

PART

One

Market Analysis and Forecasts

- “Overview of the U.S. Real Estate Market” analyzes the national and major metro markets, both in terms of macroeconomic fundamentals and real estate market drivers such as supply, demand, rent levels, and vacancies.
- “Forecasting the U.S. Market” projects real estate market fundamentals for major metros around the country. We forecast the NCREIF index based on our proprietary models using data from leading data and information providers.
- “Recession Simulation and Its Effects on Real Estate” analyzes the effects of two different types of economic downturns on property markets: a short and shallow downturn and a severe prolonged recession. This is scenario planning writ large with detailed simulations down to the property sector and metro level.
- “Subprime Fallout: The Impact on Commercial Real Estate” addresses the shock to the economy and investigates ramifications to the commercial real estate industry.
- “Capital Markets: Dramatic Shifts and Opportunities” assesses the current seizure in capital markets and the real and possible effects on commercial real estate. It looks at the challenges of reduced capital and also the potential opportunities created in the process.

- “The Bid-Ask Problem and Game Theory” assesses the dramatic fall in transaction volume since the beginning of the subprime fallout and the yawning gap between sellers and buyers. It utilizes a game-theoretic model to explain how this has occurred and how transactional liquidity may resume.

CHAPTER 1

Overview of the U.S. Real Estate Market

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A major transition for U.S. commercial real estate occurred in 2007. Triggered by the subprime fallout and credit crisis, the outsized investment returns of the past several years came to an end. With tightening lending and underwriting standards, speculative investments and construction projects are likely to be more limited, resulting in more constrained supply and healthier fundamentals over the long term. Looking forward, we anticipate that 2008 and 2009 will be fraught with challenges as well as opportunities.

OUTLOOK FOR U.S. ECONOMY: NEAR-TERM SLOWDOWN

The U.S. economy is going through a slowdown, if not a recession, as a result of the subprime fallout and residential housing market downturn. Real gross domestic product (GDP) growth declined from 4.9% in the third quarter to 0.6% in the fourth quarter of 2007.² Job growth, turning

¹This paper was originally produced in spring 2008. The data, opinions, and forecasts have not been updated for book publication.

²U.S. Department of Commerce, Bureau of Economic Analysis—National Economic Accounts, “Gross Domestic Product: Fourth Quarter 2007 (Final),” <http://www.bea.gov/newsreleases/national/gdp/2008/gdp407f.htm> (accessed March 27, 2008).

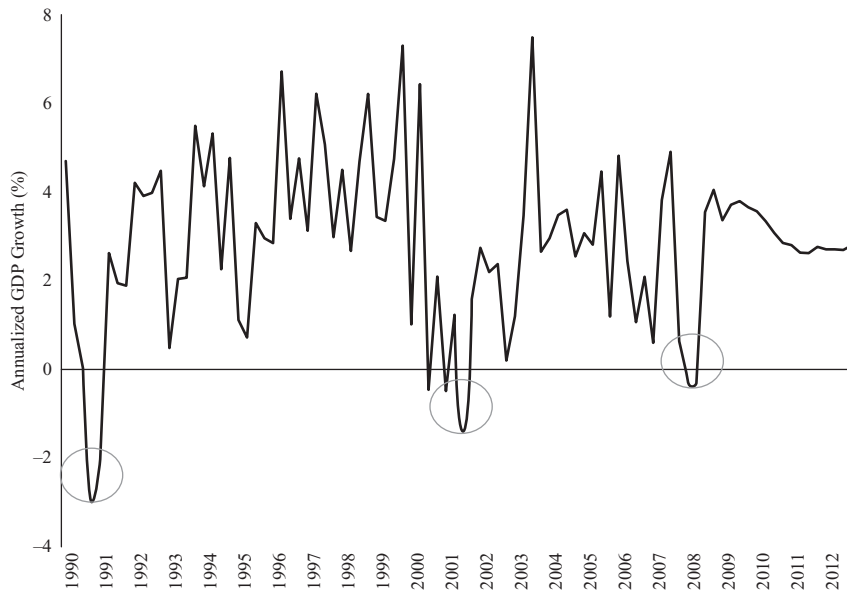


EXHIBIT 1.1 Consumer Spending: Annualized GDP

Source: ING Clarion Research & Investment Strategy and Moody's Economy.com, as of January 2008.

