

Hotel Dividend Play

By Scott Smith, MAI

After another exceptional year of financial performance in, the U.S. hotel industry rests at the highest peak since the late. As occupancy levels have been maximized, growth in ADR has powered many metropolitan markets to the top with an unprecedented percent increase nationwide. The resulting percent increase in RevPar over the prior year has resulted in a continuation of increased profits and dividends to hospitality investors.

The hotel property transaction market has been aggressively priced in. Not only did the one-off and portfolio sales continue to occur in an avalanche of money from private equity funds, well-known public companies, Four Seasons and other luxury jerseys by virtue of their exit from previously unprofitable hotel industry. The focus on investors' minds is to maximize yield in a capital induced frenzy of lowered revenue growth expectations, increasing upward pressure on operating

costs, and questionable exit expectations further on the investment horizon.

Several sad stories can be written that describe the ultimate end. The last two hotel market expansions abruptly concluded with recession and either war, catastrophic event, or both. Without clear signals of a recession brewing, no ability to predict catastrophic events, and the most likely reason for declining asset prices is the lack of supply expansion. The market is expected to grow at rates exceeding what is reasonable to assume that hotels will be virtual money-making machines over the next few years. The investor should have great difficulty matching the dividend return on hotels elsewhere.

As the data from the *Hospitality Investment Surveys* show, hotel capitalization rates remain fixed at historic low levels. Due to the lateness of the cycle, buyers

of hotels in and should plan on longer holding periods and will give up IRR points due to an absence of meaningful appreciation. The near-term probability of an increase in capitalization rates certainly is low. The probability of a turnaround can be gained back plus the points given up in holding successful dividend investments. Logical investment strategies moving forward involve development where feasible and when investors can reach the risk, and efficiently operating what you acquire to maximize NOI.

While buy and hold investment strategy explicitly means not selling anytime soon, implicitly it means holding on to your money. Hotel economics 101 tells us that ADR growth dominates RevPAR growth after occupancy has reached a threshold so fewer additional guests will be chewing up expenses and hopefully all guests will pay higher room rates. But ADR-rich revenues are an elusive breed. Sometimes they take a left turn instead a turn right into invest-

(Continued on page 2)



Table 1 - Investment Trends for Hotel Real Estate

INVESTMENT CRITERIA	2007	2006	2005	2004	2003	2002	2000	1998	1996	1995	1994
Overall Capitalization Rate	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Discount Rate	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Holding Period (Years)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Debt Coverage Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest Rate	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Loan-to-Value Ratio	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Source: PKF Hospitality Research

Hospitality Investment Survey

Table 2
Hotel Investment Criteria, 2007

Investment Criteria	Average	Low	High	2006 Average
Capitalization Rates* Trailing 12 NOI				
Full-Service	0.00%	0.00%	0.00%	0.00%
Limited-Service	0.00%	0.00%	0.00%	0.00%
All Properties	0.00%			0.00%
Capitalization Rates* Next 12 Months NOI				
Full-Service	0.00%	0.00%	0.00%	0.00%
Limited-Service	0.00%	0.00%	0.00%	0.00%
All Properties	0.00%			0.00%
Terminal Capitalization*				
Full-Service	0.00%	0.00%	0.00%	0.00%
Limited-Service	0.00%	0.00%	0.00%	0.00%
All Properties	0.00%			0.00%
Internal Rate of Return / Discount Rate				
Full-Service	0.00%	0.00%	0.00%	0.00%
Limited-Service	0.00%	0.00%	0.00%	0.00%
All Properties	0.00%			0.00%
Equity Yield				
Full-Service	0.00%	0.00%	0.00%	0.00%
Limited-Service	0.00%	0.00%	0.00%	0.00%
All Properties	0.00%			0.00%
Cash-on-Cash Return				
Full-Service	0.00%	0.00%	0.00%	0.00%
Limited-Service	0.00%	0.00%	0.00%	0.00%
All Properties	0.00%			0.00%
Holding Period (years)				
Full-Service	0.00	0.00	0.00	0.00
Limited-Service	0.00	0.00	0.00	0.00
All Properties	0.00			0.00

*After fees and reserves

Source: PKF Hospitality Research

(Continued from page 1)

tors' pockets. During past expansions, money was spent elevating service levels and amenity offerings under the assumption that higher paying guests demand such increases. If they don't get them, it is assumed, they will go elsewhere. Modest and often quite innocent, renovation projects also divert current cash flow from investor coffers. Some money needs to be spent to remain competitive and conform to franchise requirements. However, in a peak persistences environment in which returns are highly dependent on operating revenues, investors need a dividend play with good blocking so no breakdowns occur under a strong rush.

