



Saïd Business School cases

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Hilton Hotels: Real Estate Private Equity

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Abstract

On December 13, 2013, two days after its IPO, Hilton hotels traded above \$22 a share. This meant that the 2007 take-private transaction of Blackstone had produced the largest gain ever in private equity at about \$10 billion. In addition, Hilton had become the largest hotel group in the world by number of rooms up from 4th position 6 years previously, when Blackstone bought the company. How can such success occur with a cyclical business during the worst financial crisis since 1929-1933? Somebody definitely deserves a big box of chocolates; but who? The answer is surprising and offers a detailed insight into the life-cycle of real estate private equity transactions.

This note was prepared by Ludovic Phalippou and Dawoon Chung (MFE '13) solely as the basis for class discussion. Ludovic Phalippou is Associate Professor of Finance at the Saïd Business School, fellow at Queen's college and Oxford-Man institute, all at University of Oxford. We are grateful to Tim Jenkinson, Peter Morris for providing useful comments.

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1. Introduction

“Hilton Worldwide Holdings Inc., once seen as a black mark on Blackstone’s record in real estate, is poised to generate one of the two biggest private-equity profits of all time.”

“Blackstone has a paper profit of \$8.5 billion in the McLean, Virginia-based hotel operator’s initial public offering today. That’s second only to the \$10.1 billion of gains that Apollo Global Management LLC (APO) has had from its 2008 investment in chemicals producer LyondellBasell Industries NV (LYB) ... Hilton would become No. 1 if the shares rise more than \$2 above its IPO price.”

On June 28, 2007, Hilton’s board convened a special telephonic meeting, together with the Company’s management and legal and financial advisors, to review Blackstone’s offer to acquire the Company for \$47.50 a share. This represented a premium of approximately 40% to the company’s stock price. During a lengthy discussion, the board members considered, among other things, risks to the Company’s ability to sustain the growth rate given the cyclical nature of the lodging industry. Board members also looked at Blackstone’s experience. As it turns out, lodging companies were a specialty of Blackstone, which had acquired over the four preceding years alone: Extended Stay America, Prime Hospitality, Choice Resorts, Wyndham, La Quinta Corporation, and the hotel REIT MeriStar Hospitality. These represented investments totaling \$13.3 billion.

The most important aspect of the offer, however, was the price. With 497,738 rooms, Hilton was the fourth largest global hotel group (Exhibit 1), a mere 4,351 rooms short of the number three position, Marriott, and 58,508 rooms short of the number one, InterContinental. Prior to Blackstone’s offer, Hilton was trading at a multiple of 12.2x (Exhibit 2).² This was lower than most of its peers. This was probably due to the relatively high proportion of owned and leased business segment in Hilton’s earnings.³ As the sum-of-the-parts analysis in Exhibit 3 shows, multiples are highest for the managed and franchised segment, followed by owned and leased and then timeshare segments.

Also relevant to determining a fair price for the transaction was the premium paid in recent transactions. It is not uncommon to see a large premium when listed companies are taken over, especially when the deal is sponsored by a private equity firm.⁵ Prior to Blackstone’s offer, two publicly listed hotels were taken private by PE firms: Fairmont (January 2006) and Wyndham (June 2007), at premia of 28% and 19%, respectively. Another recent relevant transaction was the PPG’s acquisition of Harrah’s Entertainment at a 36% premium.

¹ <http://www.bloomberg.com/news/2013-12-11/blackstone-s-hilton-joins-ranks-of-biggest-deal-paydays.html>. The share price reached \$22 – hence \$2 above the \$20 offer price – within days.

² Among the top ten worldwide hotel groups by room numbers, those that were publicly traded in U.S. stock markets were selected for comparison.

³ In 2006, Choice owned only three out of 5,376 hotel properties, and Starwood’s managed and franchised hotel rooms represented 87.3% of total rooms, compared to 80.6% and 76.6% for Hilton and Marriott, respectively.

⁴ Management and franchise segment involves managing hotels, resorts and timeshare properties owned by third parties and licensing hotel brands to franchisees. Timeshare segment involves the sales, renting and management of timeshare properties as well as consumer financing services.

⁵ Premium is on average about 20%, and about twice as much when it is sponsored by a private equity firm.

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2. Hilton Hotels

Hilton Hotels Corporation is a hospitality company engaged in the ownership, management and development of hotels, resorts and timeshare properties and the franchising of lodging properties. Conrad Hilton bought his first hotel, The Mobley, in Texas in 1919. The Company he created was led by members of the Hilton family up until 1996 when Stephen F. Bollenbach, former chief financial officer at Walt Disney Co., succeeded Barron Hilton as the chief executive of the Company.⁶

Joining the merger and acquisition wave of the late 1990s, Mr. Bollenbach expanded the Company through a series of transactions. Most notably, he merged Hilton with Bally Entertainment Corporation via a stock swap valued at \$2 billion, spun off the firm's gaming arm (Park Place Entertainment), and acquired Promus for \$4 billion. As a result of this series of transactions, Hilton added over 1,300 hotels under various hotel brands including Doubletree, Embassy Suites Hotels, and Hampton Inn. The Company grew its room stock by more than 350,000 rooms between 1995 and 2007. This 238% growth was the highest among the top ten hotel groups. In 2007, Hilton was the fourth largest hotel group by room numbers up from being the seventh largest hotel group prior to Mr. Bollenbach's appointment (Exhibit 1).

Hilton's growth in rooms was accompanied by a substantial growth in revenue and earnings before interest tax depreciation and amortization (Ebitda) – as shown in Exhibit 4.⁷ From 1995 to 2006, Hilton's revenue and Ebitda increased by 2.5x and 3.5x, respectively. The annualized growth in Ebitda of 11.9% was the highest among its peers. This growth was mainly financed by debt, and following the December 2005 acquisition of Hilton International for \$5.7 billion,⁸ Moody's cut Hilton's debt ratings to "junk." The downgrade of Hilton's senior notes to Ba2 from Baa3 affected about \$3.7 billion of debt.

These high annualized growth numbers should not, however, obscure the volatility of the business. Following the September 11 attacks, Hilton's stock fell by 47.0% (from \$12.7 on September 4, 2001 to \$6.7 on September 20, 2001). Starwood fell by 46.5%, while Marriott and Choice fell by 34.1% and 33.2%, respectively. The S&P 500 index, which included Hilton, Starwood, and Marriott, declined by 13.1% (Exhibit 5). Consistent with the stock-market reaction, Hilton's Ebitda was down 20% in 2001 and declined further in 2002 and 2003. The Ebitda of Marriott and Starwood suffered even larger declines, with Ebitda falling by 33% in 2001. Both stock prices and Ebitda figures recovered relatively quickly. From the trough of 2003 to 2006, the Ebitda of Hilton and Marriott both doubled and their stock prices trebled.

⁶ Note that Appendix A provides a glossary of terms used in this case-study and Appendix B describes the different competitors of Hilton hotels.

⁷ From the top ten hotel groups in Exhibit 1, those that were traded in the U.S. stock markets since 2000 were selected for comparison.

⁸ In 1964, Hilton was split in two, with the London-listed Hilton Group focusing on growth outside the U.S. The 1964 breakup agreement had banned Hilton Hotels from operating outside of the North America.

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3. Blackstone Group

Founded by Stephen A. Schwarzman and Peter G. Peterson in 1985, Blackstone is a global asset management and advisory firm. Blackstone began as a mergers and acquisitions boutique with a modest balance sheet of \$400,000. Since then it has grown to be the largest private equity firm by total assets under management (AUM). Blackstone's AUM of \$70 billion in 2006 was more than double that of KKR, which was founded almost ten years earlier in 1976 (Exhibit 6). Interestingly, while Blackstone was privatizing Hilton, it took the reverse action of listing itself onto the New York Stock Exchange. Blackstone's \$4 billion IPO on June 22, 2007 is believed to have been at least seven times oversubscribed.⁹

Although the firm started as an advisory firm, its asset management business, including the management of corporate private equity funds, real estate funds and mezzanine funds, has become the most important activity in terms of revenue contribution. The revenue from the fund management business grew by 49% annually from 2002 to 2006, comprising 76% of the total revenue in 2006 (Exhibit 7). In particular, the real estate business had grown its assets under management significantly, from approximately \$3.0 billion as of December 31, 2001 to \$17.7 billion as of March 1, 2007, representing an annual growth of 16%.¹⁰

Since Blackstone began its private equity and real estate business in 1987, it raised five private equity funds and eight real estate funds with total capital commitments of \$34 billion and \$24 billion, respectively (Exhibit 8). Funds have been regularly spaced over time, with typically three years between each fund. Exceptions are between the first and second funds and between the third and fourth funds. The second and fourth buyout funds should have been raised around 1990 and 2000 respectively (instead of 1994 and 2003), but 1990-1991 and 2000-2001 were lean years for buyout funds.

Note also the two real estate funds raised in a row (2006 and 2007) testimony of both the massive flow of capital in search of real estate investment vehicles over these years and Blackstone's high returns in its real estate funds (Exhibit 9). Hilton's acquisition was financed by Blackstone Real Estate Partners VI and Blackstone Capital Partners V funds, both funds having been recently raised. Blackstone Real Estate Partners VI was the largest real estate fund ever raised, with capital commitments of \$11 billion, and had the largest stake in Hilton.

When a PE firm acquires a company, the exit plan is a crucial part of the analysis. Given that secondary buyouts, in which one PE firm sells its equity stake to another, had been increasingly popular as an exit route (Exhibit 10 & Appendix C), it was important to examine which PE firms could potentially buy Hilton from Blackstone. As shown in Exhibit 11, the size of Blackstone real estate business was only comparable to that of Morgan Stanley Real Estate Investing and Lone Star Funds.

⁹ <http://online.wsj.com/news/articles/SB118252107097944849>. From the public offering, Schwarzman received \$684 million in cash, and his Blackstone stake was worth \$8.83 billion after the first day, which made him ranked by Forbes as the 53rd-richest person in America in 2008.

¹⁰ Blackstone company filing (2007)

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4. Landscape of the Institutional Real Estate Market in 2006

Real estate attracted record amounts of capital in the 2000s. As shown in Exhibit 12, U.S. commercial real estate transactions totaled \$307 billion in 2006, up from \$76 billion in 2001. Increasing appetite for commercial property investment drove up transaction values of real estate, which is measured by capitalization rate. Low capitalization rates mean high prices and low yield (see Appendix A). Exhibit 13 shows the drop in capitalization rates from about 9% in 2001 to 7% by 2006. Throughout this period of “cap rate compression”, the appropriate level of cap rates was widely discussed and debated.¹¹ There were wide concerns that real estate was experiencing yet another “bubble”. Cheerleaders pointed out that over the last decade real estate performance had been higher than that of listed equity, and with a much lower volatility. Cassan was replied that for illiquid assets such as real estate, volatility figures may be downward biased and that past performance is no guide to the future.