slightly negative in the first two months of 2008, has been decelerating since mid-2007 and is likely to be sluggish through year-end. In 2007, 1.1 million new jobs were created, compared to 2.1 million new jobs created in 2006.³ The 2007 year-end unemployment rate rose to 5.0% according to the Bureau of Labor Statistics, the highest level since 2005. While government and corporate spending remain solid, personal consumption is beginning to show weakness. Lackluster consumer spending could possibly lead to a mild recession in early 2008 (Exhibit 1.1).

The credit crunch and housing market downturn are the biggest risks to U.S. and global economic growth. The largely stalled credit pipeline and financing activities have severely curtailed investment and M&A projects. The for-sale housing market continues to soften due to tightening lending

³U.S. Department of Labor: Bureau of Labor Statistics, "Employment, Hours, and Earnings from the Current Employment Statistics Survey (National)," <http://www.bls.gov/ces/> (accessed March 21, 2008).

standards, low affordability, and excess supply in many regions. Home prices have fallen approximately 10% year-over-year in most markets, causing negative wealth effects and weakening consumer spending power.⁴ Some potential buyers—even those with strong credit—are holding off on purchases, waiting for even bigger discounts. We expect that the housing market will not reach the bottom until 2009.

Recently, crude oil has exceeded \$100 per barrel and retail gasoline prices remain elevated at over \$3 per gallon, another drag on consumer spending. Although the core consumer price index (CPI) is running at about 2.5% annually, surging energy and commodity prices and the declining value of the U.S. dollar are adding inflationary pressures.⁵ A rising inflation rate could lead to higher interest rates thereby decreasing demand for commercial real estate.

U.S. REAL ESTATE: FINDING VALUE IN A CHANGING MARKET

U.S. Real Estate Fundamentals

U.S. commercial real estate fundamentals are generally sound with solid rent growth, albeit at a slower pace than in recent years, and stabilizing vacancy rates in most core markets. Within the next several months, demand for space is expected to soften, along with the slowing U.S. economy, before reaccelerating in 2010–2011. In 2008, vacancy rates have risen moderately. Rent growth is expected to remain positive during the economic slowdown, but will increase at a slower pace.

On the supply side, construction pipeline forecasts across all property types are below their long-term averages (Exhibit 1.2). Higher construction costs and more stringent local entitlement processes have restrained the supply pipelines. Although construction activity has picked up, demand is expected to outpace supply over the next five years, which should bode well for new and existing investments. Profitable opportunities should exist for selected core investments and well-sponsored value-added and development projects.

⁴Standard & Poor's, "S&P/Case-Shiller Home Price Indices: Home Price Values—January 2008," http://www2.standardandpoors.com/spf/pdf/index/CS.HomePrice.History_032544.xls (accessed March 25, 2008).

⁵U.S. Department of Labor: Bureau of Labor Statistics, "Consumer Price Index: January 2008," <http://www.bls.gov/cpi/> (accessed February 20, 2008).