Two recent articles by Robert Mandelbaum of PKF Hospital-

ity Research that appeared in *Lodging Magazine* highlight the kinds of operating perspectives needed during these all too good times. The first, published in February focuses on controlling expenses in the rooms department, the largest department in the hotel. As Mandelbaum argues, a significant percent of these expenses are variable and therefore quite manageable on a daily basis. Moreover, he notes that a rapidly growing portion of room division expenditures comes from franchise mandated gratis offerings to guests. Complimentary food and beverage items are one of those offerings that sneak into the expense category when times are good, but often without careful cost/benefit analysis. Giving away food and drinks unjustifiably compromises your dividend play!

The second article has a more macro perspective because it focuses on identifying new revenue streams. Specifically, Mandelbaum says pay attention to the costs in Other Operating Department (O&O) for income accounts of competitors' winners and losers. Since, local lawns, movie rental, and golf course revenues include parking revenues, seasonal lease rents, and health club fees. Also, with the larger numbers of well-behaved guests in hotels today new opportunities are emerging to lease space inside the property to merchants and service providers.

Survey Results

The edition of *Hospitality Investment Survey* reflects the cautious optimism of both debt and equity capital providers. With overall capitalization rates and discount rates near historic lows for this survey (which began in), property value increases may be moderating. Yet, cash flow growth keeps investors optimistic. With considerable discussion about relaxed lending standards, pay special attention to how lender underwriting changed from previous surveys.

The results of our *Hotel Investment Survey* conducted during early, presented in the accompanying tables, bear out the observations in the previous paragraphs. Especially noteworthy is the almost two-year increase in the investment holding period. This increase indicates an inclination to view hotels as longer-term dividend plays and not so much as short-term opportunistic investments. Table 1 reveals that the average capitalization rate for hotels of percent moved up approximately basis points from the all-time low (since this survey began) recorded in the survey. Discount rates, or unleveraged IRRs, for hotels moved down to %. Consequently, the huge spread between the overall capitalization rate and

Hospitality Investment Survey

Table 3 - Hotel Mortgage Terms, 2007

	<u>Average</u>	<u>Low</u>	<u>High</u>	<u>2006 Average</u>
Loan-to-Value Ratio				
Full-Service	0.00%	0.00%	0.00%	0.00%
Limited-Service	0.00%	0.00%	0.00%	0.00%
All Properties	0.00%			0.00%
Interest Rates				
Full-Service	0.00%	0.00%	0.00%	0.00%
Limited-Service	0.00%	0.00%	0.00%	0.00%
All Properties	0.00%			0.00%
Amortization Period (years)				
Full-Service	0.00	0.00	0.00	0.00
Limited-Service	0.00	0.00	0.00	0.00
All Properties	0.00			0.00
Loan Term (year of balloon)				
Full-Service	0.00	0.00	0.00	0.00
Limited-Service	0.00	0.00	0.00	0.00
All Properties	0.00			0.00
Debt Coverage Ratio				
Full-Service	0.00	0.00	0.00	0.00
Limited-Service	0.00	0.00	0.00	0.00
All Properties	0.00			0.00

Source: PKF Hospitality Research

major metropolitan or resort locations get the undivided attention of investors. Capitalization rates in the percent area must be paid for top tier properties with significant barriers to entry. For second tier assets such as mid-market full- and limited-service product, capitalization rates hover near nine percent. Third and fourth tier properties including older exterior corridor full and limited-service properties approaching the end of their economic life may be obtained at a capitalization rate over ten percent.

