Deloitte.

McLAUGHLIN

Commercial Real Estate Outlook: Top Ten Issues in 2013

As the Slow Recovery Continues, Innovation to Drive CRE Growth



Contents

As the Slow Recovery Continues, Innovation to Drive CRE Growth	2
Executive Summary	3
Issue One: Macroeconomic Fundamentals	4
Issue Two: CRE Fundamentals	6
Issue Three: CRE Lending	8
Issue Four: REITs and PERE	10
Issue Five: CRE Deal Flow	12
Issue Six: Single-family Homes	15
Issue Seven: Globalization of CRE	18
Issue Eight: Sustainability	20
Issue Nine: Technology	22
Issue Ten: Analytics	26
Acknowledgments & Contacts	28
Real Estate Services Industry and Functional Leaders	29

Commercial Real Estate Outlook: As the Slow Recovery Continues, Innovation to Drive CRE Growth



This report, the fourteenth in Deloitte's series on critical issues affecting real estate, examines United States (U.S.) commercial real estate (CRE) market trends and developments, with a focus on potential solutions to help CRE players favorably position themselves in the medium-to-long term future.

Specifically, this report examines what we believe are the top ten issues facing U.S. CRE in 2013, and how innovation can drive industry growth during this period of slowed CRE recovery.

The top ten issues for commercial real estate in 2013 are:

- 1. Macroeconomic Fundamentals
- 2. CRE Fundamentals
- 3. CRE Lending
- 4. Real Estate Investment Trusts (REITs) and Private Equity Real Estate (PERE)
- 5. CRE Deal Flow
- 6. Single-family Homes
- 7. Globalization of CRE
- 8. Sustainability
- 9. Technology
- 10. Analytics

I hope you find Deloitte's Commercial Real Estate Outlook and our "Top Ten" list to be informative and insightful. I would appreciate your comments, questions, and feedback and the opportunity for me or our partners, principals, and directors of Deloitte Real Estate Services to discuss the report with you.

Bob O'Brien

Vice Chairman and Partner
U.S. Real Estate Services Leader
Deloitte & Touche LLP
+1 312 486 2717
robrien@deloitte.com

Executive Summary

The U.S. CRE recovery, although slow, has been visible in improved fundamentals, capital availability, asset pricing, and transactions. In fact, REITs as an asset class continues to outperform others, primarily due to higher liquidity and relatively easy access to capital markets. However, the CRE recovery appears to be unsteady, with increased "caution" given the nation's stalled economic recovery, which is due, in part, to sovereign debt problems and economic stagnation in Europe as well as slowing growth in emerging markets such as China and India. In addition, the minimal development activity taking place does not bode well for long-term growth. Given the limited support from the external environment, CRE players should focus on alternate mechanisms to grow revenues, margins and retain tenants (Figure 1).

Foreclosed single-family homes, which are emerging as an alternate asset class, are increasingly viewed as an investment option to capitalize on the dislocation in the U.S. housing markets. There is also increasing interest in opportunistic acquisitions in select European, Asian and emerging markets in pursuit of growth and diversification of investments.

CRE players may benefit from a continued focus on sustainability, given that it tends to influence investors' and customers' commercial property decisions. In addition, CRE stakeholders can navigate these challenging times and prepare for long-term growth by capturing the benefits of technologies such as advanced analytics, cloud computing, social media, and enterprise mobility.

Weak Economic Growth External Ecosystem Continues to adversely impact.. **Property Fundamentals Capital Markets Rent & Vacancy Rates Development Activity Transactions & Pricing** Lending ..putting downward pressure on.. Factors Impacted **Tenant Development Rental Growth** Refinance **Asset Values** Retention Revenue ..which requires CRE players to focus on.. Recommended Focus Areas **Enterprise** Single-family **Social Media**

Figure 1: Potential focus areas to drive growth

Source: Deloitte Analysis

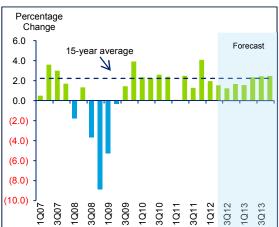
Issue One: Macroeconomic Fundamentals

The European economy's recession, which began in 2Q12, and the 89.0 percent correlation between U.S. and Eurozone economic growth over the past decade, has stunted the United States own recovery from recession. In addition, the U.S. economy is plagued by other issues, such as deepening of the liquidity trap, labor market structural problems, lack of new business formation, and deleveraging by large private sector entities. Hence, continued slow macroeconomic growth (Figure 2) could potentially stem CRE expansion, given that it is dependent on healthy macroeconomic growth.

