: Office Building**

			% of Total
Building NRA*	100,000 SF		
Land Acquisition Cost		\$4,000,000	17.32%
Development Costs			
Hard Costs	\$170	\$17,000,000	73.62%
Indirect Costs			
Permit Costs	1.00%	\$170,000	
Legal Fees	2.00%	\$340,000	
Leasing Commissions	6.00%	\$900,000	
G & A	2.00%	\$340,000	
Marketing	2.00%	\$340,000	
Total Indirect Costs		\$2,090,000	9.05%
Total Development Costs		\$23,090,000	100.00%

\* NRA - net rentable area.



### Figure 5 Market Assumptions

Market Cap Rate	7.00%
Development IRR	20.00%
As Completed IRR	9.00%
Market Rent	\$30.00 per SF or NRA
Average Lease Term	5 years
Stabilized Vacancy & Credit Loss	7.00%
Expenses	\$8.50 per SF or NRA
Expense Reimbursement	Gross
Management Fee	4.00%

### Figure 6 Value at Completion

Operating Statement	
Potential Rental Revenue	\$3,000,000
Expense Reimbursements	—
Potential Gross Revenue	\$3,000,000
Vacancy & Credit Loss	\$210,000
Effective Gross Revenue	\$2,790,000
Expenses	\$850,000
NOI	\$1,940,000
$R_o$	7.00%
Property Value at Completion	\$27,714,286
Rounded	\$27,000,000
per SF of NRA	\$277.00

### Risk Mitigation

Figure 7 presents various risk factors and the relative weight of each in this particular development scenario. It is important to note that throughout the development cycle, the current status of risk factors must be evaluated for each reporting period. Changes in the planned status of any applicable risk factor can impact the current risk profile and therefore influence the current period value estimate. The relative degree of risk for each factor is weighted on a scale from one to ten, decreasing as the impact diminishes.

As the analysis progresses through the seven-quarter development period, various risk factors are mitigated until eventually the property has reached stabilization. Figure 8 presents a pictorial

demonstration of diminishing risk factors over the development cycle.

### Profit Recognition

Based on development pro forma assumptions, the nominal target profit is \$4,610,000 (see Figure 9).

There are various methodologies for recognizing incremental profit earned during the development cycle. Traditionally, profit was back-end loaded upon project completion or achieving specific thresholds such as consummation of construction or attaining a certain occupancy level. The methodology utilized herein relates the amount of profit earned to the corresponding amount of risk that has been mitigated during the development process. This is appropriately measured by one of two methods currently in use: (1) adjusting the periodic discount rate in the development model that is applied to the remaining cash flows until the hypothetical sale of the asset upon completion of construction; or (2) calculating the pro rata share of development profit attributable to each factor that is “earned” as the risk is mitigated through the construction cycle. The selection of an acceptable method is typically based on complexity of asset type as well as quality and quantity of data available in the marketplace.