Hotels in both segments now offer investors' very attractive dividend returns on a relative basis, even as interest rates have elevated during the past 12 months. The cash-on-cash returns of percent almost match the mortgage rate of percent. Holding periods for both full- and limited-service hotels noticeably extended in this survey compared the survey. Lengthening of investment holding periods for real estate is an indicator of relative value. We believe the shift is more a result of a strategy among private equity firms to efficiently run them as these companies are moving in other industries.

The Hospitality Investment Survey also presents respondent responses on current mortgage terms for these two segments. These terms appear in Table 3. Differences in the full risk between full-service and limited-service hotel lending arise through higher interest rates, shorter terms, shorter amortization periods, and higher debt coverage ratios. Surprisingly given previous surveys that found better deals from lenders for full-service hotels, the sets of loan terms for full- and limited-service hotels are remarkably similar today. As discussed in the second article of this report, the usual barriers-to-entry differences between the two segments that give rise to weaker loan deals for limited-service hotel investments may have been modified by the high construction costs for all property development in recent years.

(Continued on page 4)

**Table 4
Capitalization Rates by Market Segment, 2007**

	<u>Average</u>	<u>Low</u>	<u>High</u>
Luxury Hotel	0.00%	0.00%	0.00%
Boutique Hotel	0.00%	0.00%	0.00%
Resort Hotel	0.00%	0.00%	0.00%
All Suite Hotel	0.00%	0.00%	0.00%
Extended Stay Hotel	0.00%	0.00%	0.00%
Mid-Price w/o F&B Hotel	0.00%	0.00%	0.00%
Economy/Budget Hotel	0.00%	0.00%	0.00%
Top-Tier Metro Market Hotel	0.00%	0.00%	0.00%

Source: PKF Hospitality Research

Sample Report

Hospitality Investment Survey

(Continued from page 3)

Summary

Despite the consensus that the market is in a late stage of the cycle, investors and lenders remain optimistic that hotel real estate will continue to produce favorable cash flows and property values will remain firm. This optimism continues to generate interest in hotel acquisitions. Development opportunities are becoming more prevalent but the feasibility of hotel development projects continues to be compromised by high land and construction costs. Sellers who missed previous peaks in the market or who have strategic reasons not to own hotels are motivated to take profits at this peak. Investors can still buy hotels despite lofty pricing because of the substantial cash flow or dividend opportunity that appears sustainable over the near term.

Hotel value and growth plays largely have been mitigated by the entry of many new hotel investors. The dividend play will still work, but in fewer and fewer instances as the market ripens. Spending vigilance must be maintained for this play to generate solid returns.

Scott Smith, MAI, is a Vice President in the Atlanta office of PKF Consulting. Phone (404) 842-1150, ext 233. Email: scott.smith@pkfc.com. Jack Corgel assisted in the preparation of this article.

IS HOTEL SUPPLY ABLE TO CASCADE?

by: John B. (Jack) Corgel, MAI

Economic theory tells us that conditions to supply will accelerate in response to favorable market conditions such as rising occupancy, growing Average Daily Rate (ADR), and when property prices signal profit opportunity. Theory also suggests that supply growth rates will slow down when interest rates and construction costs (including land) increase.¹ For some time, hotel market observers have expected a surge in construction activity in light of (1) the strong recovery of occupancy then ADRs since the downturn in the early 2000s and (2) capitalization rate compression. While demand increased at an annual rate of % during the past three years with no end to growth in sight, supply remained in check – moving at an annual rate of %.² Supply cannot respond immediately to demand changes, but the protracted delay of the supply response during the current cyclical phase is puzzling.