Real estate investment is broadly classified as either public or private. Public real estate, referred to as Real Estate Investment Trusts (REITs), uses the pooled capital of numerous investors to purchase, manage and develop income-generating properties. REITs are required to distribute at least 90 percent of their income to shareholders annually in the form of dividends. Private real estate investment funds, such as real estate private equity funds, have a specified exit timeline, typically six to eight years. As shown in Exhibit 14, real estate private equity is about twice as large as real estate public equity in the US. As a source of capital, however, both are dwarfed by debt providers. Real estate transactions are highly levered. On aggregate, in the US, for each \$1 billion of equity there is over \$3 billion of debt, implying a leverage ratio of about 75%.

As Exhibit 15 shows, private real estate fundraising grew more than five-fold, from \$19.3 billion in 2000 to \$104.7 billion in 2006. Fundraising was at its lowest in 2002, following the 2001 recession, down to \$14.2 billion, from \$21.8 billion in 2001. Of particular interest, hotel transaction volumes were relatively flat from 1998 to 2003, hovering below the \$20 billion a year mark. Starting in 2004, hotel deals grew exponentially and reached \$80 billion in 2006 (Exhibit 16). Along with developers and private investors, private real estate funds were a major investor in the hotel industry. REITs were not as active as PE firms due to the cyclicity of the hospitality sector. The changes in both occupancy rates and room rates immediately affect the cash available for distribution to shareholders.¹²

The real estate boom was probably ignited by the very low interest rate policy of the U.S. Federal Reserve and other central banks after September 2001. From 2002 to 2004 the LIBOR rate, which is the interest rate at which banks lend to one another, hovered below 2% per year. As real estate prices and volumes skyrocketed, central banks increased interest rates and the LIBOR surfed over the 5% per annum mark in 2006-2007 (Exhibit 17).

¹¹ “Cap Rates and Real Estate Value Cycles: A Historical Perspective with a Look to the Future” Babson Capital Research Note, June 2009

¹² REIT Guide (2nd Edition), Deloitte

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5. Capital Structure

In a leveraged buyout, the target company's existing debt is usually bought back, a large amount of new debt is raised, cash reserves brought to a minimum, and significant credit lines are negotiated. The large amount of debt and the retiring of cash, however, leads to higher vulnerability to downturns. A PE firm might have difficulty making large interest payments during economic downturns and run the risk of seeing its company seized by debt-holders.

In the case of Hilton, Blackstone funded the transaction with 78.5% debt and 21.5% equity. Such a high leverage was typical, albeit of the high side, of buyout transactions conducted in 2005-2007. Another important metric to gauge leverage is the debt to Ebitda multiple. In Hilton's case, it was 12.4x and this was about twice as much as the average that year (Exhibit 18). To compare, the largest PE transaction ever – Texas power company TXU Corp. – which was taken private by KKR and TPG a few months earlier (February 2007) – had a similar leverage (81.5%) but a more typical debt to Ebitda multiple of 6.6x. Exhibit 19 shows the capital structure of the Reader's Digest LBO in November 2006. Again the leverage was about 80% but the debt to Ebitda multiple was twice that of Hilton. Hence, Hilton's high debt to Ebitda ratio was high but not exceptional.

The main characteristic of the 2005-2007 credit boom was that debt tended to be 'cov-lite', i.e. with minimal covenants. This was the case for Hilton's debt. Traditionally, lenders would attach a number of covenants to any debt package and particularly so when the company takes on board a large amount of debt. Many were alarmed by this development. *The Economist* thought it was concerning and short-sighted. *The Financial Times* endorsed the view of Anthony Bolton, who warned on his retirement from Fidelity Investments in May 2007 that cov-lite is "the tinder paper for a serious reversal in the market."¹³

Exhibit 20 shows the "LBO model" for Hilton using management projections, assuming exit after 6 years and the same exit and entry multiples. Depreciation and amortization is assumed to be 23% of Ebitda (based on analyst projections), and tax rate is set to be 30%. Interest expense projections are based on a constant LIBOR set to the rate as of June 2007 (5.07%). Notice the negative net earnings for the first two years despite optimistic management projections. This is why PE firms secure a revolving credit facility for leveraged buyouts. The credit limit, however, needs to be carefully chosen to minimize fees. In Hilton's case, a cash reserve had been deposited with the lenders which could, upon the Company's request, be used for debt service, capital expenditures and general corporate purposes.

Although at the time the *Daily Telegraph* reported that there were "worries over a global credit crunch as investors start to balk at the increasingly risky debt investment vehicles being hit by rising interest rates", if it all goes as planned, Blackstone would more than quadruple its investment from \$5,700 million to \$27,247 million.

¹³ Others argued that the move to cov-lite was a welcome simplification of loan documentation, fully justified as the banks would hedge their risk by transferring exposure to the loan in the CDO market. It was also pointed out at the time that cov-lite loans operated in a very similar way to bonds, but at lower values.

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6. The day of reckoning

Blackstone executives probably knew that the Ebitda projections, if anything, were a bit on the optimistic side. If they came true, Blackstone would earn a whopping \$22 billion – by far the largest capital gain ever in the PE/RE space. This meant that there were margins for error.

But maybe this time it needed more than a margin for error. June 2007 turned out to be the very peak of the leveraged buyout and real estate market. The headlines radically changed. On 25 March 2008, the *Financial Times* ran an article explaining that since this Hilton deal:

“not a single private equity deal has been hatched above \$4bn, and only \$4.5bn of leveraged buyouts larger than \$1bn have come forth (...) significant bankruptcies in private equity portfolios are a certainty, as is the next round of bad press that will accompany them. (...) Not only are new deals scarce, a number of agreed deals that had not yet closed have hit the rocks, spawning recriminations and litigation.(...) In recent weeks, both Moody's and Standard & Poor's have issued reports identifying an increasing number of debtors at risk of default. Not surprisingly, many of those companies are private equity backed. S&P's list includes more than 50 worrisome private equity portfolio companies.”

It looked as though the private equity world was doomed right after the Hilton transaction closed. Diane Vazza, a managing director at ratings agency Standard and Poors, commented on the situation in PE by saying, "the day of reckoning has arrived". This was certainly not the type of market timing skills that Blackstone would like to boast to future investors. Blackstone's own earnings forecasts were widely missed, and in less than seven months since its successful debut on the stock market, Blackstone's stock price plunged to \$4 in February 2009, a breath-taking 87% dive from the IPO price of \$31!

Hilton was certainly not the only one in trouble. Other hotel groups, although not as highly leveraged, would still suffer the dive in Ebitda generated by this cataclysmic financial crisis. On 6 March 2009, the Starwood and Marriott stock prices were down 85% and 71%, respectively (from July 2007 - the time of the Hilton deal).¹⁴ Choice fell 39%, and the S&P 500 fell by 55% (Exhibit 20).

One good aspect of being private may be that you do not see your stock price hitting zero! But the harsh reality bites nonetheless. Due to lower than expected earnings, many companies could not service debt and bankruptcy rates skyrocketed. In 2009, Hilton's Ebitda was only about half of what had been projected at the time of the deal for 2009. How could debt be serviced, covenants met and Hilton avoid being seized by debt-holders then? To begin with, remember that Hilton's debt was cov-lite. In addition, the Fed decreased its interest rate to a first-time ever rock-bottom of 0.25%, pushing down the Libor rate to 0.68% in 2009. This rather unexpected combination of events led to a miracle: net earnings ended up being the same in 2009 as the (rosy) projections.

¹⁴ As of December 31, 2007, Starwood, Marriot, and Choice had net debt to enterprise value ratio of 29%, 17%, and 10%, respectively.

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7. Doubling up

The waves of quantitative easing might have helped preserve net earnings for Hilton, but it does not mean that the equity stake is preserved. PE-owned companies such as Hilton may not see its daily stock price but the value of the debt can be a good indicator. When debt trades below par, the equity is usually not worth much (only the option value). The sharp decline in hotel stock prices raised the likelihood that Hilton's equity was worthless and Blackstone actually wrote down the value of its equity stake in Hilton by 70% in 2009. But Blackstone saw what could be called an investment opportunity (or a doubling strategy): buying back the debt and then cashing in both the increase in equity and in debt value in case of a recovery? Buying distressed debt was a specialty of the house. The head of Blackstone's corporate advisory and restructuring practice, Mr Studzinski, was reported to be "having the time of his life. He and his stable of 134 advisers have been riding high on the opportunities being created by companies in trouble."¹⁵

In April 2010, after tough negotiations with banks and other debt holders, Hilton's debt was cut to \$16 billion from \$20 billion, and maturity was extended by two years. The restructuring included the repurchase of \$1.8 billion of secured mezzanine debt for a cash payment of \$819 million, representing a 54 percent discount from par value. Funding for the repurchase of the secured mezzanine debt was provided by \$819 million in new equity investment from Blackstone. Recall from Exhibit 8 that Blackstone raised a large fund in 2007, and this money needed to be spent by 2012. As not many deals were being executed, Blackstone was actually under pressure to find a home for all this cash. This looked like yet another reason to pursue this strategy. Finally, \$2.1 billion of junior mezzanine debt was converted into preferred equity. Singapore's sovereign wealth fund, GIC Private Ltd, an active investor in franchised hotel properties across the U.S., was one of the lenders that participated in the debt restructuring.¹⁶

A year and a half later things still looked gloomy. Moody's released a 'splashy' report arguing that the large leveraged buy-outs of 2006-2008 underperformed the wider market in terms of ratings, default rates and revenue growth despite the recent wave of debt restructuring. High-yield bonds for Clear Channel and Harrah's Entertainment, now renamed Caesars, both of which had already restructured, were trading at 70 cents on the dollar. The senior bank debt of the largest LBO ever, TSC, was trading at 60 cents on the dollar. The hotel industry, if anything was more affected for its heavy reliance on corporate travel, wages and discretionary consumer spending. A record number of lodging companies filed for bankruptcy protection in 2009 (e.g. Extended Stay America, which Lightstone acquired from Blackstone two months prior to Hilton's transaction for \$7 billion, financed by \$4.1 billion of securitized first mortgages, and \$3.3 billion of mezzanine loans). Bruce Force, senior vice president for sales at Lodging Econometrics commented after the company's bankruptcy filing,

"Between the dip in prices and the overleverage and the reduction in revenue, it's like one-two-three, you're out"

¹⁵ <http://www.ft.com/cms/s/0/5a68c232-0cde-11de-a555-0000779fd2ac.html#axzz2yxWpurKB>

¹⁶ <http://www.thestreet.com/story/12137755/1/singapore-bets-on-blackstones-hilton-ipo-after-2010-debt-restructuring.html>. After Hilton's IPO, GIC owned roughly 5% of Hilton's outstanding stock.