### Method One—Base Case

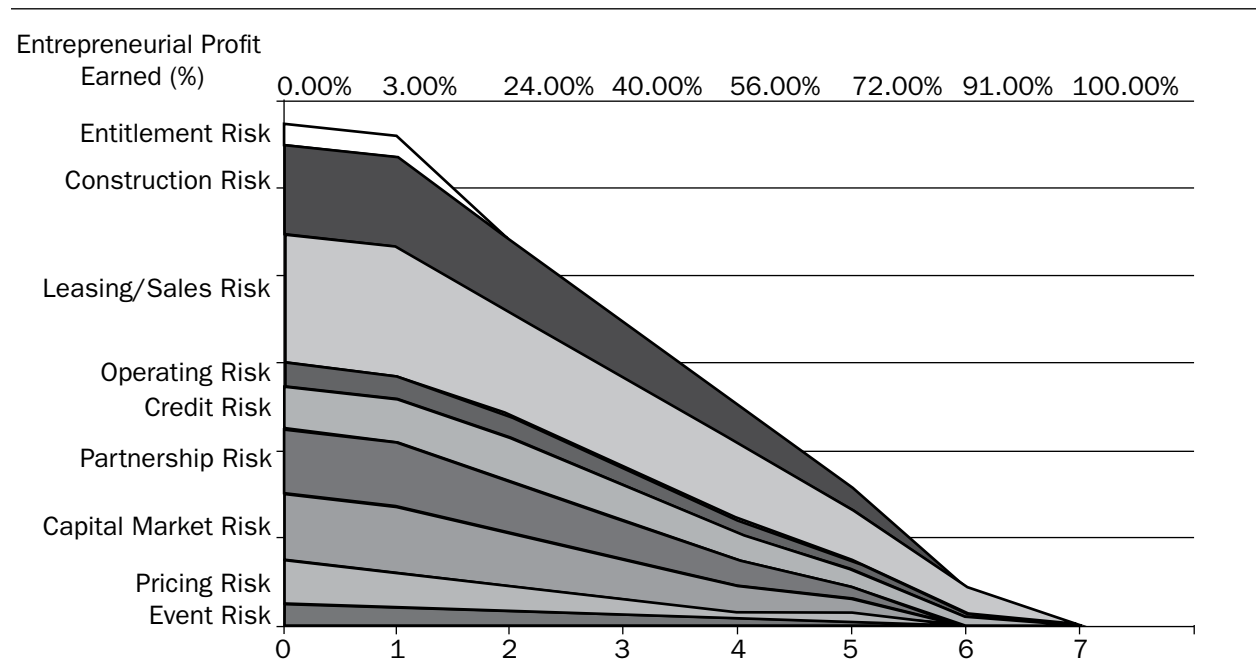
In this example, the target development internal rate of return is 20 percent. Over the development period, as various risk factors are mitigated, the inferred discount rate decreases until construction is completed. At that point the appropriate discount rate would be the market discount rate for similar improved properties. For this sample case study, we have utilized an “at completion” property discount rate of 9 percent. Figure 10 presents the periodic discount rate adjustment based on the risk mitigation profile presented earlier.

Figure 11 presents a detailed cash flow analysis of the development project and resulting periodic accumulation of development profit. Figure 11 further demonstrates the correlation between the amount of risk mitigated and recognition of profit. Note that in this example, construction is completed in the fifth quarter of the development cycle, but since leasing risk is not mitigated until the seventh quarter, it is inappropriate to recognize all of the profit at completion of construction. In addition, as the asset will be 60 percent pre-leased at the time of

**Figure 7 Risk Factor Weighting**

	Relative Weight	Development Period (Quarterly)							
		0	1	2	3	4	5	6	7
<b>Primary Risk Factors</b>									
Entitlement Risk	5.00%	10	10	0	0	0	0	0	0
Remediation Risk	0.00%	0	0	0	0	0	0	0	0
Construction Risk	20.00%	10	10	8	6	4	2	0	0
Leasing/Sales Risk	30.00%	10	10	8	7	6	4	2	0
Percent Released			0%	20%	30%	40%	60%	80%	100%
Credit Risk	10.00%	10	10	10	8	6	4	2	0
Operating Risk	5.00%	10	10	10	8	6	4	2	0
Partnership Risk	0.00%	0	0	0	0	0	0	0	0
Capital Market Risk	15.00%	10	10	8	6	4	2	0	0
Pricing Risk	10.00%	10	8	6	4	2	2	0	0
Event Risk	5.00%	10	8	6	4	2	2	0	0
Weighting	100.00%								

**Figure 8 Development Risk Profile**





**Figure 9 Estimated Profit**

Value at Completion	\$27,700,000	
Total Development Costs	\$23,090,000	
Estimated Gross Development Profit	\$4,610,000	19.97%

certificate of occupancy, cash flows must also take into consideration the buildup of NOI until the point of stabilization and theoretical sale of the asset.

### Periodic Valuation Example

The main purpose of this article is to demonstrate how increments of profit earned during the development cycle need to be reflected in the fair value estimate for periodic reporting. To further illustrate this premise we have chosen a hypothetical date of value at the end of the third quarter of the development. Based on the analysis as outlined, approximately 40 percent of the developmental risk has been mitigated at that time with total cost of the project to date of \$13,148,000. The appropriate risk adjusted discount rate has declined from the original 20 percent to 15.60 percent, which is applied to the remaining periods four through seven, indicating a current value of \$15,232,318 (\$15,200,000 rounded). Therefore the total recognized development/entrepreneurial profit as of the date of valuation is \$2,084,318 (see Figure 12).