In the search for a fundamentals-based explanation, anecdotal

evidence continues to point to the high cost of creating new hotels and other property types as the limiting factor for determining how many projects enter, and eventually advance past, the planning stage.³

Replacement Costs Escalate

A unique combination of events led to the dramatic increases in both land and construction costs during recent years. These are:

- GDP growth rates in China and India (*i.e.*, greater than seven percent) pushed up raw materials prices, such as metals and cement.
 - The red hot housing market added pricing pressure on developable land, construction labor, and construction materials (*e.g.*, lumber). The limited production of the residential condominium market limited production in hotel room inventory. The shift of markets, such as New York, began to shift from hotels to residences.
- The entry of new players into the commodities markets has added a potentially large speculative component in

If developers have been constrained by abnormally high land and construction costs, many planned, and heretofore infeasible, projects may unexpectedly advance to construction if construction cost pressures subside. Thus, the number of hotel rooms under construction during may include both an *expected* component as well as a potentially large *unexpected* component. The expected component consists of projects that would be constructed if costs continued to increase at rates well above the rate of expected inflation and those projects move through the pipeline at a historically normal pace. Unexpected starts occur if construction costs grow at or below the expected rate of inflation and projects move through the pipeline at an accelerated pace. No evidence exists that hotel supply information vendors and others interpreting the data incorporate unexpected starts into their forecasts. Thus, hotel construction levels may be under-estimated if construction cost increases do not occur by as much as expected.⁴

Construction Costs Confusion!

The future directions of many key construction cost components cannot be determined with ease by examining recent data. Some components show definite signs of weakening while others continue an upward trend. Recently released agricultural land price data from the USDA, for example, indicate a percent rise in farm land prices from January 1, through January 1.⁵ While agricultural commodity price

(Continued on page 5)

Hospitality Investment Survey

(Continued from page 4)

strength largely explains the historical farm land price increase, the housing market boom has likely been an additional driving force in recent years. As the U.S. housing market softens, land prices should follow. A well-publicized Credit Suisse report on the prospects of homebuilding companies from holding land inventories states that, "We believe the most likely scenario is a return to land values, which would imply land prices fall from peak to trough (p.1)."⁶

Lumber represents a major cost of construction showing definite signs of weakness. With the housing market stumbling, lumber prices potentially could fall by as much as Credit Suisse expects for land. Construction labor wages in the U.S. also should moderate with the housing market. During the past four years, increases in the *Engineering News Record Common Labor Index* have exceeded four percent, well-above the long-run average rate of increase of approximately percent. Although conclusions cannot be reached from two quarters of data, the growth rate in the index slowed to in , and in .

The evidence appears mixed for metals. The spot price of aluminum plummeted from a peak of \$ per ton in February to

a November price of \$ per ton. Bauxite is not a scarce resource and production capacity was not fully utilized before the prices escalated. The *Financial Times* reports that China's efforts to increase utilization and capacity explain much of the recent downward price spiral.⁷ *The Economist* reports that aluminum prices transformed China from a net importer of aluminum to a net exporter as the result of expanded capacity.⁸ Further, huge capital expenditures for new production facilities in China may soon result in the same outcome for steel. Prices of many other raw materials in the metals category remain high and show no immediate signs of decline. Yet, these prices may follow the path of copper prices, which have experienced recent declines.

The Speculation Premium

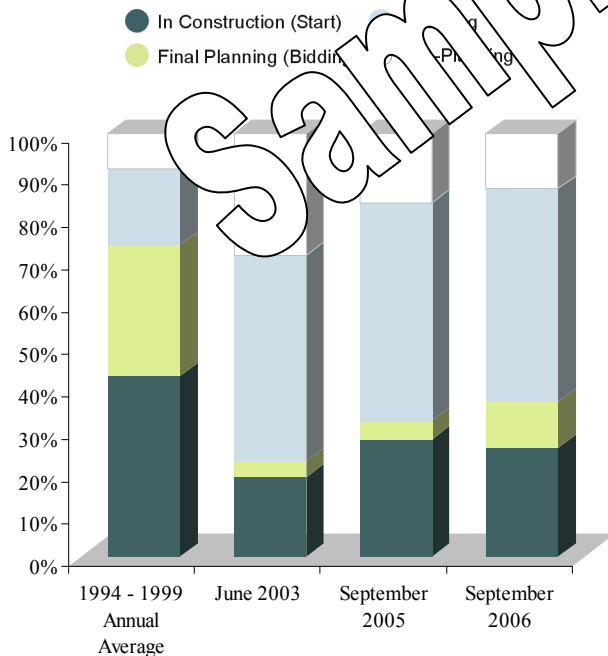
A sizeable speculation premium in commodity prices appeared over the past few years. Speculative opportunities emerged for trading in volatile commodities. In addition to fundamental reasons for commodity cost declines, pricing of basic commodities will continue to influence construction costs. The consequence of shrinking speculative premiums and securities analysts alerted investors throughout the recent period of oil and metal price escalation. When oil prices reached \$ per barrel in 2008, estimates of the speculative premium ranged from \$ to \$ per barrel. While hard evidence about the size of speculative premiums in construction-related commodities is not readily available, logic suggests that active trading in these commodities and their derivatives, as in the oil and gas cases, is responsible in no trivial way for rising prices in metals and other commodities. As the levels and volatility of these commodities moderate, whatever speculative premium that existed will evaporate, thus contributing to the trend toward lower construction costs.