U.S. GDP grew 1.5 percent in 2Q12, slower than the 1.9 percent growth in 1Q12, though modestly better than expectations. The slow growth is attributed to deceleration in private consumption as consumers increase savings over spending. In addition, new non-U.S. residential investments were sluggish amidst the European slowdown and uncertainty about U.S. fiscal policy pending the outcome of the November Presidential elections.

Outlook: Economist Intelligence Unit estimates GDP growth to average 2.2 percent during 2012-2016.

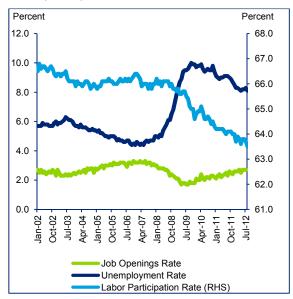
Figure 2: GDP growth rate



Unemployment³ continues to act as a drag on the economy (Figure 3). There is a significant drop in the labor force participation rate as workers who are not looking for jobs are not counted among the unemployed: If this rate was at the same level as the beginning of the recession, the unemployment rate would be a full two percentage points higher. Typically, unemployment declines with an increase in job openings. Currently, however, it takes a much higher rate of job openings to drive down unemployment - the shift in this relationship is a reflection of an increased incidence of structural unemployment.

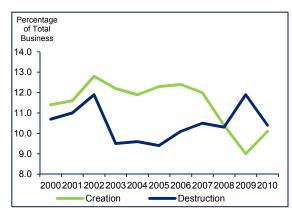
Outlook: Economist Intelligence Unit forecasts the 2012 unemployment rate at 8.1 percent.

Figure 3: Job openings, unemployment, and labor participation rates



The pace of new business creation rapidly declined during 2007-2009 (Figure 4) and has been acting as a serious impediment to employment and economic growth. A part of this dip could be attributed to demographics: a high proportion of an aging population is likely to be risk-averse and, thus, unlikely to start a new business.⁴ In addition, increased regulations are potentially preventing risk-taking across

Figure 4: New business creation



Source: Bureau of Economic Analysis, Economist Intelligence Unit, Bureau of Labor Statistics, U.S. Department of Labor

Outlook

businesses.

Contagion of the European economic crisis and structural problems in the U.S. economy have resulted in slower hiring, weaker consumer sentiment, and reduced new business creation. The Thomson Reuters/University of Michigan index of consumer sentiment increased to 74.3 in July from 72.3 in June. In comparison, the index of consumer expectations decreased to 65.1 from 65.6 during the comparable period. Average consumer confidence in 2012 remains lowest since 1982, primarily due to concerns about fiscal policy. Further, the Conference Board noted that consumer confidence is unlikely to gain any significant momentum in the next few months. The Purchasing Managers Index (PMI) stood at 49.8 percent in July, the second contraction since July 2009 and lower than the average 52.5 percent for the last 12 months, reflecting a slowdown in business activity. A cautionary environment such as this will likely hinder CRE recovery.

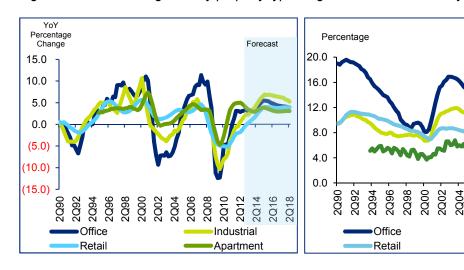
Bottom Line

Increased restraint will slow CRE recovery momentum, even though key CRE parameters – fundamentals, transactions, lending – have been on the mend. CRE fundamentals are likely to witness a more modest pace of growth across several property types. However, demand for high-quality properties is expected to remain intact, as investors continue to seek stable and less volatile returns in the current economic environment.

Issue Two: CRE Fundamentals

CRE fundamentals are benefiting from favorable absorption-completion dynamics. Construction activity remains at record lows due to tight underwriting conditions and supply-side adjustments for relatively lower demand for most property types. Rent and vacancy levels are stabilizing across property types, although they lag pre-recession levels (Figures 5 and 6). While this provides a reprieve to landlords, lack of new development activity does not bode well from a long-term growth perspective. In the near-to-medium term, the Eurozone crisis is likely to act as an overhang as tenants across property types demonstrate caution. Hence, CRE stakeholders face uncertainty in sustaining recovery momentum.

Figure 5: National rent growth by property type Figure 6: National vacancy rate by property type



^{*} Forecasted data from 3Q12 Source: CBRF-FA 2Q12

Rent Growth Vacancy **Net Absorption Apartment**

The apartment sector is demonstrating strong growth, although the pace of expansion appears to be slowing. This slowdown is reflected in net absorptions, which, despite being positive in 2Q12, declined YoY, due to the increase in development activity. Vacancy levels declined 60 bps YoY to 4.8 percent and effective rent growth increased 80 bps YoY to 5.0 percent. 6 In fact, effective rents are now above pre-recession levels. Tight underwriting standards, high home foreclosures, and stagnant income continue to favor renting and impact home-buying decisions. Thus, apartment demand will likely continue in the medium term, although development activity will likely slow rental growth.