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8. Exiting Hilton

Blackstone used the same formula to convince creditors holding debt on its other hotel investments to complete similar restructuring deals. Among the lenders rumored to have sold its mezzanine loans at a discount was the German bank Hypo Real Estate Holding AG, which was highly distressed. However, the cost of buying back debt was getting higher. In 2009 and 2010, mezzanine debt on some hotel portfolios could be bought for as little as 20 cents on the dollar. But hotel performance rebounding sharply in the U.S. in 2011-2012 eliminated many debt discounts. So maybe it was time to change gear and start thinking of selling instead of buying.

The end game for Blackstone's hotel investments was an initial public offering (IPO; see Appendix C for a discussion on exit routes). For this to happen, two ingredients are necessary: Ebitda (and its recent growth) needs to look good, and the IPO market needs to be alive and well.

Two hotel owners sought IPOs in 2011 with tepid results.¹⁷ Summit Hotel Properties, owner of 68 hotels, saw its stock quickly trading lower than the IPO price. On May 10, 2011, RLJ Lodging Trust, owner of 140 hotels, priced its IPO at \$18 a share, lower than RLJ's anticipated range of \$19 to \$21, and the stock price stuck around the issue price thereafter. But the magic of quantitative easing was going to strike again. Various commentators drew a link between the Fed monetary policy and both the reduction in stock market volatilities and increased investor confidence. Irrespective of the explanation, equity indices and IPO activity gathered steam concurrently. By mid-2013 the S&P 500 was back to October 2007 levels. 112 IPOs went through in the first three quarters of 2013, representing a 48% increase from the same period in 2012. First day returns averaged a healthy 14.2% in Q3-2013.¹⁸ Interestingly, the U.S. housing market continued to see recovery, and the real estate sector dominated the 2013 IPO market, boasting 22 IPOs raising \$4.2 billion (representing 12% of total IPO volume) in the first three quarters of 2013. Blackstone itself topped the water with a \$565 million IPO for Extended Stay America, which it co-owned with Centerbridge Partners, and Paulson & Company. The number of PE-backed IPOs surged to 58 in the first three quarters of 2013 (32% of the total) – eleven more than the full-year 2012 total (Exhibit 22).¹⁹ The stock-market seemed ready to welcome back Hilton – as long as the Ebitda and growth numbers were right.

During recessionary periods, the fee based management and franchised model performs much better than the owned and leased model. And that was the strategy pursued by Hilton. Despite the financial crisis, Hilton continued its expansion but focusing on franchising agreements, a less-costly approach than owning property outright. In 2013, Hilton was the largest global hotel group by room numbers ahead of InterContinental, which had ranked first in 2007. 302 new hotels were added by Hilton in 2009 alone, the second most in the Company's 91-year history. Between June 30, 2007 and September 30, 2013, Hilton's management and franchise segment grew by 40% in terms of number of rooms, representing 98% of its overall room growth, with virtually no capital

¹⁷ There were nonetheless some rare success stories – such as HCA, the US hospital operator taken private by KKR, Bain and Merrill Lynch for \$31bn, which floated in 2011 or KKR's Dollar General.

¹⁸ EY Global IPO Trends Report, Q3 2013

¹⁹ Q3 2013 IPO Report, WilmerHale

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investment by the Company. As Christopher J. Nassetta, President & Chief Executive Officer of Hilton, said:

“Our category-killer brands are attracting capital from all over the world, and it is their capital we are growing with, not ours”

The adjusted Ebitda for the management and franchise segment grew by 25% from 2007 to 2012, increasing its contribution to total earnings from 47% to 53%.²⁰ But Hilton also outperformed its competitors in the timeshare segment, with annual interval sales increasing over 40% since 2007. A similarly capital-efficient strategy was employed there. For instance, for the twelve months ended September 30, 2013, 50% of its sales of timeshare intervals were developed by third parties versus 0% for the year ended December 31, 2009. The results from its owned-hotel business segment were not as impressive. Despite the \$1.8 billion investment in its owned hotel portfolio to enhance its market position since December 31, 2007, the adjusted Ebitda of its owned and leased portfolio for 2012 was still below 2008 levels.

In addition to increasing its revenue from management and franchising business, Hilton’s cornerstone for growth involved expanding its global footprint. Hilton’s total international rooms increased by nearly 50% to 149,000 in 2013 from 101,000 in 2007 and rooms under construction outside the U.S. increased from less than 15% to nearly 30%. In 2010, Christopher J. Nassetta said of Hilton’s international presence during an interview:

“We’re not where we want to be, just given the breadth of opportunity that exists in other parts of the world—in Asia/Pacific, in Europe, in the Middle East, in Latin America—the majority of our pipeline should be coming from international markets because we’re under-penetrated as compared to the U.S. markets.”

In 2012, Hilton’s Ebitda was nearly double that of Marriott or Starwood (Exhibit 23). Both Marriott and Starwood had lower earnings in 2013 compared to 2007. Hilton’s revenue, which fell by 14.6% in 2009 in line with the peer average of -15.8%, achieved an annual growth of 2.0% since 2007, just behind Choice, which grew by 2.8% per annum. Hilton’s Ebitda grew at a higher rate than its revenue at 5.5%. Choice saw a marginal annual growth rate of 0.5%, whereas Starwood and Marriott had negative growth rates of -1.2% and -2.9%, respectively. These numbers looked good enough, and so Hilton was ready to jump back into the listed equity world.

On December 11, 2013, Hilton raised \$2.34 billion in its IPO, selling 117.6 million shares for \$20 each. The IPO was the second largest in the U.S. in 2013. The IPO gave Hilton a total equity value of \$20 billion, more than 40% higher than the market capitalization of Marriott or Starwood. Net debt was \$14 billion, giving it a total enterprise value of \$34 billion. On December 13, 2013, the stock price reached \$22 and Blackstone capital gain was standing at \$10 billion – the largest ever in the private equity world. Job done. But where to send the big box of chocolates?

²⁰ Hilton Company filing (2013)

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Questions

Question 1 (Valuation risk): Should the board have accepted the per share price of \$47.50 offered by Blackstone? If not, what should the board have done?

Question 2*** (Business cycle risk): Does the 2001 crisis teach a lesson relevant to Blackstone when considering such an LBO? Why or why not?

Question 3 (Ex ante exit risk): How does the size of Hilton, Blackstone's competitors and real estate funds influence the potential exit route?

Question 4 (Timing risk): Is the 2007 booming market the right moment for Blackstone to yet again invest in a hotel business?

Question 5*** (Leverage risk): Run the model assuming that another 2001-2002 downturn occurs in 2008-2009. What would Blackstone return be under the different capital structures shown in the exhibits?

Question 6: (Strategy risk) Why would Hilton focus on growing franchise and management business instead of purchasing hotels for expansion, as it did in 1990's?

Question 7 (Risk for other stakeholders): Is the Hilton debt restructuring orchestrated by Blackstone good or bad news for its investors? What about for debt-holders?

Question 8 (Operational growth risk): How much would have been the capital gain of Blackstone assuming the same exit multiple as at entry and an EBITDA growing at the same rate as its competitors? What do you conclude regarding the source of the capital gains in this transaction?

Question 9 (Post-IPO risks): How much is Blackstone's capital gain on December 11, 2013 and on December 13, 2015? What is the Ebitda/TEV ratio on those days? Do they differ from those at entry? Why or why not? What are the risks faced by Blackstone and its investors post-IPO?

Question 10*** (Interest rate risk): Loans to PE/RE-sponsored companies have an interest rate that is floating (LIBOR plus a fixed margin). Banks would usually require companies to hedge this interest rate risk. Why do you think banks require this? Do you think it was the case for the Hilton transaction? If not, what would have been the return if interest rate risk had been hedged?

Question 11*** (LP risk management): The Canadian model of investing is getting traction in the illiquid investment space among institutional investors. This model dictates that a \$100 equity investment in an LBO should contemporaneously trigger a \$130 sale of a similar publicly listed stock and a \$30 purchase of government bonds. The idea is to isolate the alpha of the PE transaction, maintain portfolio diversification, and hedge away market risk. What trading would a Canadian-model adopter do in the case of the Hilton LBO and what would her total return be at the time of the Hilton IPO? Is this an effective risk management practice? Comment and debate on what this approach does under different scenarios.

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Appendix A: Glossary

Acquisition: The process of gaining control, possession or ownership of a private portfolio company by an operating company or conglomerate.

Amortisation of debt: The paying down of a debt instrument's principal amount over time. This is a separate matter from interest payments. The amortisation schedule delineates in advance the timing and size of these principal repayments.

Bankruptcy: An inability to pay debts. Chapter 11 of the bankruptcy code deals with reorganization, which allows the debtor to remain in business and negotiate for restructuring of debt. Chapter 7 of the bankruptcy code deals with the liquidation of a company's assets.

CAGR: Compound Annual Growth Rate. The year over year growth rate applied to an investment or other aspect of a firm using a base amount. The compound annual growth rate is calculated by taking the nth root of the total percentage growth rate, where n is the number of years in the period being considered.

Capital Gains: The difference between an asset's purchase price and selling price, when the selling price is greater. Long-term capital gains (on assets held for a year or longer) are taxed at a lower rate than ordinary income.

Capitalization rate (cap rate): Ratio of property net operating income (NOI) to current market value. This is one of the key metrics in real estate valuation. Cap rates are the reciprocal of valuation multiples – a higher cap rate means a lower valuation, and vice versa.

Closing: An investment event occurring after the required legal documents are implemented between the investor and a company and after the capital is transferred in exchange for company ownership or debt obligation.

Co-investment: The syndication of a private equity financing round or an investment by individuals (usually general partners) alongside a private equity fund in a financing round.

Committed Capital: The total dollar amount of capital pledged to a private equity fund.

Committed capital: Cash to the maximum of these commitments may be requested (i.e. drawn down) by the private equity managers usually on a deal-by-deal basis. This amount is different from invested funds for three reasons. First, most partnerships will initially invest only between 80% and 95% of committed funds. Second, it may be necessary in early years to deduct the annual management fee that is used to cover the cost of operation of a fund. Third, payback to investors usually begins before the final draw down of commitments has taken place.

Common Stock: A unit of ownership of a corporation. Owners of common stock are typically entitled to vote on the selection of directors and other important events and may receive

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dividends on their holdings. Common stock offers no performance guarantees. In the event that a corporation is liquidated, the claims of secured and unsecured creditors and owners of bonds and preferred stock take precedence over the claims of those who own common stock.