Hotel Supply -The Big Bulge!

The data assembled by Smith Travel Research, Torto Wheaton Research, F.W. Dodge (STR/TWR/Dodge Construction Pipeline) and Lodging Econometrics (Development Pipeline) isolate new supply, not by dollar investment, but instead by number of projects and number of rooms advancing through the various stages of property development. Both vendors report increases in pipeline activity. The swelling of the hotel pipeline does not, however, appear to have materialized into a sizeable increase in hotel starts. Pipeline expansion during primarily occurred as Pre-planned and Planned (including Final Planning) projects. The apparent disparity between the Census data and the data from pipeline vendors suggests either of two alternatives – (1) the Census data are picking up substantial growth in renovation expenditures or (2) the Cen-

(Continued on page 6)

Exhibit 1
STR / TWR / Dodge Construction Pipeline



Source: Exhibit 1 in Mark S. Coleman and Ralph Gentile. 2001. "Exploring the Dynamics of Building Supply: A Duration Model of the Development Cycle," *Journal of Real Estate Research* 21 (Nos. 1 and 2):21-42.

Hospitality Investment Survey

(Continued from page 5)

Can we somehow measure new construction spending ahead of pipeline vendors.

Learning from History

Assuming that the vendor data are temporally accurate, we now proceed to examine the recent growth of the pipeline as reported by STR/TWR/Dodge. Exhibit 1 shows the distribution of hotel development projects at three points in time: June, September, and September. These distributions are benchmarked against the distribution in Coleman and Gentile (2001) from their study of comparable Dodge data.¹⁰

Historical Patterns

During the benchmark period, the hotel development pipeline bulged at the end of the development cycle. At that point, over percent of the projects resided either in the Final Planning or In Construction stages and only percent were in the Planning stage. Interestingly, projects moved quickly through the pipeline during the benchmark period, often skipping over the Planning stage. The bulge in the pipeline shifted decidedly toward the beginning of the development cycle by June. At that time, nearly percent of the projects were classified as in Final Planning or Planning stages. Recently (*i.e.*, September), the pipeline of Planned Projects alone account for about percent of the development pipeline.

Why has the hotel development pipeline become so bloated during the 2000s? Further research and analysis may lead to an answer regarding the underlying cause – will the large number of projects currently in the Planning stage soon appear in a cascade of new supply? The thesis put forward in this report is that the bloated Planning stage of the pipeline and absence of construction activity derive from the high cost of development. If high construction costs are largely responsible

for the large number of projects accumulated at the Planning stage, then lower construction costs could unexpectedly release projects to the In Construction stage. To lend further insight about this unexpected component of future supply growth, several empirical issues must be addressed – the most important of which is the historical cost elasticity of supply.

The *cost elasticity of supply* is defined as the percent change in supply (*i.e.*, rooms available) divided by the percent change in construction costs typically evaluated at the mean over a long period of time. We are most interested in the new supply component of changes in rooms available together with overall measures of development cost which includes land and soft costs in addition to hard costs (mainly labor and materials). Also, the supply elasticity must be econometrically estimated from a supply equation specifying controls for ADR and asset price effects. The econometric work done with income property data has not addressed the topic of cost elasticity.¹¹ The issue has probably occurred because construction costs have been relatively stable until recently.