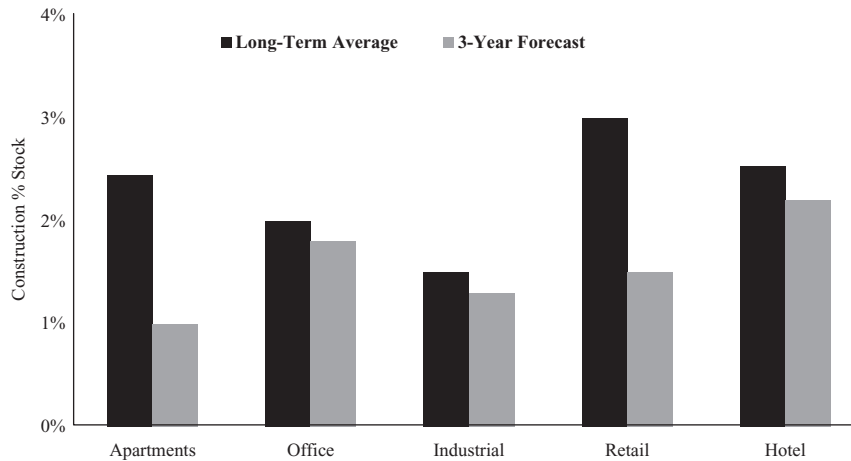


EXHIBIT 1.2 Construction Pipeline Forecasts (as of 2007)

Source: ING Clarion Research & Investment Strategy, TWR, REIS, and Smith Travel as of 2007Q4.

Private real estate investment continues to generate competitive risk-adjusted returns relative to other asset classes. In 2007, the private real estate index (NCREIF Property Index) achieved a strong total return of 15.9% (Exhibit 1.3). Office and hotel properties outperformed other property types. Office markets in the East and West and industrial markets in the West had significant gains. Looking forward, we expect that core real estate investment returns will likely be in the high single digits (between bonds and equities).

EXHIBIT 1.3 Historic Asset Class Performance (% annualized returns)

| Asset Class | 1 Yr | 3 Yr | 5 Yr | 10 Yr | Std Dev |
|------------------------------|------|------|------|-------|---------|
| NCREIF Property Index | 15.9 | 17.5 | 15.1 | 12.9 | 4.4 |
| S&P 500 | 5.5 | 8.6 | 12.8 | 5.9 | 17.3 |
| Dow Jones Industrial Average | 8.9 | 9.7 | 12.2 | 7.4 | 14.3 |
| Russell 2000 | 1.6 | 6.8 | 16.3 | 7.1 | 18.6 |
| Lehman Government Bond Index | 8.7 | 4.9 | 4.1 | 5.7 | 4.7 |
| T-bill (90 Days) | 4.7 | 4.2 | 3.0 | 3.6 | 1.8 |

Source: ING Clarion Research & Investment Strategy, NCREIF, NAREIT, and MorningStar as of December 31, 2007.



EXHIBIT 1.4 Bright Spots in the Economic Landscape
Source: ING Clarion Research & Investment Strategy and Moody's Economy.com, 2008.

Regional Outlook

We analyze major markets based on trends and forecasts in population growth, job growth, gross metro product (GMP), fundamentals of local economies, and health of the residential housing markets (Exhibit 1.4).

Despite the gloomy outlook of the U.S. economy in the near term, there are several expanding regions showing above-average growth and relatively healthy fundamentals (Exhibit 1.5). These markets are typically driven by high-tech, biotech, energy, commodities, international trade, housing affordability, and quality of life. Such factors may make these regions especially suitable for value-added and development investment projects.

Multifamily Market Outlook

Multifamily Market Fundamentals U.S. apartment market fundamentals are sound, supported by favorable demographic trends, a declining for-sale housing market, and a restrained construction pipeline. Members of the

EXHIBIT 1.5 Growth Drivers by Region

| Trend | Region | Comments |
|-------------|----------------------------|---|
| Expansion | Seattle/Portland | Strong high-tech, biotech, manufacturing, and trade |
| | San Francisco/San Jose | Strong high-tech, biotech, manufacturing, and trade |
| | Salt Lake City/Denver | Booming telecom, high-tech, commodity, and energy |
| | Texas | Booming energy, high-tech, high growth in population/jobs |
| | Atlanta/C Carolinas | High growth in population/jobs |
| Mixed | So. Cal./Las Vegas/Phoenix | Negative impact of housing markets on local economies |
| | Florida | Negative impact of housing markets on local economies |
| | Boston/NYC/DC | Potential pullback from the financial industry |
| Contraction | Minneapolis/Chicago | Weak population and job growth |
| | Detroit/Cleveland | Decline in population/manufacturing jobs |

Source: ING Clarion Research & Investment Strategy as of January 2008.