Covenants: Covenants are legally enshrined in the debt documentation. If covenants are broken, then the debt is in default and the bank can lay claim to its security. Covenants can be qualitative or quantitative. A qualitative covenant example would be that, for example, a certain named individual has to remain in the business. A quantitative covenant sets limits and trigger points on financial measures. For example, that the ratio of debt to EBITDA cannot exceed a certain level.

Cov-lite (or "covenant light") is financial jargon for loan agreements that do not conform to the usual protective covenants for the benefit of the lending party. Although traditionally banks have insisted on a wide range of covenants that allow them to intervene if the financial position of the borrower or the value of underlying assets deteriorates. Cov-lite lending is seen as riskier because it removes the early warning signs lenders would otherwise receive through traditional covenants. Against this, it has been countered that cov-lite loans simply reflect changes in bargaining power between borrowers and lenders, following from the increased sophistication in the loans market where risk is quickly dispersed through syndication or credit derivatives. Cov-lite loans usually remove the requirement to report and maintain loan to value, gearing, and EBITDA ratios. More aggressively negotiated cov-lite loans might also remove: events of default relating to "material adverse change" of the position of the borrower, requirement to deliver annual accounts to the banks, restrictions on other third party debt, restrictions on negative pledges, requirements for bank approval to change the form of the debtor group's business.

Distressed debt: Corporate bonds of companies that have either filed for bankruptcy or appear likely to do so in the near future.

Diversification: The process of spreading investments among various different types of securities and various companies in different fields.

Dividend: The payments designated by the Board of Directors to be distributed pro-rata among the shareholders. On preferred shares, it is generally a fixed amount. On common shares, the dividend varies with the fortune of the company and the amount of cash on hand and may be omitted. Dividends can be paid either in cash or in kind, i.e. additional shares of stock.

Due Diligence: A process undertaken by potential investors -- individuals or institutions -- to analyse and assess the desirability, value, and potential of an investment opportunity.

EBITDA: See appendix D.

Equity and Enterprise Value (EV): See appendix D.

Exit Strategy: A fund's intended method for liquidating its holdings. See Appendix C.

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Flotation: When a firm's shares start trading on a formal stock exchange.

Free cash flow: The cash flow of a company available to service the capital structure of the firm. Typically measured as operating cash flow less capital expenditures and tax obligations.

Fund Size: The total amount of capital committed by the investors of a venture capital fund.

General Partner (GP): The partner in a limited partnership responsible for all management decisions of the partnership. The GP has a fiduciary responsibility to act for the benefit of the limited partners (LPs), and is fully liable for its actions.

Holding Company: Corporation that owns the securities of another, usually with voting control.

Holding Period: The amount of time an investor has held an investment. It determines whether a gain or loss is considered short-term or long-term, for capital gains tax purposes.

Initial Public Offering (IPO): See Appendix C.

Institutional Investors: Organizations that professionally invest. Includes insurance companies, depository institutions, pension funds, investment companies, mutual funds, endowment funds, and sovereign wealth funds.

IRR: Internal Rate of Return. A typical way Funds measure performance. IRR is technically a discount rate: the rate at which the present value of a series of investments is equal to zero.

Leveraged Buyout (LBO): Take over of a company, using a combination of equity and borrowed funds. Generally, the target company's assets act as the collateral for the loans taken out by the acquiring group.

LIBOR: London Inter-Bank Offered Rate. Serves as the reference rate for floating rate loans.

Limited Partner (LP): An investor in a limited partnership who has no voice in the management of the partnership. LP's have limited liability and usually have priority over GP's upon liquidation of the partnership.

LTM: Last Twelve Months. See appendix D.

Limited Partnerships: An organization comprised of a general partner, who manages a fund, and limited partners, who invest money but have limited liability and are not involved with the day-to-day management of the fund.

Management buy-out (MBO): A private equity firm will often provide financing to enable current operating management to acquire or to buy at least 50 per cent of the business they manage. In return, the private equity firm usually receives a stake in the business. This is one of the least

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risky types of private equity investment because the company is already established and the managers running it know the business.

Management Fee: Compensation for the management a Fund, paid from the Fund to the general partner or investment advisor.

Market Capitalization: See appendix D.

Merger: Combination of two or more corporations in which greater profit is supposed to be achieved by the elimination of duplicate plant, equipment, and staff.

Multiples: See Appendix D.

Net Asset Value (NAV): NAV is calculated by adding the value of all of the investments in the fund and dividing by the number of shares of the fund that are outstanding. NAV calculations are required for all mutual funds (or open-end funds) and closed-end funds. The price per share of a closed-end fund will trade at either a premium or a discount to the NAV of that fund, based on market demand. Closed-end funds generally trade at a discount to NAV.

Net income: The net earnings of a corporation after deducting all costs of selling, depreciation, interest expense and taxes.

NYSE: The New York Stock Exchange. Founded in 1792, the largest organized securities market in the United States. The Exchange itself does not buy, sell, own or set prices of stocks traded there. The prices are determined by public supply and demand. Also known as the Big Board.

Pari Passu: At an equal rate or pace without preference.

PIK Debt Securities: Pay In Kind security. This is a form of security that occasionally appears in transactions and is the least senior security before equity. It receives rolled up interest (not paid until the debt is redeemed) at high rates as it tends not to have any security on the business at all.

Pooled IRR: A method of calculating an aggregate IRR by summing cash flows together to create a portfolio cash flow. The IRR is subsequently calculated on this portfolio cash flow.

Portfolio Companies: Companies in which a given fund has invested into.

Preferred Stock: A class of capital stock that may pay dividends at a specified rate and that has priority over common stock in the payment of dividends and the liquidation of assets.

Private Equity: Equity securities of companies that have not "gone public" (are not listed on a public exchange). Private equities are generally illiquid and thought of as a long-term investment.

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Recapitalization: The reorganization of a company's capital structure. A company may seek to save on taxes by replacing preferred stock with bonds in order to gain interest deductibility. Recapitalization can be an alternative exit strategy (see appendix C).

Sale and leaseback transaction: Used by companies to change the financial relationship with assets that they use in the business. For example, a retail business might sell a store to realise cash, but then simultaneously enter into a long term lease contract to rent the store back for continued use. It transfers assets off the balance sheet (and the costs of ownership) into a pure running cost on the income statement.

Senior Securities: Securities that have a preferential claim in the case of liquidation. Generally, preferred stock and bonds are considered senior securities.

Subordinated Debt: Debt with inferior liquidation privileges to senior debt in case of a bankruptcy; it carries higher interest rates than senior debt, to which it is subordinated, to compensate for the added risk, and will typically have attached warrants.

Term loan A (or "A tranche"): A senior *term loan* that usually matures within five to six years and typically *amortize*, with the borrower having to repay an amount each year equal to between 5.0% and 20.0% of the initial principal amount of the loan. In English law-governed loan transactions, a TLA is usually referred to as *senior debt* or *Tranche A debt*.

Term loan B (or "B tranche"): Loans that typically mature within six to seven years. It has a repayment schedule (e.g. 1% of the principal amount of the loan per year). In English law-governed loan transactions, TLBs are often referred to as *mezzanine debt* or *subordinated debt*. In US law-governed loan transactions, TLBs are *senior debt* and are usually not subordinated to other indebtedness of the borrower (they are *pari passu*).

Syndication: A number of investors offering funds together as a group on a particular deal. A lead investor often coordinates such deals and represents the group's members.

Syndicate: Underwriters or broker/dealers who sell a security as a group.

Vintage Year: The year in which the venture firm began making investments. Often, those funds with "vintage years" at the top of the market will have lower than average returns because portfolio company valuations were high, e.g. an Internet Fund started in vintage year 1998.

Write-off: The act of changing the value of an asset to an expense or a loss. A write-off is used to reduce or eliminate the value an asset and reduce profits.

Write-up/Write-down: An upward or downward adjustment of the value of an asset for accounting and reporting purposes. These adjustments are estimates and tend to be subjective; although they are usually based on events affecting the investee company.

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Appendix B: The Competitors of Hilton Hotels

InterContinental, a British multinational hotels company, was the largest hotel company in the world by rooms with 556,246 as of January 2007. InterContinental focuses on managed and franchise businesses instead of owned and leased businesses through its brands including InterContinental, Crowne Plaza, Holiday Inn, and Holiday Inn Express.

Wyndham, the second in the 2007 ranking behind InterContinental by 13,012 rooms, increased its room portfolio by 31.3%. In July 2006, it was spun off from Cendant. Cendant, which grew by a series of acquisitions, including Ramada, Howard Johnson's and Days Inn, entered the upscale lodging sector by acquiring the Wyndham hotel brand in September 2005. Wyndham engages in the lodging business entirely through managed and franchised business model.

Marriott climbed up the ranks from the sixth position in 1995 to the third in 2007 by increasing its room supply by 317,094. Its growth was attained through a combination of the buyout of brands such as Ritz-Carlton (1995) and Renaissance (1997), steady organic growth of its brands, and the creation of new brands, such as Spring Hill Suites and TownePlace Suites.

Although stable in the ranking, Accor, a French hotel group whose hotel brands include Ibis, Mercure, and Novotel grew by nearly 230,000 rooms. Accor heavily relied on the organic growth of its economy brands, but also acquired Red Roof in 1999 to increase presence in North America.

Choice, which franchises lodging properties under its proprietary brand names, including Comfort Inn, Comfort Suites, Quality and Econo Lodge, had seen a modest growth in room by 46.2%. Only three of the hotels operated under its brands were owned by the company.

Best Western, operator of the Best Western Hotel brand, dropped from the number four spot to number seven in 2007. Each Best Western hotel is an independently owned and operated franchise. The company operates as a nonprofit membership association, with each franchisee acting and voting as a member of the association in the manner of marketing co-operatives.

Despite the higher than average growth rate of 100.5%, Starwood remained in the same rank in 2007. Starwood conducts hotel and leisure business primarily in the luxury and upscale segment under its brand names including St. Regis, W Hotels, Westin and Sheraton. In 2006, Starwood acquired the Meridien, which contained 137 properties, primarily located in Europe and the Middle-East.

Carlson, which placed the ninth position with 119,665 rooms behind Starwood, had a portfolio of hotel brands including Radisson Blu, Park Plaza, Park Inn and Country Inns & Suites.

Global Hyatt, which was the last in 2007 ranking, manages, franchises, owns and develop hotels and resorts under the Hyatt, Park Hyatt, Grand Hyatt, Hyatt Regency, and Hyatt Place brand names.

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Appendix C: Exit Options

IPO (Initial Public Offering)

An IPO occurs when a private company offers its shares to the general public. The company is then publicly traded. It usually takes some time until the IPO can be completed. It also takes a lot of management time and fees are quite high (often 7% in the US; much lower in Europe). In addition, investors would typically leave money on the table when bringing a company public. The typical underpricing is 10% but it can often be much higher. IPOs used to be considered the road to glory in the 1990s, but increasingly, PE firms try to avoid IPOs.