Office fundamentals continued to stabilize amid a flight to quality, as vacancy levels decreased 50 bps YoY to 15.7 percent in 2Q12. Rent grew 2.8 percent YoY in 2Q12 compared to flat growth in 2Q11.7 Given limited development activity, the result of low demand and tight development financing, the office sector posted a net absorption of 12.7 million square feet in 2Q12 compared to 9.0 million square feet in 2Q11.8 Among major office markets, New York and San Francisco are the strongest, with low vacancies allowing landlords to increase rental rates. In contrast, office markets such as Sacramento and Phoenix, which were significantly affected by the housing crisis, continue to remain the weakest. The sector will likely improve further as the year progresses, although the impact of European uncertainty on U.S. capital markets may act as a damper. While average rents are likely to grow, a more robust recovery is not expected to begin until 2015.

Forecast

2Q16 ∞

Industrial

Apartment

2Q1

Lodging ADR Growth Cocupancy RevPAR

Lodging demand continues to remain strong, driven by improved business and leisure travel. In 2Q12, higher occupancy (+3.1 percent YoY to 65.1 percent) and average daily rate (ADR: +4.7 percent YoY to \$106.40) led to a 7.9 percent YoY growth in revenue per available room (RevPAR). Both full- and limited-service hotels posted better-than-expected performance. San Francisco (+15.0 percent) and Los Angeles-Long Beach (+14.4 percent YoY) were the strongest markets, with double-digit growth in RevPAR. However, higher room rates will likely impact demand, which may be offset to some extent by limited new supply.

Industrial Rent Growth 1 Vacancy - Net Absorption

The industrial space showed modest improvement, as demand for larger buildings outpaced demand for smaller ones. Also, there is an increase in warehouse demand from e-retailers. Rent growth turned positive for the first time since the recession (0.6 percent in 2Q12 versus -2.71 percent in 2Q11) and vacancy improved to 13.2 percent compared to 14.0 percent in 2Q11. However, with Europe accounting for a quarter of U.S. exports, the current recession will likely result in lower exports and impact demand for industrial space. New construction activity remains slow due to low rents and elevated supply, and net absorption was essentially flat YoY at 26.5 million square feet in 2Q12. A modest increase in demand will likely improve vacancy rate and rents.

Retail Rent Growth Vacancy Net Absorption

The improvement in retail real estate fundamentals has moderated as retailers remain wary of uncertain growth in consumer spending. In addition, retailers are cautious about expanding brick and mortar stores as they target consumers through multiple channels due to the continuing growth in online sales. However, store completion is at a record low, which will temper the effect of lower demand to some extent. In fact, net absorptions grew in 2Q12 to 4.1 million square feet compared to a negative 2.2 million in 2Q11. In 2Q12, vacancy declined 20 bps YoY to 13.0 percent. Effective rents declined 1.8 percent YoY, which is substantially better than the 3.7 percent decrease in 2Q11. However, key markets such as New York, Chicago, Boston, and Los Angeles are unlikely to return to pre-recession peak levels in the medium term.

Outlook

CRE fundamentals have improved across all sectors, with flat to positive net absorptions. Most sectors, except the multifamily segment, have low development activity. Leasing activity has improved across most property types. With the macroeconomic environment pointing towards a slow and unsteady recovery, CRE players will have to focus on cost management to survive and grow.

Bottom Line

The key positive in the past year has been an improvement in absorption levels across property types. This has helped alleviate concerns about high vacancy levels. However, rent growth remains soft except for apartments, which implies that tenants still hold bargaining power. Revenue growth for CRE players is unlikely to reach pre-recession levels over the next few years, and construction and delivery of new properties remain minimal. That said, sectors such as apartment and lodging continue to grow strongly. The comparatively slower recovery in the office, industrial, and retail sectors indicates a coming era of reduced expectations and slower growth.

Issue Three: CRE Lending

Increased investor demand, improved fundamentals, and enhanced CRE loan performance continue to drive lending, especially for class-A properties. In 1H12, banks continued to ease underwriting standards and increase commercial mortgage originations, while life insurance companies and government-sponsored entities (GSEs) led overall originations. However, weak CMBS performance, high debt maturities, and concerns over stricter provisions under the Dodd-Frank Act and Basel III continue to pose risks for CRE debt markets.