75-million-strong echo boomer⁶ cohort are entering the workforce and will constitute the primary demand for apartments as the population of primary renters (age 19–35 years) expands by 3.2 million over the next four years. Because of tightening lending standards, fewer renters will be able to afford homes, helping to boost apartment demand in the near term.

During 2007, the national apartment vacancy rate dropped 20 basis points (bps) to 5.6% according to Reis, Inc.; however, that rate is forecast to edge up to over 6.0% in 2008 and 2009 as job growth slows. Effective rent growth in 2007 was strong at 4.5%, with markets such as New York, San Francisco, San Jose, Stamford, northern New Jersey, and Seattle experiencing the largest rent increases. Looking forward, we expect apartment rent growth to slow to approximately 3–4% annually over the next five years. Transaction volume in 2007 was \$99.6 billion according to Real Capital Analytics (RCA), largely driven by the \$22 billion Archstone-Smith Trust deal, compared to \$91.7 billion in 2006.

⁶*Echo boomers*, also known as Generation Y, are the offspring of baby boomers born between 1986–1993.

Shadow Market Impacts Several markets, especially in Florida where condominium construction and conversion activities far outpaced demand, continue to be challenged with rising vacancy rates and depressed rent growth (Exhibit 1.6). Additionally, in markets where the for-sale housing sector is taking the hardest hit, some vacant, single-family homes are competing with Class A apartments, putting significant downward pressure on rent growth.

Multifamily Sector Outlook With the lowest cap rate among the four core property types, the apartment sector faces the greatest threat from rising cap rates. Moreover, job growth, the engine of apartment demand, has turned slightly negative for the first two months of 2008. The apartment markets with excess vacant condo or single-family homes will likely suffer the most (Exhibit 1.7).

After cap rate adjustments, new apartment investments in markets that are not suffering from excess shadow vacancy should perform well. Supply-constrained markets such as New York, San Francisco, San Jose, Los Angeles, Seattle, Boston, and northern New Jersey continue to be attractive. Furthermore, stressed assets such as vacant condominiums and selected land sites may offer opportunistic plays. Investment in Class B apartments in core markets can present opportunities, as these properties may attract echo boomers who are graduating from college.

Industrial Market Outlook

Industrial Market Fundamentals Supply and demand fundamentals of the industrial sector remained balanced through 2007. According to Torto Wheaton Research (TWR), the nationwide industrial vacancy rate was essentially static at 9.4%, but is expected to edge up to the long-term rate of 10% in 2008 and 2009 as the U.S. economy slows. Average rents rose 3.6% in 2007 and are expected to slow to an average annual growth rate of 3.0% over the next five years. On the supply side, industrial development activities are still modest nationwide, constrained by limited suitable building sites near coastal ports and soaring construction costs. In 2007, \$48.0 billion of industrial properties were traded according to RCA, compared to \$43.6 billion a year ago.

Expanding Global Trade and Strong Exports So far, the slowing economy has had a minor impact on the nation's demand for warehouse space, which is fueled by expanding global trade. The depreciating U.S. dollar has boosted export growth by more than 12% annually since 2003 (Exhibit 1.8). West Coast warehouse markets such as Southern California, San Francisco, and Seattle experienced low vacancy rates and strong rent growth. In addition,