### Method One—Alternative Case

The preceding case study illustrates a successful, feasible development where anticipated entrepreneurial profit is achieved as initially anticipated. However, negative market or asset conditions introduced mid-development may cause a corresponding change in the risk profile, resulting in a potentially

material reduction in available development profit on a gross or net present value basis.

If, for example, during the third quarter of development an unanticipated competing office project with superior access, design characteristics, and lead credit tenant is announced in the subject's competitive market area, the assumptions utilized in the previous example will require re-examination. Given the probable degradation of demand for the subject property, absorption as well as market leasing risk will be similarly impacted.

In addition to the announcement and pending groundbreaking of this new competing office development, also assume that market demand conditions are now forecast to deteriorate during the fourth quarter of the construction schedule, due to a just-disclosed loss of a major employer in the area. This news is expected to reduce demand, with market rents anticipated to decline another 20 to 30 percent. As a result, the subject is adversely affected by both an extended lease-up period as well as the expectation of achieving rents significantly below initial projections and preleasing activity. Figure 13 illustrates the impact of these risk profile changes.

As the title of this article indicates, appropriate recognition of earned profit is critical to the periodic valuation process, but not every development results in profit. The purpose of the alternative case study is to further demonstrate market conditions can arise that necessitate increments of profit previously realized be reduced and depreciation (loss of profit taken) be recognized. This concept is captured in Figures 13 and 14, where the hypothetical events in the third and fourth quarters attributable to the alternative case demonstrate how the impact of the increased risk results in development profit declines of 13 percent of the previously recognized profit over the subsequent two quarters.

**Figure 10 Discount Rate Adjustment**

	Development Period							
	0	1	2	3	4	5	6	7
Discount Rate Analysis:								
Percent of Risk Remaining at End of Period	100.00%	97.00%	76.00%	60.00%	44.00%	28.00%	9.00%	0.00%
Target Discount Rates	20.00%							9.00%
Risk Rated Discount Rate	<b>20.00%</b>	<b>19.67%</b>	<b>17.36%</b>	<b>15.60%</b>	<b>13.84%</b>	<b>12.08%</b>	<b>9.99%</b>	<b>9.00%</b>

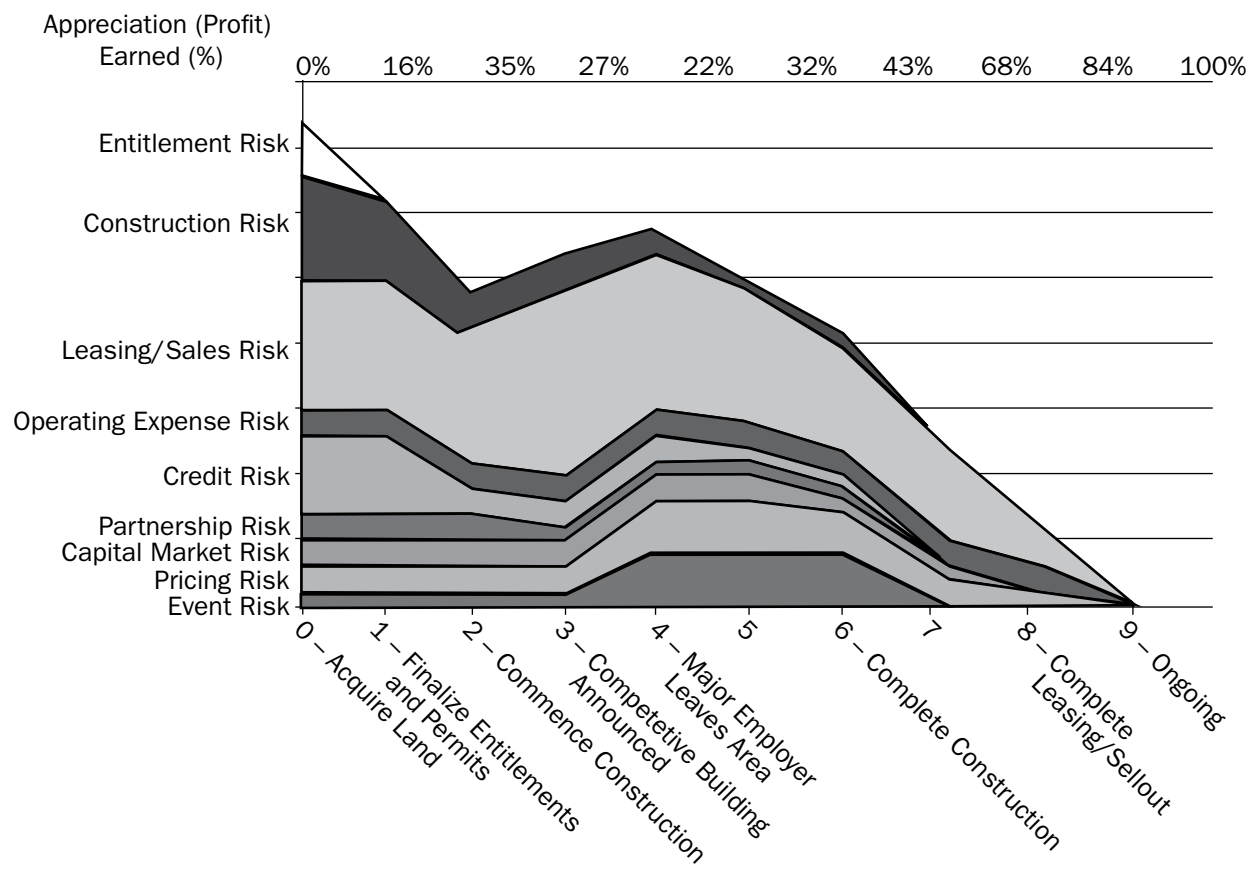
**Figure 11 Property Cash Flow Analysis: Office Building**