CRE loan originations rise; moderate growth expected through 2013

Commercial mortgage originations grew 64.0 percent YoY to \$195.0 billion in 2011¹⁴ and continue to rise in 2012 (the MBA origination index grew 25.0 percent YoY in 2Q12), as life insurance companies, government agencies, and banks compete for CRE loans, especially for core properties. Among property types, the retail sector reported the highest growth in mortgage originations - 56.0 percent YoY in 2Q12 (index value of 253.0 in 2Q12 versus 162.0 in 2Q11) - followed by hotel properties. In contrast, CMBS recovery has continued to slow since 2H11, driven by the sovereign debt crisis and increased economic uncertainty: Issuance grew just 6.8 percent YoY in 1H12 compared to 605.7 percent in 1H11.¹⁵ There continues to be significant bifurcation in the market, as well-located and leased properties have strong access to debt capital, while other properties find it difficult to source financing. The Mortgage Bankers Association (MBA) expects commercial mortgage originations to increase by 6.6 percent YoY to \$244.0 billion through 2013.¹⁶

Credit standards ease slightly; lenders focus on permanent resolutions

According to the Federal Reserve's 3Q12 Senior Loan Officer Opinion Survey, there was a net 10.9 percent decline in "Domestic Respondents Tightening Standards for CRE Loans," which illustrates continued easing of banks' credit standards. In addition, lenders are focusing on permanent resolutions of distressed loans versus modifications/extensions, driven by higher commercial property prices, and increased refinancing options. For instance, between 2Q11 and 2Q12, nearly 78.5 percent of the total distress workouts (or \$47.7 billion) were resolutions; the remaining were restructurings (Figure 7). That said, credit conditions remain strict for the broader CRE market (including construction loans 18), despite easing in the last five quarters for prime properties.

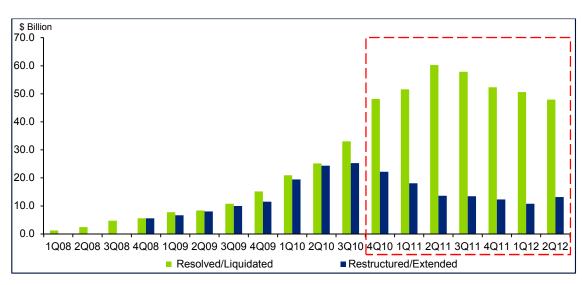


Figure 7: Loan resolution vs. restructuring

Note: Data pertains to a trailing 12-month total Source: Real Capital Analytics (RCA), August 2012

Bank loan delinquencies decline; CMBS performance and looming maturities remain a concern

The increase in loan workouts and improved property fundamentals has decreased CRE loan delinquencies at commercial banks — 5.0 percent in 2Q12 compared to 7.1 percent in 2Q11.¹⁹ However, slower recovery in non-prime markets provides significant challenges for the \$1.7 trillion in CRE debt maturities due between 2012 and 2016. Of the debt maturing through 2016, 29.0 percent is estimated to be "underwater." In addition, high CMBS delinquencies (9.0 percent as of 2Q12 ²¹) remain a concern.

\$ Billion \$1.7 Trillion At least \$1.7 trillion of CRE 400.0 debt will mature between 2012 and 2016. Trepp LLC 350.0 estimates that nearly 29.0 \$75.8 percent of these loans are \$72.6 \$74.6 underwater, which \$69.4 300.0 \$60.3 continues to pose a risk to \$66.0 a broader CRE recovery. \$23.8 \$23.2 \$24.8 250.0 \$24.6 200.0 \$52.4 150.0 \$211.0 \$213.1 100.0 \$184.5 \$152.3 \$120.6 \$105.6 50.0 \$86.8 \$64.4 \$39.9 0.0 2012 2013 2014 2015 2016 2017 2018 2019 2020 Banks CMBS Life Companies Others

Figure 8: CRE debt maturities by lender type

Source: Trepp LLC, August 2012

Outlook

Prospects for a broad CRE market recovery are being delayed due to tepid CMBS issuance and increased caution towards loan originations and refinancing for "non-trophy" assets in secondary and tertiary markets. In addition, Dodd-Frank Act and Basel III provisions on enhanced risk-retention requirements for CMBS and higher capital charges on bank CRE loans will lead to increased origination and securitization costs and stricter eligibility criteria - factors that may limit lending, increase debt cost, and result in a financing gap in the U.S. CRE markets.

Bottom line

While increasing bank leniency and improved fundamentals have helped revive the CRE market, the high level of maturing debt remains a significant barrier to recovery. However, lenders' focus on permanent loan resolutions through pre-foreclosure sales will likely provide opportunities for investors to acquire overleveraged properties at attractive prices.

