

# Oil Prices and Lodging Risk

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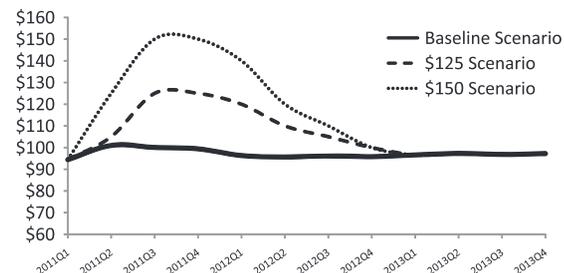
With the lodging industry recovery in full swing and strong tailwinds leading to much optimism among economists, there are still headwinds that could derail progress to recovery and send the industry back into the red. At PKF Hospitality Research (PKF-HR), we believe that oil prices could have a profound impact on future revenue and should be on everyone's radar when making plans.

Our research shows a direct economic relationship between oil prices and the U.S. lodging industry. The U.S. economy is highly dependent on a steady supply of affordable oil. When the price of oil increases beyond normal levels, the difference reduces individual consumers' and businesses' spending power, which in turn has a negative multiplying effect throughout the macro economy. Since the U.S. lodging industry depends on the health of the macro economy to sell its products, oil prices should be a serious concern for hotel managers, investors, and developers. In describing the microeconomic effect of oil prices, Moody's Analytics states:

The most visible channel through which higher crude oil prices affect the U.S. economy is higher transportation costs. An increase in crude oil prices raises the price of gasoline and diesel and also the cost of heating oil and propane, which are used by households in the Northeast and Midwest to stay warm during the winter. When petroleum prices rise, consumers have less money to spend on other goods or services, save, or pay down debt. Every \$1 increase in the price of crude oil raises gasoline prices by 2.2 cents per gallon and costs consumers about \$3 billion over the course of a year.

The Hotel Horizons<sup>®</sup> econometric demand model relies on economic data from Moody's Analytics to project future hotel demand levels. The following possibilities have the potential to keep oil prices at uncomfortably high levels: the continued threat of political instability in oil-producing nations, potential supply constraints driven by conflict, and further increased demand from developing nations emerging from the global recession. Moody's Analytics created two economic forecasts around a hypothetical future where oil prices increase to either a high of \$125 or \$150 by the

**Exhibit 1:**  
Oil price scenarios



Note: Chart 1 shows a baseline case of oil at \$98 per barrel (bottom line), which assumed resolution of the Libyan conflict. The middle line is an alternative scenario assuming \$125 oil due to reduced production from an escalation of violence in the region. The top line assumes \$150 oil for the same reasons. Source: Moody's Analytics

fourth quarter of 2011. While Moody's highlights the low probability of these oil spike scenarios, it is prudent to plan for unfortunate events. The baseline scenario (i.e., \$98 per barrel for 2011) reflects Moody's modeled fundamental price of oil (\$93.53) coupled with premium of about \$5 to account for the supply uncertainty. This baseline scenario assumed the Libyan conflict would be resolved over the course of the year. In the alternative scenarios presented, the catalyst for oil price increases is an escalation of violence in the Middle East and North Africa. In these scenarios, a reduction in global crude oil production, coupled with widespread angst about the sustainability of oil production in the region, caused oil prices to sharply increase in the second quarter of 2011 (to \$125 or \$150) and remain at that level until the end of the year. Exhibit 1 displays the oil assumptions in each of the three scenarios, and Exhibits 2a and 2b