Development Milestones	Development Period (Quarterly)								
	0	1	2	3	4	5	6	7	
	Acquire Land 3/31/2012	6/30/2012	9/30/2012	12/31/2012	3/31/2013	6/30/2013	9/30/2013	12/31/2013	Asset Sale
<b>Development Costs</b>									
Land Acquisition	4,000,000	(4,000,000)							
Hard Costs	17,000,000		(4,250,000)	(4,250,000)	(4,250,000)	(4,250,000)			
Permit Costs	170,000	(100,000)				(70,000)			
Legal Fees	340,000	(140,000)				(120,000)	(40,000)	(40,000)	
Leasing Commissions	900,000					(540,000)	(180,000)	(180,000)	
G&A	340,000	(68,000)	(68,000)	(68,000)	(68,000)	(68,000)			
Marketing	340,000	(68,000)	(68,000)	(68,000)	(68,000)	(68,000)			
<b>Total Development Costs</b>	23,090,000	(4,000,000)	(376,000)	(4,386,000)	(4,386,000)	(5,116,000)	(220,000)	(220,000)	
Property Operating Cash Flow									
Net Cash Flows	(4,000,000)	(376,000)	(4,386,000)	(4,386,000)	(4,386,000)	(5,116,000)	171,400	315,400	27,700,000
Total Gross Cash Flow	5,536,800								
<b>Discount Rate Analysis:</b>									
Percent of Risk Remaining at End of Period	100.00%	97.00%	76.00%	60.00%	44.00%	28.00%	9.00%	0.00%	
Target Discount Rates									
Risk Adjusted Discount Rate	20.00%	19.67%	17.36%	15.60%	13.84%	12.08%	9.99%	9.00%	
Project IRR									
Present Value Analysis									
Estimated Market Value Per Period	4,295,912	4,954,320	10,062,424	15,232,318	20,512,826	26,563,325	27,332,764	27,700,000	
Cost to date	4,000,000	4,376,000	8,762,000	13,148,000	17,534,000	22,650,000	22,870,000	23,090,000	
Profit to date	295,912	578,320	1,300,424	2,084,318	2,978,826	3,913,325	4,462,764	4,610,000	
Incremental Profit Added	295,912	282,408	722,103	783,895	894,508	934,499	549,440	147,236	
Percent of Development Profit Earned	0.00%	3.00%	24.00%	40.00%	56.00%	72.00%	91.00%	100.00%	
Target Profit	4,610,000								
Percent of Target Profit Earned	6.42%	12.54%	28.21%	45.21%	64.62%	84.89%	96.81%	100.00%	