There are a number of key decisions to take when considering an IPO: First is the location of listing (where to list). A stock can be traded on different stock-exchanges and issues such as visibility and liquidity are central here. Second, and related, is the choice of the level of regulation. For example London main market and NYSE are more regulated than London's Alternative Investment Market (AIM). Several commentators argue that the US stock-markets are losing to their foreign competitors due to their heavier regulatory environment (e.g. Sarbanes-Oxley). Third is timing. IPOs are very cyclical. There are some prolonged periods of time with very few IPOs ("cold markets"). Fourth is the amount to sell. Not all shares can be sold on the issue date, and there is a lock up period (from six months to over a year).²¹ Finally, another element to consider is that the key driver of demand in an IPO is usually growth.

Trade Sale

The most common exit strategy for PE firms (Exhibit 10), a trade sale refers to the sale of company shares to industry investors. The trade buyer is usually motivated by synergies and economies of scale. It is therefore usually operating in the same industry, and willing to pay a premium. However, competition and regulatory concerns are important impediment to such deals and make the PE firm run the risk of being unable to sell the company while having paid all the transaction costs.

Secondary Buyout

A secondary buyout occurs when one PE firm sells its equity stake to another. It is now the second most common exit channel for PE firms (Exhibit 10). The usual route would be to organize a transaction to execute such a sale. PE firms will not care too much about poor past growth.

It is often difficult to see what a private equity firm can do that the previous one did not manage to do. Most importantly, this exit channel is not really an exit for some investors. If a Limited Partner is investing in both the buying fund and the selling fund, then it is not exiting the deal. It stays in its portfolio, but it has to bear the transaction costs. Such transaction costs are easily above 5% of the equity stake (about 2% of transaction value).

But will a trade sale, or secondary PE sale, raise more money than a flotation (i.e. IPO)? It should depend in part on what happens to control. When buying an entire company, the acquirer may be willing to pay a control premium. However, IPOs are sold to a broader public and if it

²¹ Can be rationalized by concerns over asymmetric information – need reassurance that original investors haven't massaged the figures then exited

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was successful in creating interest and/or competition between investors then more money may be raised. Another element that may be considered is sentiment. As mentioned above, IPOs are very cyclical, with period during which certain type of stocks are “hot”, i.e. potentially over-valued.

In practice, it is difficult to know which route realises higher returns and the answers may be time-dependent due to cycles. Typically private equity owners prepare some basic information for a number of investment banks, ask them to pitch for business and advise on valuation and which is the best exit route. Interestingly, sometimes, the PE firm initiates an IPO, gets early signals from the underwriter (the consortium of investment banks) about the capital that can be raised and if a trade buyer and financial buyer steps in and offer more, the IPO is cancelled and the company is sold to those buyers.

Dividend Recapitalization

If the business is not ready for complete exit, there are some partial exit options. The usual route is a dividend recapitalization. Usually, dividend recaps are leveraged (called leveraged dividend recapitalization), which means that the company assumes additional debt to partly or fully use to pay for a dividend. A non-leveraged dividend recapitalization is financed by using cash that the company already has on hand.

Pre-crisis, there had been a wave of dividend recaps. For example, in 2006, according to Fitch data, there had been 40 dividend payouts totalling about \$10 billion and these dividends enabled buyouts companies to recover 72 percent of their investment within 20 months.²² But post-crisis they became more difficult because of the difficulty to borrow.

Dividend recaps are basically an arbitrage between debt and equity markets by PE firms. Some of the most spectacular (initial rates of) returns in private equity have been achieved through dividend recaps because of the dividends coming early on in the life of the investment and often for an amount similar to what the investors had put in the deal. For example, the largest dividend recap in Europe has been that of Amadeus Global Travel Distributions by BC Partners and Cinven Group in 2007 for \$1.6 billion (to pay a record dividend of the same amount), less than two years after buying the company.²³ Another famous one is that of Edgar Bronfman Jr. and PE buyout firms THL Partners, Bain Capital, and Providence Equity Partners. They purchased Warner Music Group in 2004 and a year later they received about \$1.4 billion of dividend from a dividend recap.²⁴ In both cases, the dividend was higher than the original investment.

Some dividend recaps are quite infamous, however. For example, in 1993, Bain Capital invested \$6 million in GS Industries. Less than a year later it collected a dividend of \$36 million via a dividend recap. While the dividend recap is not the only culprit it contributed to increase the debt of the company which filed for bankruptcy in 2001; 4500 people lost their job (from the peak year).²⁵

²² <http://www.bloomberg.com/apps/news?pid=newsarchive&sid=a.viLGhVPark>

²³ <http://www.bloomberg.com/apps/news?pid=newsarchive&sid=a.viLGhVPark>

²⁴ <http://dealbook.nytimes.com/2011/05/06/how-well-did-warner-musics-investors-do/>

²⁵ <http://www.politifact.com/truth-o-meter/statements/2012/may/16/barack-obama/obama-ad-claims-romney-bain-left-misery-wake-gst-s/>

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Appendix D: Enterprise Value, Multiples, Relative Valuation and the modelling of Illiquid Investments

Enterprise value (EV) is the total economic value of the enterprise which is equal to all capital claims on the company. Hence, the enterprise value of a company refers to the present value of all future free cash flows from operations that are generated by a company's economic assets. This value equals the sum of investors' claims on the assets, as represented by the company's equity and net debt positions.

As the enterprise value is determined by future cash flows, its value changes when expectations about the amount, riskiness, or opportunity costs, of future cash flows change. This is the case when the situation for a company, the industry within which it operates, or the whole economy improves or worsens. When calculating the enterprise or equity value of a company, one accounts for a company's "net" debt position, which equals the amount of a company's long and short-term interest-bearing liabilities minus any cash and short-term investments. Cash and short-term investments are deducted as they could immediately be used to repay an equal fraction of a company's debt, or could be taken out after a takeover and used to recoup a part of an acquirer's purchase price.

For a publicly listed company, the **equity value** equals the **market capitalization** of a company, which is the total dollar value of all outstanding shares (= number of shares multiplied by current price per share). For a private company, the share price is not observed, so the equity value needs to be estimated has to be estimated by using comparable companies or transactions. **Comparable companies** are publicly listed companies of similar size that operate in the same industry. **Comparable transactions** are recent mergers, acquisitions or buyouts that involved similar size companies operating in a similar industry. From the value of those companies and transactions, **multiples** can be derived and be applied to the company's earnings measures to determine the enterprise value.

Multiple (or earnings multiple) is the ratio of a company's enterprise value and a performance measure. The most commonly used performance measure is a company's earnings before interest, taxes, depreciation and amortization (**EBITDA**) over the Last Twelve-Months (**LTM**), as this represents a company's ability to generate cash from its current operations.

EBITDA is a measure of cash flow calculated as: Revenue - Expenses (excluding tax, interest, depreciation and amortization). By not including interest, taxes, depreciation and amortization, we can clearly see the amount of money a company brings in and that could be used to cover any loan payments.

Other measures, and probably more pertinent measures, are EBITDA-Capex and EBIT. EBITDA-Capex measures a company's remaining cash after its investment activities. This provides a better estimate of the amount of money that can be used to pay interest expenses and taxes, with the remainder being at the disposal of the company's owner. In the case of LBOs any remaining free-cash flow is usually used to repay debt principal. Capex includes both reinvestments in a company's maturing long-term assets and expenditures for future growth. As a result, Capex can be volatile, due to changes in investment activity, and should be compared to previous years' levels. In contrast, a company's EBIT deducts depreciation from cash flow, and

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hence the impact of investment activity is smoothed according to the assets' depreciation schedules. Nevertheless, when using EBIT multiples, one should compare the amount of amortization with previous year's numbers as, for example, goodwill impairments might bias the EBIT in a particular year.

The multiple that is applied to earnings measures – to arrive at the valuation of the firm – depends on many related factors, including:

- The expectations about the growth of the economy/industry
- The expectation of growth of the company within its industry
- The current level of interest rates
- The capital intensity of a company, especially when using EBITDA as the performance measure

In addition, one has to consider adjustments to the multiples. Factors to consider include:

- A control premium for a publicly traded company or an illiquidity discount for a privately held company
- Differences in capital structure, as tax shields resulting from increased debt impact on enterprise values
- Differences in operational risk, which may result in more volatile earnings
- Trends in the overall market since the occurrence of recent transactions
- Whether the earnings measures are “normal”, or include exceptional revenues or costs that are unlikely to recur in the future
- Whether there are any advantages or disadvantages that justify a premium/discount

Immediately after the transaction (i.e. closing of the deal) a company's equity value equals the amount of equity a private equity fund has invested in the company. Since the equity value of a company at exit will equal the capital that is returned to the fund, and hence determines the return on the fund's initial equity contribution, private equity firms are keen to increase a company's enterprise value as much, and as fast, as possible following the LBO. To increase the equity value, one can either (1) decrease the amount of debt or (2) increase the enterprise value (see appendix D). To decrease debt, one needs to pay off as much of the debt as possible during the holding period. To increase the enterprise value of a company, recall from appendix D that $EV = \text{Multiple} * \text{performance}$. Hence, there are two options to increase EV:

- (1a) Increase the performance measure of a company (e.g. its Ebitda)
- (2) Increase the multiple that the market will apply to a company at exit, i.e. exiting the company at a time when there are higher growth expectations for an economy or an industry, or improving the expected company earnings growth.

Importantly, the three levers of increasing the equity value (1, 2a, 2b) are not mutually exclusive. Growth of a company's EBITDA triggers a higher EV at exit and may also trigger a higher multiple at exit. In addition it may trigger a fast repayment of debt. It is therefore difficult, yet instructive to decompose the source of value addition in a transaction.

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Appendix E: Structuring the equity

It is also instructive to understand the monetary incentives provided to top executives. To align interests between the private equity fund and the management of a portfolio company, the management is expected to invest alongside the private equity fund into the equity of an LBO. At this point it becomes relevant how much of its own wealth the management puts into an LBO and how their equity investment is structured.

Note that if the management puts too much of its own wealth into the company it might become excessively risk-averse. If the management's contribution is too small it might not focus enough on necessary changes and implementation. As a rule of thumb, management is expected to contribute between 20% and 50% of its own wealth into a deal. In the case of public-to-private transactions, management would usually roll-over a part or all of its shares and stock options into the equity of the post-transaction company. In the case of Hilton, the CEO was appointed by Blackstone when the transaction closed. This means that the CEO must have bought some of the equity at closing.