EXHIBIT 1.6 Condominium Conversion and Shadow Market

| Market | 2003 Year-End Apt Inventory | 2003-2007Q3 Conversion | Inventory Reduction | 2007Q3 Apt Inventory | Estimated Shadow Inventory ^a | Percent of Apt Stock | Percent of Housing Stock ^b |
|----------------|--------------------------------|---------------------------|------------------------|-------------------------|---|-------------------------|---|
| Orlando | 136,521 | 31,813 | 23% | 111,458 | 23,953 | 21% | 2.8% |
| Ft. Lauderdale | 96,099 | 27,340 | 28% | 71,923 | 14,279 | 20% | 1.8% |
| Miami | 134,685 | 28,651 | 21% | 111,289 | 18,977 | 17% | 1.9% |
| Tampa | 157,708 | 21,935 | 14% | 142,991 | 22,572 | 16% | 1.9% |
| W. Palm Beach | 64,829 | 14,586 | 22% | 53,664 | 5,567 | 10% | 0.9% |
| Las Vegas | 135,285 | 15,394 | 11% | 123,843 | 9,988 | 8% | 1.3% |
| San Diego | 181,796 | 12,745 | 7% | 175,633 | 14,031 | 8% | 1.3% |
| DC Metro | 371,344 | 15,346 | 4% | 370,637 | 24,079 | 6% | 1.3% |
| Phoenix | 250,239 | 21,367 | 9% | 243,284 | 11,904 | 5% | 0.7% |

^aExcess vacant single-family homes, condominiums, and apartments vs. local norm as of 2007Q3. These units are either competing or likely to compete in the local rental market.

^bIncludes single-family homes, condominium, and apartments.

Source: ING Clarion Research & Investment Strategy, REIS, and Witten Advisors, 2007.

EXHIBIT 1.7 SWOT Analysis of Multifamily Market

| Strengths | Opportunities |
|--------------------------|----------------------------------|
| Echo boomers | Stressed assets |
| Moderate supply pipeline | Development |
| Weaknesses | Threats |
| Shadow vacancy | Cap rate decompression |
| Slowing job growth | Improving for-sale affordability |

vacancy rates in several R&D flex (San Jose) and manufacturing markets (Chicago and Charlotte) continued to improve.

Industrial Sector Outlook With expanding global trade projected for the next few years, markets in coastal ports and intermodal hubs are expected to continue to benefit. Investments in supply-constrained coastal markets

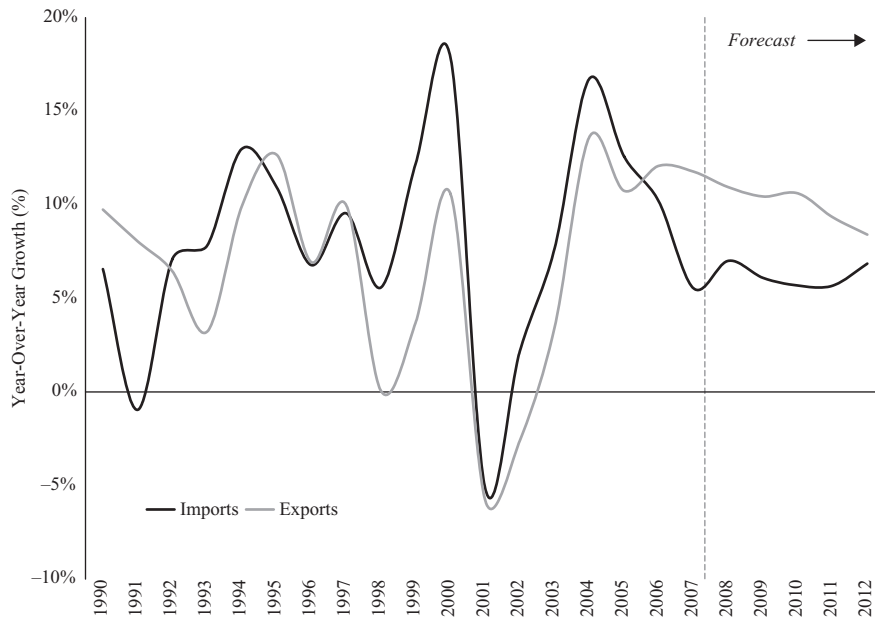


EXHIBIT 1.8 Export Growth

Source: ING Clarion Research & Investment Strategy and Moody's Economy.com as of January 2008.