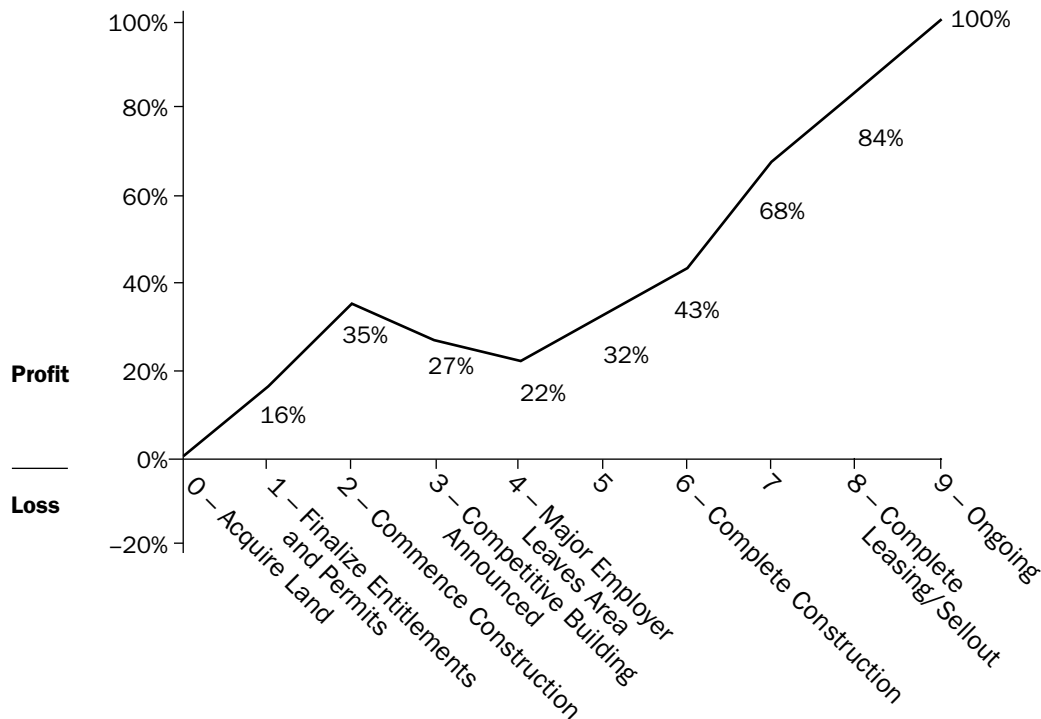
**Figure 12 Periodic Value Example**

<b>Current Period</b>	<b>3</b>
<b>Present Value Analysis</b>	
Indicated Discount Rate	15.60%
Estimated Quarter End Market Value	\$15,232,318
<b>Cost to Date</b>	<b>\$13,148,000</b>
<b>Realized Profit to Date</b>	<b>\$2,084,318</b>
<b>Percent of Development Profit Earned</b>	<b>40.00%</b>
<b>Percent of Target Profit Earned</b>	<b>45.21%</b>

**Figure 13 Development Risk Profile**



**Figure 14 Cumulative Development Profit**



### **Method Two—Base Case**

This approach also focuses on the profit available during construction, as measured by the difference between development cost and value “at completion.” The profit, calculated at \$4,610,000 in the preceding case study, is allocated on a dollar basis between each applicable risk factor, as highlighted in Figures 15 and 16. To further clarify, as risk is mitigated for each component, the dollar amount of profit allocated is “earned” and recognized as appreciation during the applicable quarter, thereby ensuring appropriate adjustment of value during the development period preceding construction completion.