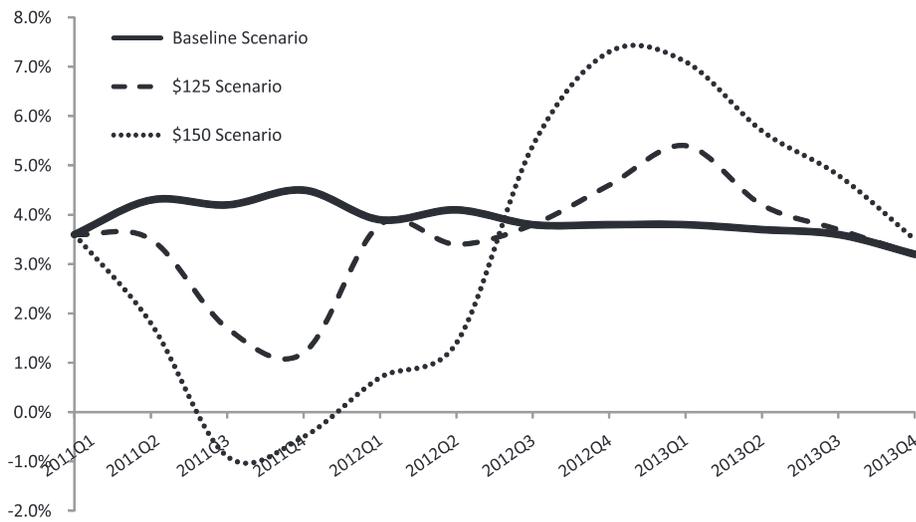
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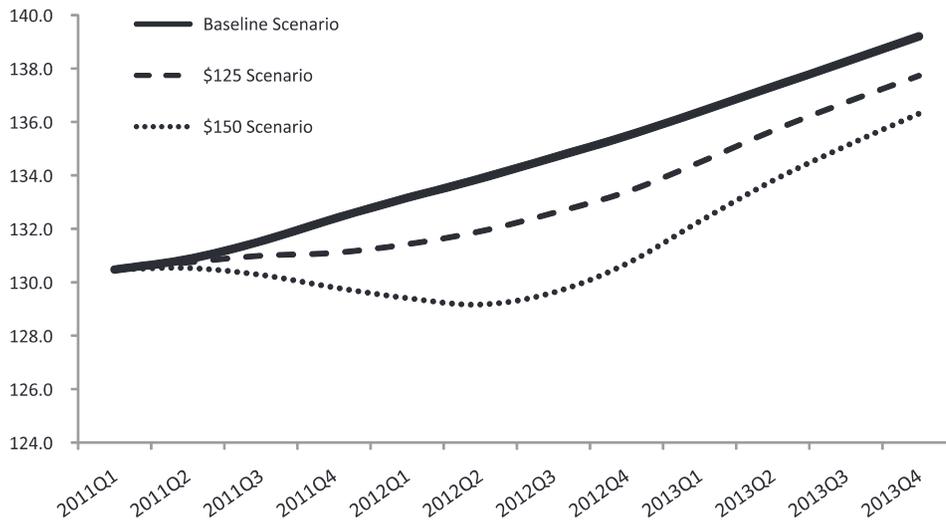
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**Exhibit 2a:**  
GDP with various oil price scenarios



Note: Chart 2a shows the effect of three possible oil price levels on U.S. GDP. The relatively steady line in the center shows the baseline case of oil at \$98. Source: Moody's Analytics.

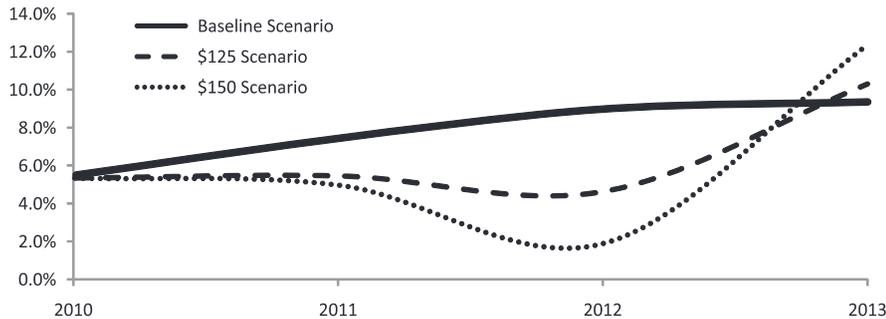
**Exhibit 2b:**  
Employment levels with various oil price scenarios (millions of jobs)



Note: Chart 2b shows the effect of three possible oil price levels on U.S. employment levels. The top line shows the baseline case of oil at \$98. Source: Moody's Analytics.

**Exhibit 3:**

Annual change in revenue per available room (RevPAR) under various oil price scenarios



Note: Chart 3 shows the effect of three possible oil price levels on U.S. hotel industry RevPAR growth. The relatively steady line at the top shows the baseline case of oil at \$98.

show how these new prices translate into macro GDP levels.

According to Moody's Analytics, the U.S. economy could weather a rise in oil prices to \$125 per barrel, but a surge to \$150 would trigger a mild recession (i.e., traditionally defined as two successive quarters of negative GDP). In the \$150-per-barrel scenario, Moody's forecast of real GDP growth falls by a maximum of 2.6 percentage points (Exhibit 2a) and 4.5 million jobs are lost by 2012 compared with the baseline forecast (Exhibit 2b).

The econometrically based Hotel Horizons<sup>®</sup> demand model relies primarily on changes in real personal income and total payroll employment. By introducing Moody's Oil Spike scenario for economic growth into our models, we receive a vastly different view of the next five years. Exhibit 3 plots our revenue per available room (RevPAR) forecast (at this writing in March 2011) as compared to the oil spike forecast prepared by Moody's Analytics.