EXHIBIT 1.9 SWOT Analysis of Industrial Market

| Strengths | Opportunities |
|--|--|
| Expanding global trade Surging US exports | Best port markets/gateways R&D/Flex |
| Weaknesses | Threats |
| Easy to build Decelerating imports | Potential supply Recession risk |

including Los Angeles, Orange County, Riverside, northern New Jersey, Seattle, and Miami remain attractive. Niche opportunities exist in markets such as Charleston, Houston, Savannah, Oakland, and Austin. R&D flex assets, especially in high-tech and biotech-concentrated markets such as San Jose and San Diego, may offer unique opportunities (Exhibit 1.9).

Office Market Outlook

Office Market Fundamentals The office sector is expected to face substantial headwinds in 2008 and possibly 2009 before recovering in 2010–2011. In 2007, several central business district (CBD) office markets experienced significant rent growth and declining vacancy rates, and the CBD office subsector achieved a remarkable 24.3% annual total return according to NCREIF. In particular, New York, San Francisco, Los Angeles, San Jose, Seattle, and Austin experienced notable declines in vacancy rates and near double-digit rent growth. Primarily driven by rising vacancy rates in suburban office markets, the 2007 national average vacancy rate edged up 50 bps to 13.1% according to TWR and is expected to spike to over 14.0% in 2008 and 2009 in response to a softer economy. Average office rents rose 9.8% in 2007 and are expected to increase by approximately 2–4% annually over the next five years. On the supply side, the construction pipeline will remain moderate through 2012. Driven by the sale and subsequent retrades of Equity Office assets, total office transaction volume surged to \$215.4 billion in 2007 according to RCA, significantly more than the \$138.2 billion in 2006.

Slow Growth of Office-Using Jobs The credit crunch and subprime losses are negatively impacting U.S. office employment, especially in the financial sector. Financial centers such as Manhattan, San Francisco, and Boston may be impacted as several large financial institutions have suffered huge losses. Although office employment growth is decelerating in the near term relative

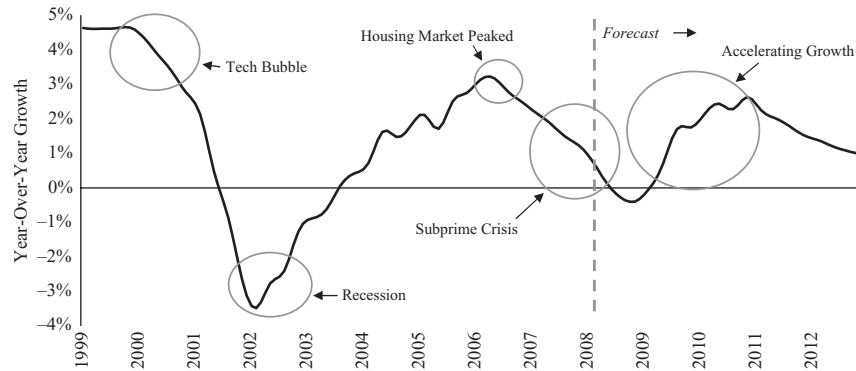


EXHIBIT 1.10 Annual Office Employment Growth

Source: ING Clarion Research & Investment Strategy and Moody's Economy.com as of January 2008.

to 2006, demand for office space is forecast to reaccelerate in 2009–2011 (Exhibit 1.10).

Office Sector Outlook Sensitized by the subprime situation, investors are increasingly seeking safety in high-quality office properties in core markets; however, the office sector has historically been relatively volatile. Selectivity in regard to market, property location, and pricing is increasing in importance. Recent transactions in markets such as Midtown Manhattan showed negative spreads between cap rates and the 10-year Treasury yield. Double-digit rent growth assumptions in underwriting must be carefully evaluated. Better investment opportunities may exist in the top secondary markets (Exhibit 1.11).

Deep, supply-constrained markets, such as New York, San Francisco, Los Angeles, and Washington, DC, still have bright, long-term prospects.