ⁱ Trepp, LLC changed the underlying index used for calculation of underwater loans. Consequently, since August, the number has reduced significantly compared to 65.0 percent reported until July.

Issue Four: REITs and PERE

REITs have been strong performers in the CRE recovery, given their easier access to capital, high acquisition activity, and superior investment returns compared to traditional asset classes. However, PERE has had a comparatively slower recovery as investors remained on the sidelines during an uncertain macroeconomic scenario and delayed private equity (PE) exits.

Robust fundraising and investments by REITs; relatively modest by PERE

REITs continue to take advantage of easier access to capital as leverage (reduced to 35.6 percent as of June 2012 from 39.8 percent at the start of 2011²²) and fundraising return to customary levels (Figure 9). In addition, REITs have utilized the surplus capital for acquisitions (net acquisitions of \$7.0 billion in 1H12 vs. \$5.3 billion in 1H11).²³ PERE fundraising, though slow (Figure 10), is refocusing on traditional areas such as core and opportunistic strategies, with 46.0 percent and 35.0 percent of investors planning to invest in these funds, respectively, over the next 12 months.²⁴ While there is ample dry powder - \$78.5 billion²⁵ - to target U.S. CRE investments, PERE capital deployment continues to be slow due to uncertainty about current economic conditions.²⁶

Figure 9: U.S. REIT fundraising

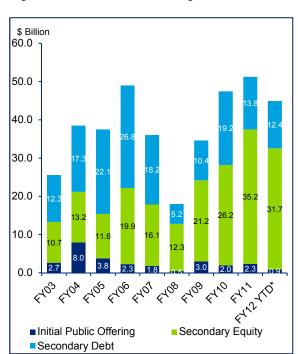
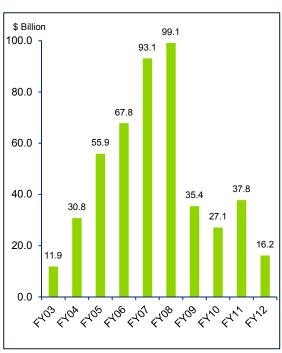


Figure 10: U.S. PERE fundraising



Source: NAREIT, September 2012

Source: Preqin, September 2012

^{*} YTD represents data through August 2012

REITs outperform most competing asset classes; PERE continue to underperform

Public REITs continue to outperform other asset classes (Figure 11) with returns of 20.4 percent²⁷ in 2012 YTD,ⁱⁱ as investors seek portfolio diversification and superior inflation-hedged returns. In 2011, PERE funds posted an average internal rate of returnⁱⁱⁱ (IRR) of 12.1 percent, in comparison to 15.5 percent in 2010.²⁸ During the pre-recession period, PERE funds reported an average IRR of 21.7 percent during the period 2003 to 2007.²⁹

Figure 11: Comparative performance by asset class

Asset Class	FY07	FY08	FY09	FY10	FY11	FY12 YTD*
Public REIT (All REIT Index)	-17.8	-37.3	27.5	27.6	7.3	20.4
NASDAQ	9.8	-40.5	43.9	16.9	-1.8	19.5
S&P 500	5.5	-37.0	26.5	15.1	2.1	16.0
Russell 2000	-1.6	-33.8	27.2	26.9	-4.2	15.2
DJIA	6.4	-33.8	18.8	11.0	5.5	9.1
Private Real Estate (NCREIF Property Index)**	15.9	-6.5	-16.9	12.6	14.3	5.3

^{*} YTD is as of September 12, 2012

Source: NAREIT. September 2012

Outlook

REITs' access to equity and debt capital continues to favorably position them to acquire properties (including distressed) and makes it a compelling asset class from an investment perspective. In addition, PERE investments in secondary and tertiary markets can potentially help to revive the broader CRE market. However, given the minimal development activity and the expected slowdown in operating fundamentals, sustained outperformance may be challenged. REITs and PERE may be increasingly drawn to invest in Asia, selected European and other emerging markets in search of growth and higher returns.

Bottom line

REITs have been one of the drivers of prime property transactions over the past few years, given their relatively easier access to capital. However, given rising business complexity, REIT growth prospects depend on higher rental income and operational optimization. Investments in technology and business initiatives (see Issues 8-10) such as sustainability, enterprise mobility, and analytics will be important for REITs' long-term growth prospects.

^{**} NCREIF 2012 data is as of June 30, 2012

ii As of September 12, 2012

The IRR is calculated for each fund as cash-on-cash to the investors on a cumulative basis, modified to incorporate the quarter end valuation of the fund's unliquidated holdings or residual value. The rates of return analyzed throughout the Thomson Reuters private equity products are annualized returns unless otherwise stated.