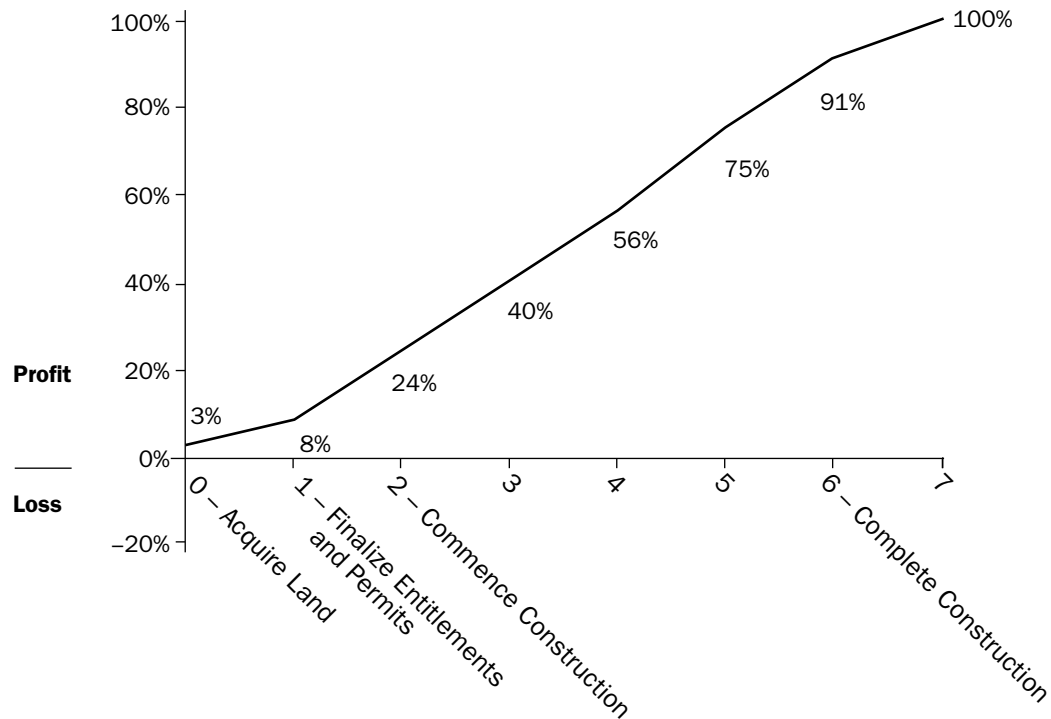
### **Method Two—Alternative Case**

Similar to method one, immediate recognition of the impact of deteriorating market conditions is easily accommodated by reversing profit earned, consistent with base case Figures 15 and 16.

**Figure 15 Development Profit Recognition Schedule**

Risk Factor	Relative Weight	Profit Available (Allocated)	Development Period (Quarterly)									
			0	1	2	3	4	5	6	7		
Entitlement	5.00%	\$230,500	\$115,250	\$115,250	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Construction	20.00%	\$922,000	\$0	\$0	\$184,400	\$184,400	\$184,400	\$184,400	\$184,400	\$184,400	\$184,400	\$0
Leasing/Sales	30.00%	\$1,383,000	\$0	\$0	\$276,600	\$138,300	\$138,300	\$138,300	\$276,600	\$276,600	\$276,600	\$276,600
Credit	10.00%	\$461,000	\$0	\$0	\$0	\$92,200	\$92,200	\$92,200	\$92,200	\$92,200	\$92,200	\$92,200
Capital Markets	15.00%	\$691,500	\$0	\$0	\$138,300	\$138,300	\$138,300	\$138,300	\$138,300	\$138,300	\$138,300	\$0
Pricing	10.00%	\$461,000	\$0	\$92,200	\$92,200	\$92,200	\$92,200	\$92,200	\$92,200	\$92,200	\$0	\$0
Event	5.00%	\$230,500	\$0	\$46,100	\$46,100	\$46,100	\$46,100	\$46,100	\$46,100	\$46,100	\$0	\$0
Valuation	0.00%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Partnership	0.00%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Operating Expense	5.00%	\$230,500	\$0	\$0	\$0	\$46,100	\$46,100	\$46,100	\$46,100	\$46,100	\$46,100	\$46,100
Quarterly Profit "Earned"			\$115,250	\$253,550	\$737,600	\$737,600	\$737,600	\$737,600	\$875,900	\$875,900	\$737,600	\$414,900
Cumulative Profit "Earned"		\$4,610,000	\$115,250	\$368,800	\$1,106,400	\$1,844,000	\$2,581,600	\$3,457,500	\$4,195,100	\$4,195,100	\$4,610,000	\$4,610,000