Turning to the housing economics literature to find studies that provide guidance about the magnitude of cost elasticity of supply, Somerville (1999) reviews this literature and statistically corrects for problems that led to previous estimation inconsistencies.¹² His results indicate a huge cost elasticity of starts on the order of negative 12. This means that a one percent change in construction cost results in a 12 percent change in housing starts. If the true cost elasticity for hotel properties is near what Somerville estimates for houses, then a solution has emerged to the hotel supply puzzle. Specifically, why supply has so sluggishly responded to ADR growth with asset price firmness and why the Planning stage of the hotel development pipeline has become bloated.

The large presumed supply elasticity gives support to the proposition that an abnormally large number of construction

Sample Report

Exhibit 2 - Forecasts of Hotel Room Growth with Assumed Cost Reduction

Year/Forecast	Elasticity Projection	STR/TWR/Dodge - Net Supply Additions		Lodging Econometrics - Room Construction	
		Number of Rooms	% Growth	Number of Rooms	% Growth
2007 (Vendor)	-				
2007	R1 (5% /Elasticity=6)				
2007	R2 (10% /Elasticity=6)				
2008 (Vendor)	-				
2008	R1 (5% /Elasticity=6)				
2008	R2 (10% /Elasticity=6)				

Sources: Smith Travel Research, Lodging Econometrics, PKF-HR

Hospitality Investment Survey

projects have been held back by abnormally high construction costs. Elasticity typically works in both directions. If costs decline, we should expect a surge in construction projects. If we conservatively assume that the cost elasticity of supply, defined here as projects that move into the Construction stage, equals one half the Somerville estimate for houses (i.e., six), then even a five percent reduction in costs would induce a percent increase in construction projects.

How Much New Construction Might There Be?

Exhibit 2 presents the forecasts of hotel room construction during from the two hotel supply data vendors. Also shown are revised forecasts (i.e., R1 and R2) assuming percent and percent declines in development costs during each year and a constant cost elasticity for hotels equaling six. The differences between the vendor forecasts and the revised forecasts represent the unexpected component of room construction. The revised numbers reflect upward adjustments, respectively. The revised forecasts indicate that hotel construction could escalate to levels (rounded) between and rooms in and to more than rooms in. To lend perspective to these estimates, the level of hotel construction activity in the decade of the 's peaked at units.

Conclusion

The conditions facing hotel developers are moving in a favorable direction. China now needs the materials needed to fuel its economy. Oil prices continue to fall, and commodity prices are down more than a year ago. The conditions show up as price reductions for some materials. We cannot predict the price levels of these materials, but we can, however, estimate the impact that construction cost decreases would have on hotel starts should these decreases occur. Hotel starts resulting from falling construction costs constitute an unexpected component of hotel supply forecasts.

In this article, we rely on evidence regarding transitional probabilities from stage-to-stage in the development pipeline and assumed cost elasticity of supply to estimate unexpected hotel supply growth. Should construction costs decline by five to ten percent, the potential exists for the supply growth to exceed demand growth during the next two years. However if these costs are to increase, we will see even more congestion in the supply pipeline. Due to the large number of hotel projects in the Planning stage, the speed with which projects can move through the pipeline once they become feasible, and the presumed sensitivity of supply change to construction cost movements, we recommend that investors closely watch how the prices of land, labor, and materials behave.

John B. Corgel, Senior Advisor to PKF Hospitality Research and the Robert C. Baker Professor of Real Estate, Cornell University School of Hotel Administration. Assisted by Aaron Walls, Research Analyst, PKF Hospitality Research

Footnotes

¹William Wheaton, and Laurence Rossoff. 1998. "The Cyclic Behavior of the U.S. Lodging Industry." *Real Estate Economics* 26(1): 67-82. The model includes a capitalization rate to represent property prices and also interest rate levels.

²PKF Hospitality Research and Torto Wheaton Research. 2007. *Hotel Outlook* (Spring).

³For example see, Art Gering. 2006. "On the Mend: Less Room at the Inn." *Real Estate Portfolio* (June): 44-45. Sibley Flemming. 2006.

"Hotel Investors Celebrate Lower Construction Costs," *Hotel & Motel Management*, September 1, and "Hotel & Motel Management: Hotel Owners Concerned About Construction Costs," *Hotel & Motel Management*, June 19, 2006.