EXHIBIT 1.11 SWOT Analysis of Office Market

| Strengths | Opportunities |
|----------------------|-------------------------|
| Low vacancy in CBDs | Best secondary markets |
| Rent-growth momentum | Value-added/development |
| Weaknesses | Threats |
| High volatility | Pullback in financials |
| Slowing job growth | Recession risk |

Despite the near-term slowdown, most U.S. corporations (with the exception of financial institutions, home builders, and auto manufacturers) have strong balance sheets. Business services, information technology, finance, insurance, and management consulting are expected to regain robust job growth in 2009–2012. Consequently, knowledge-based and technology-concentrated office markets, including Boston, San Jose, Austin, and Seattle, are expected to continue to benefit. Furthermore, a modest office supply pipeline continues to justify value-added and development projects.

Retail Market Outlook

Retail Market Fundamentals The retail sector is under pressure due to falling home prices, a slowing job market, and the credit crisis. The residential housing downturn had an immediate impact on big-box retailers with those selling home furnishings, construction materials, and garden equipment experiencing the steepest declines. According to Reis, the national retail vacancy rate edged up 40 bps to 7.5% in 2007 and is expected to rise modestly through 2008 as consumer spending softens. Net absorption fell short of new construction, reflecting the hesitation from retailers and moderating retail sales. Average effective rent growth was only 2.9% in 2007, below the trend in recent years, and is expected to remain below 3.0% over the next three years.

Several West Coast markets, including Los Angeles, Orange County, San Jose, San Francisco, and Seattle, experienced low vacancy rates and strong rent growth in 2007. Overall, strong demographic trends, relatively low interest rates, rising wages, and resilient consumer spending should support the retail sector going forward. Transaction volume totaled \$72.1 billion in 2007 according to RCA, compared to \$54.8 billion a year ago.

Sluggish Consumer Spending In 2007, retail sales grew 4.1% according to Moody's Economy.com, the slowest pace since 2002. We expect that 2008 will be a more challenging year for consumer spending (Exhibit 1.12). With a softening economy and fears of an imminent recession, retailers are focusing on same-store profitability and are expected to temper expansion plans over the next 12 months, negatively impacting rent growth. Most recently, major retailers including Macy's, CompUSA, and Sharper Image announced the closing of hundreds of underperforming stores. Malls may experience rising vacancies as consumer spending continues to soften. Even upscale retailers such as Tiffany & Co. and Coach reported disappointing U.S. sales, suggesting pullback on the part of high-end consumers.



EXHIBIT 1.12 U.S. Retail Sales: Personal Disposable Income

Source: ING Clarion Research & Investment Strategy and Moody's Economy.com as of January 2008.

Retail Sector Outlook Despite near-term weakness, the demand for retail space is expected to recover in 2010 and 2011, although the anticipated recovery is largely dependent on the rebound of economic growth and the housing market. Energy prices and inflation could continue to weigh on consumer sentiment. Markets such as New York, Washington, DC, Miami, West Palm Beach, Houston, and several West Coast metros continue to be attractive. Some retail stores may go out of business during 2008, providing value-added opportunities to upgrade tenant quality and mix. Because supply is forecast to lag demand over the next five years, opportunities exist for redevelopment and selective development in high-growth markets (Exhibit 1.13).

Hotel Market Outlook

Hotel Market Fundamentals The U.S. hotel sector has experienced strong growth and is in the middle of its current cycle that began in 2002. Advanced bookings from several large hotel chains suggest solid demand in 2008. According to Smith Travel Research, the 2007 national average occupancy rate stabilized at 63.2%. Revenue per available room (RevPAR) grew by 5.7% in 2007 and is expected to increase approximately 3–4% in 2008–2010 (if the economy can avoid a severe recession). Occupancy rates are expected

EXHIBIT 1.13 SWOT Analysis of Retail Market

| Strengths | Opportunities |
|---------------------------|------------------------------|
| Growing disposable income | Redevelopment |
| Long-term leases | Selective development |
| Weaknesses | Threats |
| Negative wealth effects | Lackluster consumer spending |
| Slowing job growth | High energy/healthcare costs |

to drop modestly in 2008, and RevPAR growth will be achieved mainly through increasing average daily rates (ADR).