Even though CEOs may put up to 50% of their own wealth into the company, their equity stake may be relatively small. This means that any extra \$1 of equity value added to the company would translate into a small amount for the CEO. This issue is precisely why CEOs of public companies receive stock options. In private equity transactions, in a sense, executive stock options are given via a slicing of the equity into two parts: preferred equity and common equity. By giving management only common equity any extra \$1 of equity value translates into a large payout for CEOs.

In the case of Hilton, assume that the CEO put only \$10 million and that there is \$5.5 billion of equity split between \$5 billion of preferred equity earning 12% per year and \$500 million of common equity. The CEO then has 2% of common equity. At the time of the IPO, the value of the preferred equity would be about $5 * 1.12^{5.5} = \$9.3$ billion. The total equity value was \$19.7 billion, thus let's say that common stock was worth \$10 billion. In this case, the CEO stake would be worth \$200 million, which is 20 times what the CEO invested in the deal. Without this structuring of the equity tranche, the CEO stake would have been worth less than 0.2% and the value at the time of the IPO would have been (only) \$34 million.

Exhibit 1: Top 10 Worldwide Hotel Groups by Room Numbers (2007)

Rank 2007	Rank 1995	Group	Country	Hotels		Rooms		Growth in Rooms	
				2007	1995	2007	1995	Change	%
1	2	InterContinental	GB	3,741	1,925	556,246	356,800	199,446	55.9%
2	1	Wyndham	USA	6,473	4,208	543,234	413,891	129,343	31.3%
3	6	Marriott	USA	2,776	874	502,089	184,995	317,094	171.4%
4	7	Hilton	USA	2,901	388	497,738	147,457	350,281	237.5%
5	5	Accor	FRA	4,121	2,265	486,512	256,607	229,905	89.6%
6	3	Choice	USA	5,316	3,358	429,401	293,706	135,695	46.2%
7	4	Best Western	USA	4,164	3,409	315,401	280,144	35,257	12.6%
8	8	Starwood	USA	871	425	265,598	132,477	133,121	100.5%
9	-	Carlson	USA	945	349	145,933	79,882	66,051	83.6%
10	-	Global Hyatt	USA	733	167	141,017	77,511	63,499	81.9%

Source: MKG Consulting Database

Exhibit 2: Comparable Companies

(USD in millions, except share price data)	Share Price	Market Cap	Total Debt	Enterprise Value	LTM EBITDA	EV/ EBITDA
Marriott	42.77	10,706	2,234	19,000	1,379	13.8x
Starwood	67.07	1,427	2,606	16,874	1,180	14.3x
Wyndham	36.26	6,000	3,132	9,568	837	11.4x
Choice	39.57	2,613	184	2,762	177	15.6x
Harrah's Entertainment	66.43	12,383	10,838	22,640	2,342	9.7x
Hilton	33.47	13,045	7,471	20,479	1,680	12.2x

Source: Capital IQ, WRDS. Data as of June 29, 2007, except Harrah's Entertainment which is as of September 29th, 2006, the last trading day prior to the takeover announcement.

Exhibit 3: Hilton Sum-of-the-Parts Valuation (as of June 29, 2007)

Segment	Comparable Company	Avg Mult	Hilton	
Owned and leased	<u>Accor</u>			
	<u>Extended Stay America</u>			
	LTM	1,752.0	224.8	957.1
	Market Cap	19,676.3		
	Net Debt	1,425.3		
	Enterprise	20,526.8		12,348.3
Deal Value		3,166.6		
EV/EBITDA	11.7x	14.1x	12.9x	
Managed and Franchised	<u>Choice</u>			
	LTM	177.1		612.8
	Market Cap	2,613.2		
	Net Debt	149.1		
	Enterprise	2,762.3		9,558.2
	Deal Value			
EV/EBITDA	15.6x		15.6x	
Timeshare	<u>Vail Resorts</u>			
	<u>Harrington</u>			
	LTM	230.5	2,360.7	110.1
	Market Cap	2,374.4		
	Net Debt	250.1		
	Enterprise	2,563.6		1,287.6
Deal Value		27,892.5		
EV/EBITDA	11.6x	11.8x	11.7x	
Enterprise Value			23,194.1	

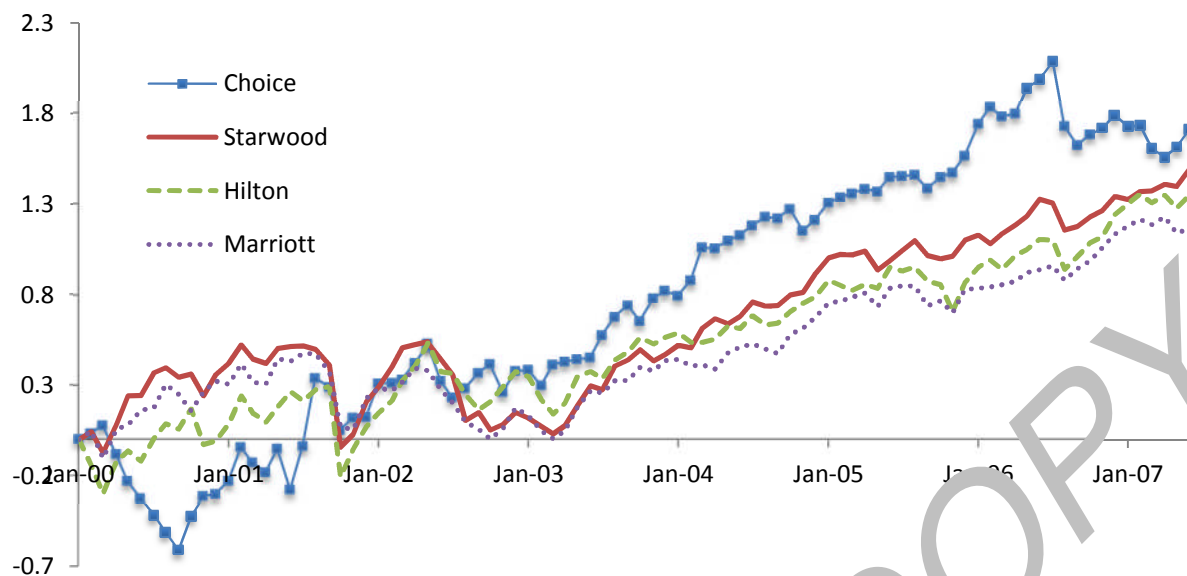
Source: Company filings, Capital IQ

Exhibit 4: Financial performance of Hilton and peer companies (1995-2006)

(USD in)	1995	2000	2001	2002	2003	2004	2005	2006	CAGR
Revenue									
Hilton	3,555	4,345	3,952	3,816	3,819	4,146	4,437	8,126	7.8%
Marriott	6,255	7,911	7,768	8,222	8,712	9,778	11,129	11,995	6.1%
Starwood	5,396	4,945	4,633	4,588	4,630	5,368	5,977	5,979	0.9%
Choice	213	353	341	366	386	428	477	545	8.9%
EBITDA									
Hilton	497	1,235	1,023	951	849	988	1,104	1,715	11.9%
Marriott	398	957	642	642	641	741	883	1,275	11.2%
Starwood	674	1,449	1,094	1,039	856	1,084	1,229	1,145	4.9%
Choice	54	104	86	116	125	135	153	176	11.3%

Source: Company filings, Capital IQ

Exhibit 5: Comparison of (log of) Cumulative Stock Returns (Jan. 2000 – Jun. 2007)



Source: WRDS, own calculations

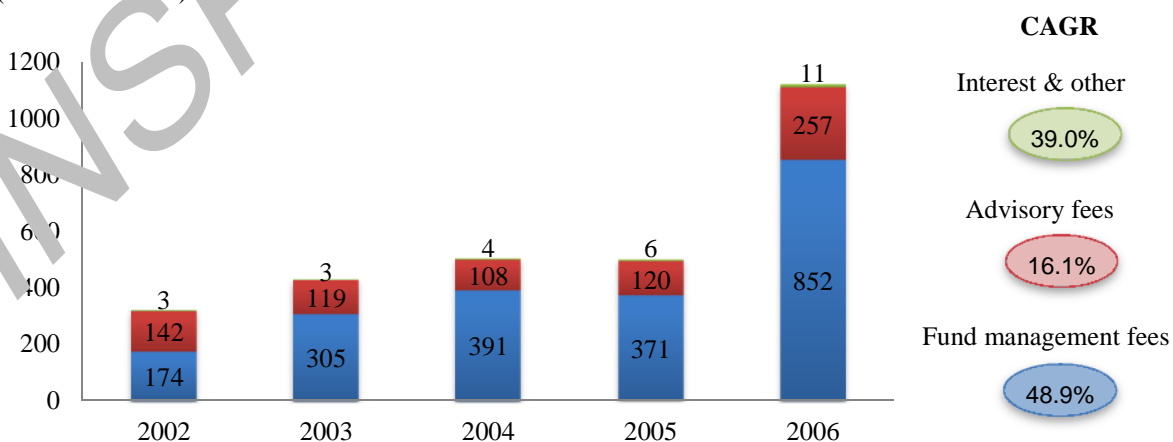
Exhibit 6: Top 5 PE Firms by AUM (2007)

Rank	PE Firm	Asset Under Management (\$bn)
1	Blackstone Group	79
2	Carlyle Group	59
3	Bain Capital	40
4	KKR	30
4	Texas Pacific Group	30

Source: WSJ

Exhibit 7: Revenue Contribution and CAGR by Business Segment (2002-2006)

(USD in millions)



Source: Blackstone company filing (2007)

Exhibit 8: Blackstone's Private Equity and Real Estate Funds Raised (as of 2007)

Fund	Vintage	Fund Size (mn)
Blackstone Capital Partners I	1987	800 USD
Blackstone Capital Partners II	1994	1,271 USD
Blackstone Capital Partners III	1997	3,750 USD
Blackstone Capital Partners IV	2003	6,450 USD
Blackstone Capital Partners V	2006	21,700 USD
Blackstone Real Estate Partners I	1994	485 USD
Blackstone Real Estate Partners II	1996	1,300 USD
Blackstone Real Estate Partners III	1999	1,500 USD
Blackstone Real Estate Partners IV	2003	2,500 USD
Blackstone Real Estate Partners V	2006	2,250 USD
Blackstone Real Estate Partners VI	2007	10,000 USD
Blackstone Real Estate Partners International I	2001	800 EUR
Blackstone Real Estate Partners International II	2006	1,550 EUR