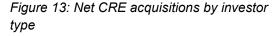
Issue Five: CRE Deal Flow

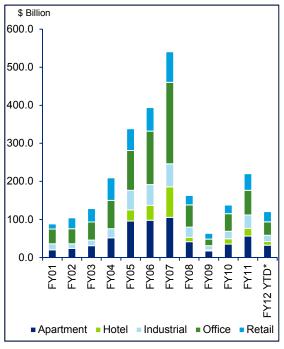
Transaction activity has been a bright spot in the CRE recovery process, driven by REITs and distressed deals. However, CRE deal flow appears to be decelerating due to overall slowed economic growth.

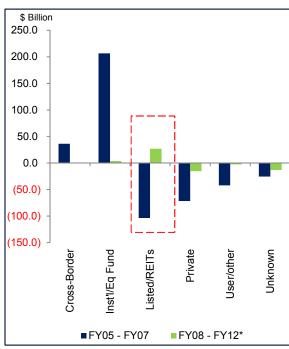
Transaction activity grows, albeit at a measured pace

Transaction growth appears to be flattening in the first half of 2012 (Figure 12) due to global economic uncertainty: 3.7 percent YoY growth in 1H12 followed a strong 130.7 percent YoY growth in 1H11.³¹ However, an encouraging trend is increased investor interest in secondary and tertiary markets, even as there is high competition for trophy assets in gateway markets. In terms of investor class, REITs and institutional funds continue to drive investment recovery, with net positive acquisitions of \$7.0 billion and \$0.4 billion, respectively, in 1H12 (Figure 13).

Figure 12: U.S. CRE deal volume by property type







Source: RCA, September 2012

*FY12 is through 2Q12

Source: RCA, July 2012

^{*} YTD represents data through July 2012

CRE prices stabilize

Commercial property prices have increased modestly over the past 12 months, with a 5.2 percent YoY increase in the Green Street Advisors Commercial Property Price Index (CPPI) in August 2012 (Figure 14), as investors' improved access to capital and the relatively low cost of debt financing got tempered by economic concerns. ³² Nonetheless, compared to other investment options, property yields remain attractive in an extended period of low interest rates.

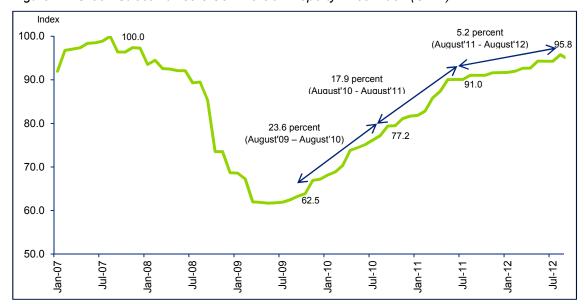


Figure 14: Green Street Advisors Commercial Property Price Index (CPPI)

August 2007 = 100

Source: Green Street Advisors CPPI, September 2012

Distressed property sales decline

Distressed-driven sales declined 18.9 percent YoY to \$14.9 billion through July 2012 and comprised 11.2 percent of total U.S. CRE sales, down from 12.5 percent during the same period last year (Figure 15). Distressed assets have likely peaked, as troubled assets stood at their lowest level since 3Q09 and net new additions to distressed inventory, after adjusting for loan workouts, fell for the fifth consecutive quarter in 2Q12. However, distressed property sales will continue to be a key transaction driver, as nearly \$169.9 billion of distressed assets remain.³³

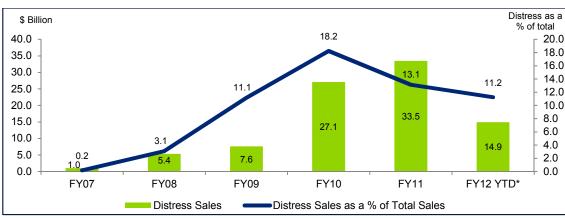


Figure 15: Distressed-driven CRE sales volume

* YTD represents data through July 2012

Source: RCA, September 2012

Outlook

CRE transaction activity is likely to grow at a slower pace due to continued economic uncertainty. With easier access to capital, REITs will likely dominate transaction activity in the medium term, albeit with increased competition from investors such as institutions and equity funds. In addition, distressed assets will continue to be an important transaction catalyst in the next 12 months, as lenders seek to permanently resolve troubled mortgages.

Bottom line

A broad-based transaction market recovery may be protracted as conduit lending, which investors depend on to finance non-trophy assets in tertiary markets, is yet to see a meaningful recovery. In addition, macroeconomic and regulatory concerns will influence near-to-medium term deal flow.