On the supply side, the hotel pipeline is still below its long-term average, although construction is projected to increase substantially after 2008. Luxury and Upper Upscale segments are relatively insulated because of high construction costs and more difficult local entitlement processes. Investors continued to show strong interests in hotel assets in 2007 with hotel transaction volume totaling \$87.9 billion according to RCA, more than double that of 2006. A particularly notable transaction in 2007 was the \$26 billion privatization of the Hilton Hotels by Blackstone.

Declining U.S. Dollar Fueling Hotel Demand The U.S. dollar has depreciated approximately 35% against major currencies since 2001 and is expected to remain weak for the foreseeable future.⁷ As a result, demand from international travelers continues to grow. Meanwhile, domestic travelers, concerned about reduced spending power overseas, are increasingly traveling within the U.S. International gateway cities and vacation destinations, including New York City, Los Angeles, Miami, Orlando, San Francisco, Honolulu, Las Vegas, and Washington, DC, should have high growth potential for business and leisure travel (Exhibit 1.14).

Hotel Sector Outlook Despite strong momentum, hotel returns could be at risk should a recession occur. The hotel sector is volatile because hotels operate essentially by one-night leases, and hotel demand is highly correlated with GDP growth. Businesses and consumers normally reduce travel during a severe economic downturn. Caution should be observed in core hotel investments over the next six months as the national economic downturn plays out. Nonetheless, a recession could present excellent opportunities

⁷Moody's Economy.com, "Weighted Average Exchange Value of U.S. Dollar: Broad Index, for United States," *DataBuffet.com*, <http://www.databuffet.com> (accessed March 2008).

EXHIBIT 1.14 Overseas Visitors to Selected U.S. Destinations in 2006

| Rank | Metro | Market Share | Visitation (000) |
|------|---------------|--------------|------------------|
| 1 | New York City | 28.7% | 6,219 |
| 2 | Los Angeles | 11.6% | 2,514 |
| 3 | Orlando | 9.2% | 1,993 |
| 3 | San Francisco | 9.2% | 1,993 |
| 5 | Miami | 9.1% | 1,972 |
| 6 | Oahu/Honolulu | 8.0% | 1,733 |
| 7 | Las Vegas | 7.6% | 1,647 |
| 8 | Metro DC Area | 4.9% | 1,062 |
| 8 | Chicago | 4.9% | 1,062 |
| 10 | Boston | 4.6% | 997 |

Source: U.S. Department of Commerce, ITA, and Office of Travel and Tourism Industries, 2007.

EXHIBIT 1.15 SWOT Analysis of Hotel Market

| Strengths | Opportunities |
|----------------------|-----------------------|
| Strong RevPAR growth | Cap rate compression |
| High occupancy | Selective development |
| Weaknesses | Threats |
| Short-term leases | Large supply pipeline |
| Operating intensive | Recession risk |

to buy high-quality hotel assets at reduced prices. Further, the hotel sector still has room for potential cap rate compression if Treasury yields remain relatively low (Exhibit 1.15).

Within the hotel sector, Luxury, Upper Upscale, and Upscale segments are projected to outperform the other segments over the next three years. Strong brand names have created customer loyalty, which facilitates pricing premiums. Business hotels and resorts in selected, supply-constrained markets may perform most favorably. Furthermore, we believe that many projects in the current pipeline will be delayed or canceled, creating opportunities for well-sponsored development projects to move forward. The extended-stay hotel segment is expected to perform well because current supply is significantly lagging demand. During the last recession, occupancy in extended-stay hotels remained relatively stable, suggesting that the segment may experience less volatility through an economic downturn.