**Figure 16 Cumulative Development Profit**



### Conclusions

As illustrated by the preceding case studies, appropriate analytics can be derived and applied to more accurately quantify both the amount and timing of development or entrepreneurial profit recognized and reported during the development life cycle. Integral to the methodology utilized, however, is the depth of understanding and market support regarding the magnitude and duration of key risk factors impacting the specific asset being reported. Of equal importance is the need for continuous monitoring of these risk factors throughout construction and preleasing to ensure material market and property changes (both positive

and negative) are accurately reflected, as evidenced by the “alternative” case studies.

Regardless of the specific metrics or methodologies adopted, the conceptual framework presented in this paper is critically important to accurate and timely recognition of development or entrepreneurial profit (or loss) for assets under development. Accordingly, implementation is warranted to facilitate both integrity and timeliness of value and performance reporting, with the methodology employed properly predicated on asset complexity, data availability and sound analytics.



**Brent A. Palmer, CRE, FRICS**, is executive vice president and chief valuation officer at NewTower Trust Company, Seattle, a member of Trust Real Estate Investment Committee, and executive director of NewTower Valuation Services LLC. Palmer has more than 25 years of experience in market research, feasibility analysis and valuation of real estate, infrastructure, stocks, securities and intellectual assets as well as leasing, portfolio risk, adaptive re-use, and investment consulting throughout the U.S. and Canada. Prior to joining NewTower, Palmer was national manager of Realty Advisory Services for GE Capital (BAF); senior vice president and manager of Valuation Technology at Bank of America; senior vice president and manager of Real Estate Advisory and Appraisal Services with Seafirst Bank; and senior vice president/managing director at Landauer Associates, Inc. He received his master's degree in business administration and bachelor of science degree from Brigham Young University. Palmer is vice chair of the Washington Real Estate Appraiser Commission and a member of the Board of Trustees for the Washington Center for Real Estate Research, CBE National Board of Advisors for Washington State University, Industry Advisory Council (The Appraisal Foundation), National Council of Real Estate Investment Fiduciaries (NCREIF) and Pension Real Estate Association (PREA).

**Contact: Brent\_Palmer@newtowertrust.com**

**D. Richard Wincott, MAI, CRE, FRICS**, is a senior executive vice president in Altus Group's Research, Valuation and Advisory Group, Houston. He has been actively involved in the real estate valuation and consulting profession since 1973.

In recent years, principal clients include pension funds, institutional investors, REITs and real estate operating companies. Specialized areas of expertise include property valuation, transaction support, valuation advisory/management consulting, and litigation support. His current focus is on valuation consulting for real estate fund advisors, and REITs who are reporting the fair value of their assets on an annual, quarterly, monthly or daily basis. Industry involvement has included serving as chairman of the Valuation Committee, and member of the Board of Directors and Executive Committee for the National Council of Real Estate Investment Fiduciaries (NCREIF). Prior to holding his current position with Altus, Wincott was cofounder and president, Real Estate Analysts of Houston, national director of Valuations for Laventhol and Horwath, chief appraiser of the National Real Estate Valuation Services group at Price Waterhouse, and risk assessment partner for the Real Estate Business Advisory Services group at PricewaterhouseCoopers.

He is a Fellow—Homer Hoyt Institute.

**Contact: richard.wincott@altusgroup.com**

## Web Connections

*Internet resources suggested by the Y. T. and Louise Lee Lum Library*

Appraisal Institute—Valuation for Financial Reporting

<http://www.appraisalinstitute.org/advocacy/valuation-for-financial-reporting/>

<http://appraisalinstitute.org/assets/1/7/30VFR.ppt>

National Council of Real Estate Investment Fiduciaries

—NCREIF PREA Reporting Standards

<http://www.reportingstandards.info/>

—Resources

<http://www.ncreif.org/resources.aspx>

Real Estate Information Standards (REIS)—REIS handbook

[http://www.prea.org/research/reis\\_handbook\\_vol2.pdf](http://www.prea.org/research/reis_handbook_vol2.pdf)