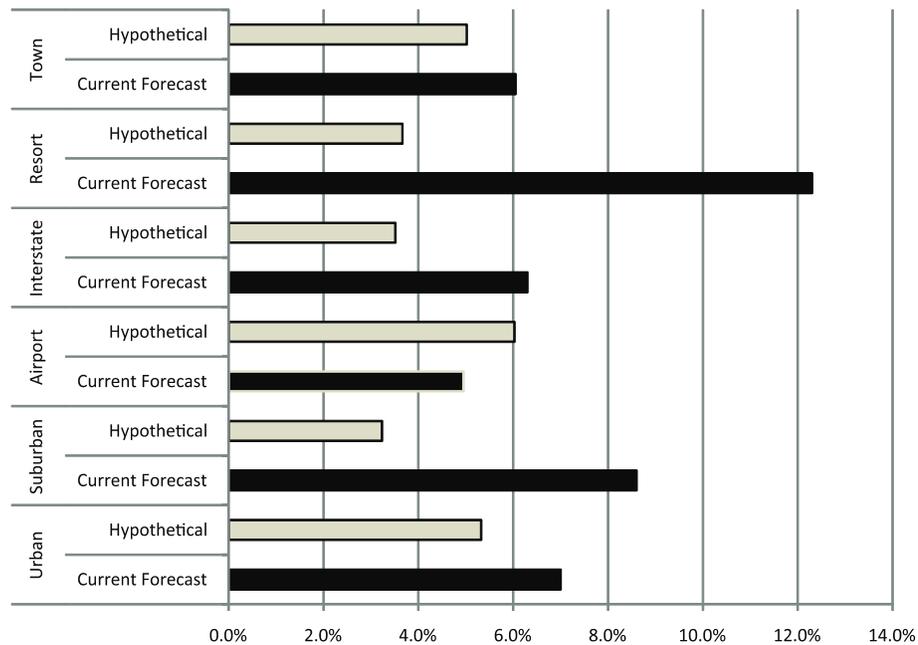
Exhibit 3 illustrates oil's hampering affect on RevPAR growth as compared to the baseline forecast. RevPAR gains observed in the beginning of 2011 will not continue if oil prices move as scripted in either of Moody's oil spike scenarios. These high oil prices have the potential of halting the economic recovery as shown in Exhibits 2a and 2b, and given lodging's dependence on macroeconomic health, we expect the declines in economic production to flow through to lodging demand. In the \$150-per-barrel scenario, the 2.0-percent RevPAR increase in 2012 will be entirely driven by a 2.0-percent increase in demand, as average daily rate (ADR) levels remain flat. As inflation powers forward, ADR fails to keep up, which results in decreasing real rates.

This trend is generally seen through all types of locations and chain scales. Looking specifically at location segments, we then tested which ones are more susceptible to an increase in oil prices. Historically oil prices have had a 99-percent correlation with gas prices, and since hotels are travel destinations, one could assume that an increase in the price of getting to the destination could potentially decrease the demand. Not surprisingly, we anticipate that hotels with "drive to" business will see the first impacts of increased oil prices; this includes interstate, suburban hotels, and resort locations near major metropolitan areas. We then expect declines to migrate to "fly to" resort locations once other hedging strategies run out (e.g., taking the train, reducing other vacation expenditures).

To test this theory, we inserted Moody's \$150 oil price scenario into our models for each location. The results (see Exhibit 4) show the average RevPAR change for 2011-2012. The two bars for each location represent the current forecast (lower bar) contrasted with our hypothetical (\$150) scenario forecast (upper bar). The location segment expected to see the bulk of the damage is resort, where RevPAR could fall from an average increase of 12.3 percent down to 3.7 percent. These results confirm that location segments exposed to leisure and destination travel demand could see the largest declines in future growth.

As long as oil prices continue to stay high, they remain a concern and warrant continual monitoring. While we stress the scenarios presented above have a low probability of occurrence, many of the drivers will have a greater influence in our models as situations abroad unfold. PKF-HR continues to perform research on the subject and, until we

**Exhibit 4:**  
RevPAR changes as a result of hypothetical \$150 oil, 2011–2012



Note: For each lodging category, Chart 4 compares projected RevPAR under a scenario of \$98 oil (lower bar) with RevPAR change assuming oil at \$150 (upper bar). Resort or destination properties show the greatest RevPAR effect from elevated oil prices. Source: PKF Hospitality Research

see strong evidence to the contrary, we maintain our robust outlook for 2011 and 2012.

#### Bios

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