Issue Six: Single-family Homes

The single-family homes market continues to slowly improve, with low but relatively stable prices and home equity value, choppy sales, moderate supply, foreclosures, and limited mortgage financing options. Most of the government's efforts to stimulate the residential sector have failed to deliver the intended results. However, the recent initiative aimed at encouraging private investor participation to clear the glut of foreclosed homes has generated investor interest.

Residential real estate sector is on the mend

The residential real estate market is demonstrating mixed trends, but appears to be on the mend. The S&P/Case-Shiller Index (national composite) rose 1.1 percent YoY and 2.2 percent QoQ (seasonally adjusted) in 2Q12, due to low inventory and seasonality. As of June, home prices for cities that constitute the 10-city and 20-city indices are back to summer 2003 levels, which is a positive indicator for the housing market. According to Pulsenomics LLC, home prices will likely show an average cumulative appreciation of 3.5 percent by the end of 2014 and 10.2 percent by the end of 2016³⁴ (Figure 16). Sales of new single-family houses grew 3.6 percent MoM in July to a seasonally adjusted annual rate of 372,000.³⁵ Existing-home sales increased 2.3 percent MoM and 10.4 percent YoY to a seasonally adjusted rate of 4.5 million in July³⁶ (Figure 17). Distressed homes accounted for 24.0 percent of July sales, one percentage point lower on a MoM basis.³⁷ That said, total housing inventory increased 1.3 percent MoM to 2.4 million homes in July and represents a 6.4 months supply compared to 6.5 months in the prior month.³⁸

Figure 16: Home prices

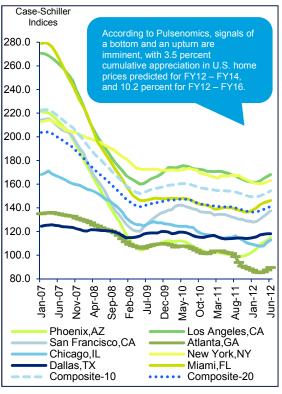
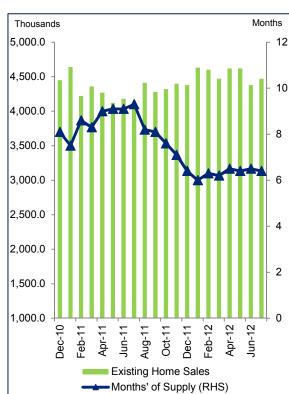


Figure 17: Existing home sales



Source: Standard & Poor, August 2012; Pulsenomics, June 2012 Home Price Expectations Survey

Note: Home Sales are at Seasonally Adjusted Annual Rate (SAAR)

Source: National Association of Realtors (NAR), August 2012

Foreclosed homes emerging as the new asset class

As of June 2012, the foreclosed pipeline included about 1.5 million homes, although new foreclosures declined approximately 4.0 percent MoM.³⁹ While the pace of new foreclosures has slowed, there remains a large inventory of distressed homes. Since the beginning of the housing crisis, the results of most government efforts, such as the Home Affordable Refinance Program (HARP), which allows refinancing options to borrowers, were below expectations. In its most recent initiative, the government (FHFA/Fannie Mae) has invited bids from private players to acquire singlefamily foreclosed homes classified as real estate-owned or REO^v (about 180,000 total as of 1Q12),⁴⁰ with the intent to eventually rent these homes to renters. The current effort, which is in its pilot stage (bids for approximately 2,500 REO homes) has generated significant interest and is being compared to the Resolution Trust Corporation of the 1980s. In fact, participants are considering the option of buy-to-rent or buy-to-securitize-and-rent. Banks are open to the sale of distressed homes, and are trying to ascertain an efficient execution mechanism. This aside, private equity players and homebuilders, individually or as a consortium, are buying foreclosed homes with the intent to rent. In summary, several efforts are being made to "institutionalize" foreclosed homes and cash in on the new "asset" class. However, price discovery of distressed homes may act as an impediment to the success of this program. Further, efficient management of single-family home portfolios is a challenge that must be addressed by investors.

Residential mortgage issuance low amid stringent regulatory and underwriting standards