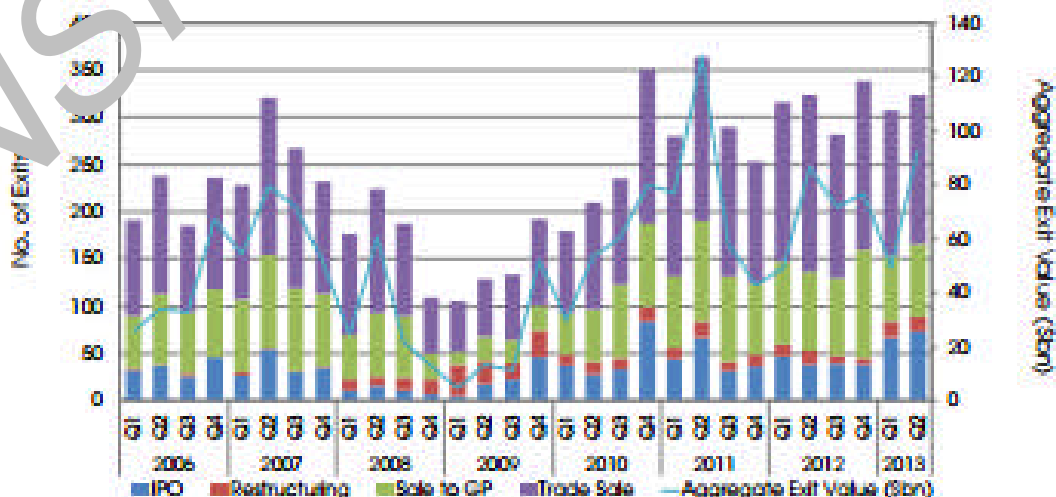
Source: Preqin

Exhibit 9: Annualized IRR Since Inception by Fund Type (through Dec 31, 2006)

Fund Type	Year of Inception	Combined Fund Level Annualized IRR or Return Since Inception	Annualized IRR or Return, Net of Fees, Since Inception
Corporate private equity	1987	31.8%	22.8%
Real estate opportunity	1991	31.2%	29.2%
Funds of hedge funds	1990	13.0%	11.9%
Mezzanine	1999	16.0%	9.3%
Distressed securities hedge	2005	11.5%	7.9%
Equity hedge	2006	11.6%	8.9%
Closed-end mutual funds:			
The India Fund	2005		43.9%
The Asia Tigers Fund	2005		42.5%

Source: Blackstone company filing (2007)

Exhibit 10: Global Number of Private Equity-Backed Exits by Type (Q1 2006- Q2 2013)



Source: Preqin

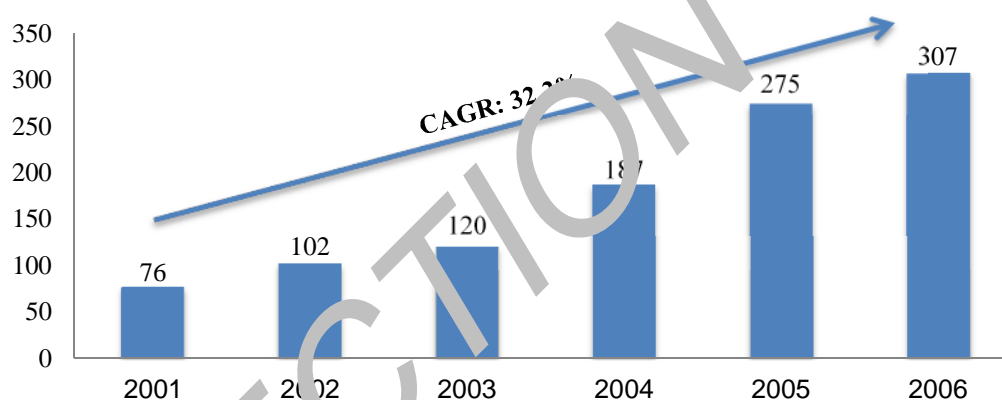
Exhibit 11: Top 10 Real Estate Funds Raised

Fund	Firm	Vintage	Fund Size (\$mn)	Net IRR (%)
Blackstone Real Estate Partners VI	Blackstone Group	2007	10,900	8.8
Morgan Stanley Real Estate Fund VI Intl.	Morgan Stanley Real Estate Investing	2007	8,000	-38.1
Lone Star Fund VI	Lone Star Funds	2008	7,500	15.2
Blackstone Real Estate Partners V	Blackstone Group	2006	5,250	8
Lone Star Fund V	Lone Star Funds	2005	5,000	10.6
Lone Star Fund IV	Lone Star Funds	2001	4,200	30.8
Morgan Stanley Real Estate Fund V Intl.	Morgan Stanley Real Estate Investing	2006	4,200	10.1
Colony Investors VIII	Colony Capital	2006	4,000	n/a
Beacon Capital Strategic Partners V	Beacon Capital Partners	2007	4,000	-17
MGPA Asia Fund III	MGPA	2007	890	0.7

Source: Preqin

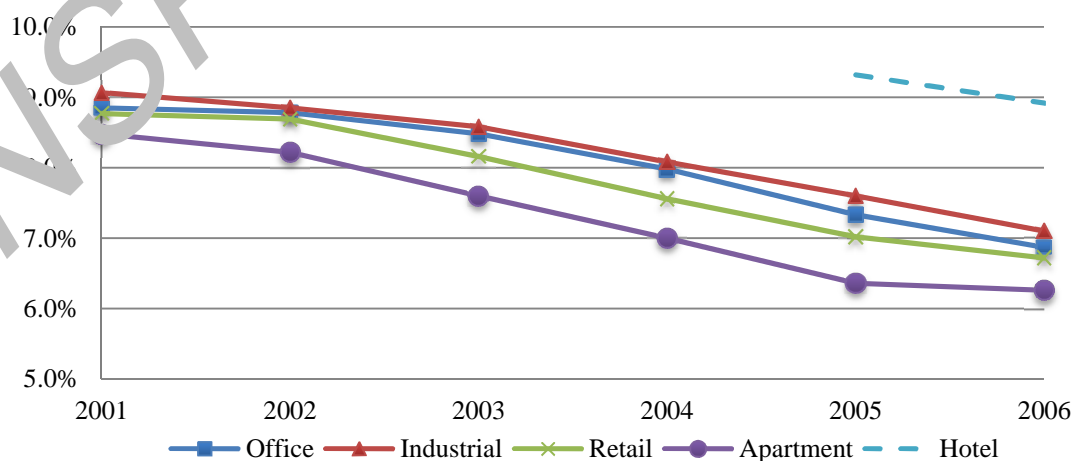
Exhibit 12: U.S. Commercial Real Estate Transaction Volume (2001-2006)

(USD in billions)



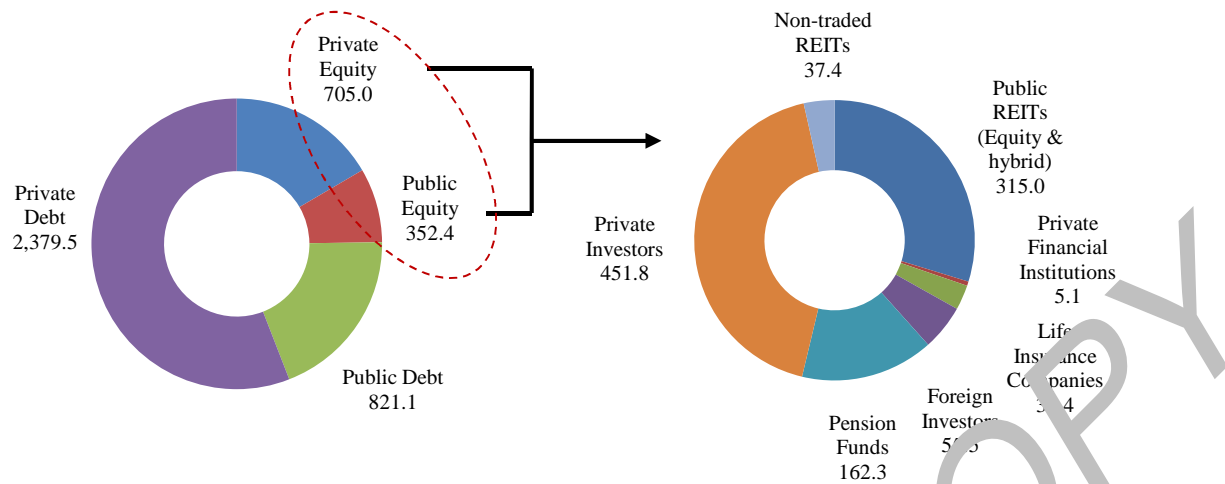
Source: Real Capital Analytics and NAREEF

Exhibit 13: Average Transaction Cap Rate for U.S. Core Properties (\$2.5 mln+, 2001-2006)



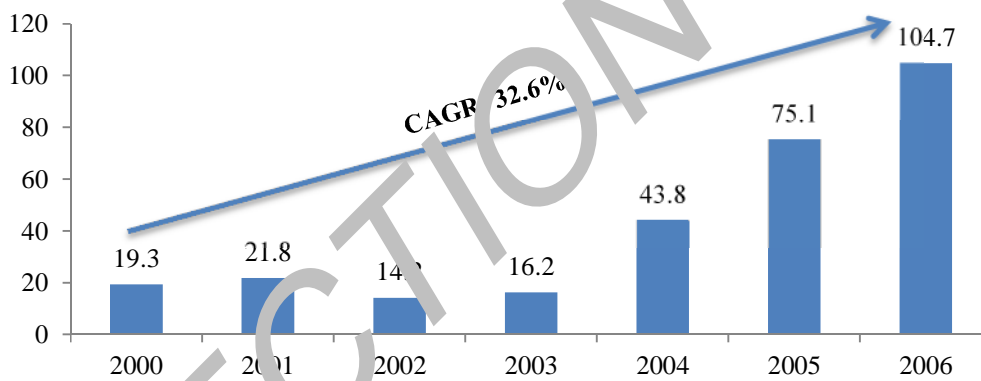
Source: Real Capital Analytics

Exhibit 14: The US Institutional real estate investment universe and capital sources (2006)
(USD in billions)



Source: Emerging Trends in Real Estate 2007, Urban Land Institute and PriceWaterhouseCooper