⁴The Associated Builders and Contractors of America, for example, forecast construction starts to increase between 6 percent and 8 percent in 2007. See "Construction Starts to Increase in 2007," *National Real Estate Builders Association*, August 2006. Forecasts are available for 2008.

⁵U.S. Department of Agriculture. 2006. *U.S. Department of Agriculture*, August.

⁶Ivy Zelman, et. al. *Wonder-Land*. 2006. Credit Suisse Equity Research, October 3.

⁷Kevin Morrison, "Falling Alumina Prices Brings Benefits," 2006. *Financial Times*, November 8.

⁸"From Accelerator to Break," 2006. *The Economist*, November 3.

⁹See, for example, Jad Mouawad and Heather Timmons. 2006, "Trading Frenzy Adding to Rise in Price of Oil," *New York Times*, April 29, and Goldman Sachs, 2004, *Natural Gas Weekly*, December 10.

¹⁰Mark S. Coleman and Ralph Gentile. 2001. "Exploring the Dynamics of Building Supply: A Duration Model of the Development Cycle," *Journal of Real Estate Research* 21 (Nos. 1 and 2):21-42. They report the distribution during this time period from counts of how many times projects moved through the various stages.

¹¹For hotels, see William Wheaton, and Laurence Rossoff. 1998. "The Cyclic Behavior of the U.S. Lodging Industry." *Real Estate Economics* 26(1): 67-82. Also, see the review of office market empirical studies in John F. McDonald. 2002. "A Survey of Econometric Models of Office Markets," *Journal of Real Estate Literature* 10 (No. 2): 223-242.

¹²C. Tsuruel Somerville. 1999. "Residential Construction Costs and the Supply of New Housing: Endogeneity and Bias in Construction Cost Indexes," *Journal of Real Estate Finance and Economics* 18:43-62.

Sample Report

Hospitality Investment Survey



Atlanta
Contact: R. Mark Woodworth
mark.woodworth@pkfc.com
Contact: Scott Smith
scott.smith@pkfc.com

Boston
Contact: Reed Woodworth
reed.woodworth@pkfc.com

Bozeman
Contact: Christopher Kraus
chris.kraus@pkfc.com

Dallas
Contact: Gregory C. Crown
greg.crown@pkfc.com

Houston
Contact: John M. Keeling
john.keeling@pkfc.com

Indianapolis
Contact: Mark D. Eble
mark.eble@pkfc.com

Los Angeles
Contact: Bruce Baltin
bruce.baltin@pkfc.com
Contact: Jeff Lugg
jeff.lugg@pkfc.com

New York
Contact: John F. ...
john.f...@pkfc.com

Philadelphia
Contact: David E. Arnold
dave.arnold@pkfc.com

San Francisco
Contact: Thomas E. Callahan
thomas.callahan@pkfc.com

Washington, D.C.
Contact: Walter C. Williams
walt.williams@pkfc.com



Dallas
Contact: Hank Wolpert
hank.wolpert@pkfc.com

Houston
Contact: John M. Keeling
john.keeling@pkfc.com

Indianapolis
Contact: Mark D. Eble
mark.eble@pkfc.com

Irvine
Contact: Bob Kaplan
bob.kaplan@pkfc.com

San Francisco
Contact: ...
...@pkfc.com

Seattle
Contact: Chris Burdett
chris.burdett@pkfc.com



Atlanta
Contact: Mark Woodworth
mark.woodworth@pkfc.com

Sample Report

Visit our Web Site at www.pkfc.com

Hospitality Investment Survey is compiled and produced by **PKF Consulting** and **PKF Hospitality Research**. Readers are advised that neither PKF Consulting nor PKF Hospitality Research represents the data contained herein to be definitive. Neither should the contents of this publication be construed as recommendation on policies or actions. Quotation is permitted with credit to PKF Consulting and PKF Hospitality Research. Please address inquiries to the Editor, Hospitality Investment Survey, 3475 Lenox Road, Suite 720, Atlanta, GA 30326. Phone: (866) 842-8754.

Price: \$195