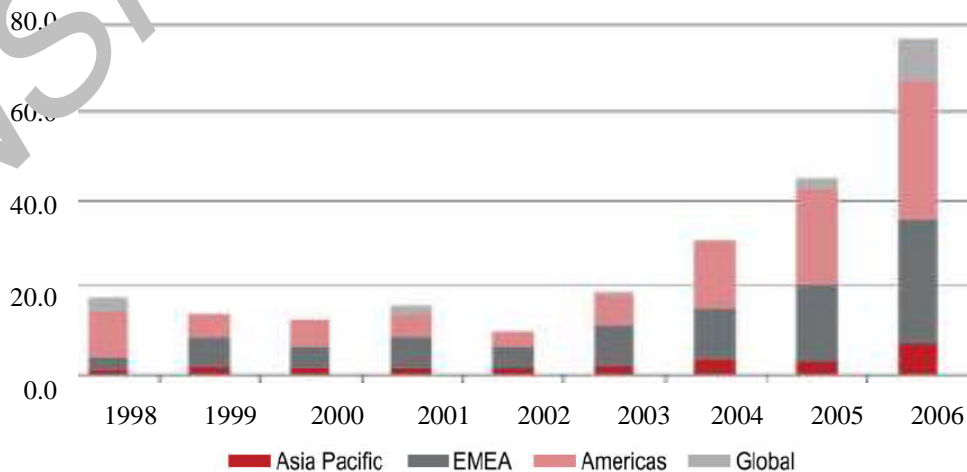
Exhibit 15: Aggregate Global Private Equity Real Estate Capital Raised (2000-2006)
(USD in billions)



Source: Preqin

Exhibit 16: Global Hotel Transactions Volume (1998-2006)

(USD in billions)

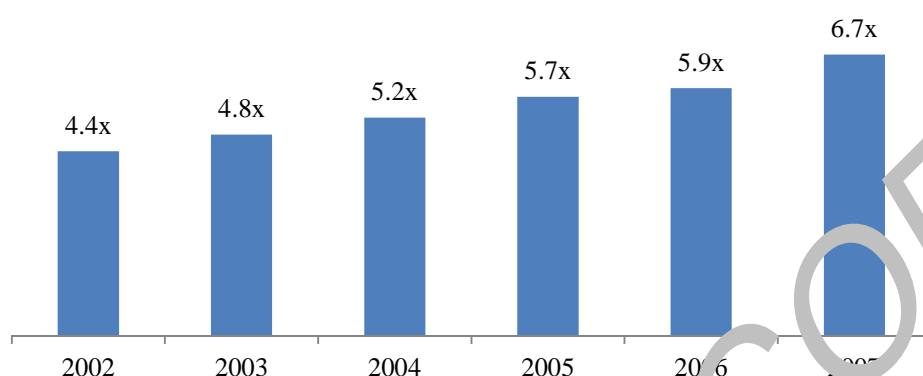


Source: Jones Lang LaSalle Hotels

Exhibit 17: Historical annualized 3-months USD LIBOR (2001-2013)

(%)	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
LIBOR	3.77	1.80	1.21	1.62	3.57	5.20	5.30	2.93	0.68	0.34	0.34	0.43	0.27

Exhibit 18: Evolution of Debt/EBITDA ratio (2002-2007)



Source: Deutsche Bank

Exhibit 18: Capital Structure for TXU Corp. LBO (February 2007)

	Amount (\$mln)		Pricing (spread over LIBOR)	Multiple of EBITDA
Enterprise value	44,972			8.2x
Total Equity	8,300			1.5x
	(18.5%)			
Debt				
Term Loan B	16,450	7 years	3.50%	3.0x
Senior Unsecured Notes 1	5,000	8 years	10.25%	
Senior Unsecured Notes 2	1,750	9 years	10.50% + PIK	
Senior Unsecured Notes 3	2,000	10 years	10.875%	
Senior Unsecured Notes 4	2,500	10 years	11.25% + PIK	
Senior Subordinated Notes	8,972	10 years	6.07%	
Total Debt	36,672			6.6x
	(81.5%)			

Exhibit 19: Capital Structure for Reader's Digest LBO (November 2006)

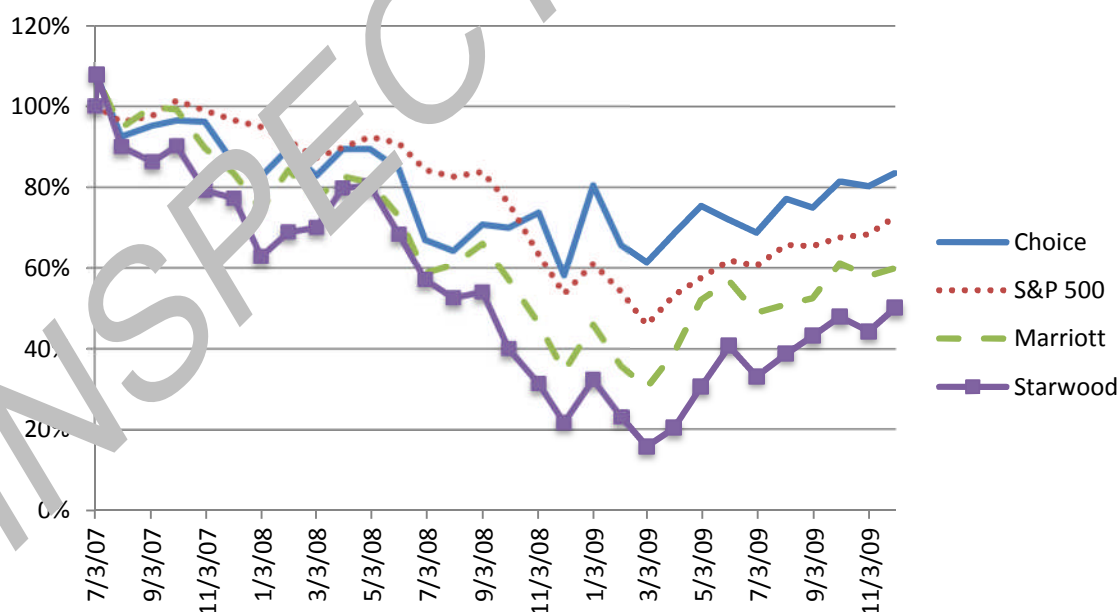
	Amount (\$mln)	Term	Pricing (spread over LIBOR)	Multiple of EBITDA
Enterprise value	2,335			24.2x
Total Equity	425			4.4x
	(18.2%)			
Debt				
Term Loan B	1,310	7 years	2.00%	13.6x
Senior Subordinated Notes	600	10 years	9.00%	
Total Debt	1,910			19.8x
	(81.8%)			

Exhibit 20: LBO Model for Hilton using Management Projections for Ebitda

LTM Ebitda	1,688		Ebitda CAGR	11.3%
EV Multiple at Entry	15.7x		Tax Rate	30.0%
EV Multiple at Exit	15.7x		LIBOR at Entry	5.07%
Sources of Funds				
Term loan B	14,000	(53%)	Senior Debt Margin	2.75%
Senior Unsecured Notes	6,800	(25.5%)	Junior Debt Margin	4.91%
Equity	5,700	(21.5%)		

	2007E Year 0	2008E Year 1	2009E Year 2	2010E Year 3	2011E Year 4	2012E Year 5	2013E Year 6
Senior Debt at Year-End	14,000	14,000	14,000	14,000	14,000	14,000	14,000
Junior Debt at Year-End	6,800	6,800	6,800	6,800	6,800	6,800	6,800
EBITDA	1,603	1,798	2,075	2,335	2,605	2,773	3,046
D&A/Capex		414	477	537	591	661	701
EBIT		1,384	1,598	1,798	2,007	2,212	2,345
Interest on Senior Debt		1,095	1,095	1,095	1,095	1,095	1,095
Interest on Junior Debt		678	678	678	678	678	678
EBT		-389	-176	25	233	439	572
Taxes		0	0	7	71	133	173
Net Earnings		-389	-176	7	163	306	399
Enterprise Value	26,500						48,047
Equity Value	5,700						27,247

Exhibit 21: S&P 500 and Peer Companies stock price (as a percentage of 7/3/2007 price)



Source: Bloomberg, own calculations

Exhibit 22: US IPO market statistics

Year	Number of IPOs	Median Age	VC-backed		Buyout-backed	
			No.	%	No.	%
1980	71	6	23	32%	1	1%
1981	192	8	53	28%	1	1%
1982	77	5	21	27%	2	3%
1983	451	7	118	26%	9	2%
1984	173	8	45	26%	3	2%
1985	187	9	39	21%	17	9%
1986	393	8	79	20%	42	11%
1987	285	7	67	24%	42	15%
1988	102	8	33	32%	8	8%
1989	113	7	40	35%	10	9%
1990	110	8	42	38%	14	13%
1991	286	9	116	41%	72	25%
1992	412	10	138	33%	98	24%
1993	509	9	171	34%	79	16%
1994	403	8	130	32%	22	5%
1995	461	7	188	41%	29	6%
1996	676	7	263	39%	34	5%
1997	474	9	134	28%	37	8%
1998	282	8	76	27%	31	11%
1999	476	5	274	58%	32	7%
2000	381	6	243	64%	31	8%
2001	79	12	32	41%	21	27%
2002	66	15	23	35%	20	30%
2003	63	11	24	38%	21	33%
2004	173	8	78	45%	44	25%
2005	160	13	46	29%	67	42%
2006	157	13	54	34%	68	43%
2007	159	9	70	44%	32	20%
2008	21	14	9	43%	3	14%
2009	41	15	12	29%	18	44%
2010	93	10	40	43%	27	29%
2011	81	11	44	54%	18	22%
2012	93	12	48	52%	27	29%
2013	157	12	76	48%	36	23%

Source: Jay Ritter website

Exhibit 23: Financial performance of Hilton and Peer Companies (2006-2013)¹

(USD in millions)	2006	2007	2008	2009	2010	2011	2012	2013	CAGR
Revenue									
Hilton	8,875	8,875	7,576	8,068	8,783	9,276	9,735		2.0%
<i>YoY Growth</i>			2.4%	-14.6%	6.5%	8.9%	5.6%	4.9%	
Marriott	12,990	12,879	10,908	11,691	12,317	11,814	12,784		-0.3%
Starwood	5,999	5,754	4,756	5,071	5,624	6,321	6,115		0.3%
Choice	615	642	564	596	639	692	724		2.8%
<i>Peer Average</i>			-1.7%	-15.8%	7.0%	7.0%	1.3%	4.2%	0.0%
EBITDA									
Hilton	1,603	1,703	1,211	1,564	1,753	1,956	2,210		5.5%
<i>YoY Growth</i>			6.2%	-28.9%	29.1%	12.1%	11.6%	13.0%	
Marriott	1,580	1,298	898	885	992	1,217	1,325		-2.9%
Starwood	1,356	1,157	793	879	1,032	1,220	1,263		-1.2%
Choice	198	200	164	171	180	201	204		0.5%
<i>Peer Average</i>			-15.3%	-30.1%	4.3%	13.9%	19.7%	5.8%	-1.9%

Source: Company filings, own calculations

¹ Adjusted EBITDAs were used for comparison. Hilton's 2007 EBITDA comes from management projections, and 2008 and 2009 EBITDAs are based on own calculations using the following formula: Operating income + D&A + Impairment losses. YoY stands for 'year on year'.