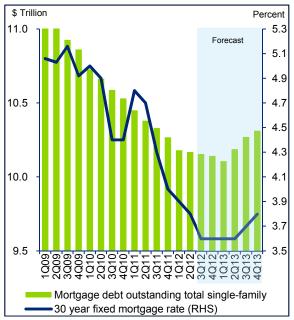
The residential mortgage market has stabilized into a "new normal" and is yet to demonstrate growth, despite measures such as reorganization of the GSEs (Fannie Mae and Freddie Mac) and introduction of alternate finance mechanisms (covered bonds). While mortgage debt levels continue to drop, new non-agency issuances remain at record lows amid low interest rates and stringent underwriting standards. According to the Office of the Comptroller of Currency's 18th annual underwriting survey, residential real estate loans, including construction, experienced the most tightening in underwriting standards during the 2011-12 survey period. Of the 84 banks surveyed, 29.8 percent continue to tighten underwriting standards: it remains unchanged for 77.3 percent (tightened for several years). Delinquencies (seasonally adjusted) rose sequentially in 1Q12 for residential real estate loans at commercial banks to 10.2 percent from 9.9 percent in 4Q11 but improved YoY from 10.3 percent in 1Q11⁴² (Figures 18 and 19). Overall, according to MBA, the delinquency rate on one-to-four unit residential properties improved to 7.4 percent in 1Q12, down 18 basis points and 92 basis points, sequentially and YoY, respectively. Hence, high residential real estate loan delinquencies at commercial banks continue to pose a risk.

^{iv} HARP is designed to help homeowners with underwater mortgages, through reduction of monthly payments or replacement of a riskier loan structure, such as an interest-only mortgage with a cheaper and more stable fixed-rate mortgage.

^v Real estate-owned or REO is a class of property owned by a lender—typically a bank, government agency, or government loan insurer—after an unsuccessful sale at a foreclosure auction.

Figure 18: Residential mortgage debt and lending rate

Figure 19: Residential mortgage delinquencies





Source: Actuals: Federal Reserve, June 2012; Forecasts: Fannie Mae Economics and Mortgage Market Analysis, August 2012

Source: MBA National Delinquency Survey, August 2012; Federal Reserve, Charge-Off and Delinquency Rates on Loans and Leases at Commercial Banks

Outlook

Despite several housing-related parameters that show lackluster improvement, home ownership is still a priority, as demonstrated in a 2011 National Association of Realtors (NAR) survey in which 72.0 percent of respondents (renters) favored it over renting compared to 63.0 percent in 2010. Additionally, some markets are beginning to show improvements in transaction activity and modest improvements in pricing, driven by low interest rates and exceptional housing affordability. Apart from government measures, growth in demand for single-family homes will likely be driven by first-time home buyers. Typically, entry-level buyers account for four of 10 purchases; they accounted for 34.0 percent of purchasers in July. Also, there is a shortage of homes in the lower price range, which is stemming opportunities for first-time buyers. Any rise in interest rates may accelerate home buying in the short-term as buyers try to lock-in a low rate. However, banks' stricter underwriting standards may act as an impediment as financing continues to be an issue, and existing homeowners have been reluctant to purchase larger and more expensive homes due to significant equity losses in their existing homes.

Bottom line

Distressed single-family homes are a key obstacle to economic growth. The situation is further compounded by stringent underwriting norms for residential real estate loans, resulting in a continued decline in new issuance, despite low interest rates. There appears to be no single solution to address the problem. The market timing and asset selection, the alpha strategies for dealing with distress, have to be crafted state-by-state and city-by-city across the country.

Issue Seven: Globalization of CRE

The European economic slowdown continues to cause real estate investors to be cautious and favor Class A properties across the globe. From a regional perspective, relatively high-growth emerging markets such as Brazil and Asia Pacific (APAC) continue to develop and interest foreign investors looking for higher growth and returns.

Global CRE sales volumes decline

Global transaction volume declined 23.4 percent YoY to \$306.3 billion in 1H12 from \$399.7 billion in 1H11, a fall-out of the general economic uncertainty. Asia Pacific continues to lead regions in absolute volume terms in 1H12 at \$128.6 billion, although it declined by 34.9 percent YoY. Americas sales volume was \$102.3 billion in 1H12 compared to \$105.6 billion during the same period last year, a modest decline of 3.2 percent. In fact, Americas region sales as a percentage of global sales have improved consistently and were at 33.4 percent in 1H12 compared to 26.4 percent in 1H11, primarily due to strong performance in Brazil and Canada, and improved U.S. markets (Figure 20).

Among the developed markets, European transaction activity is dominated by the UK, France, and Germany as the recession has led to a substantial flight to quality. Canada continues to generate significant investor interest due to attractive yields and the strength of the Canadian economy. Among the developed APAC markets, Australia continues to rebound thanks to increased investor focus on core properties and Japan is witnessing a modest recovery in transactions after last year's natural disasters.

Investment activity in key emerging markets remains strong, despite the economies appearing to lose steam due to favorable local supply-demand dynamics. China, considered to be a preferred global CRE investment destination, continues to demonstrate strong growth in rents and capital values, with Shanghai and Beijing leading this marketplace. However, India's investment activity has slowed due to a deceleration in domestic growth and policy-making. The Middle East and North Africa (MENA) markets continue to be affected by political and social turmoil.

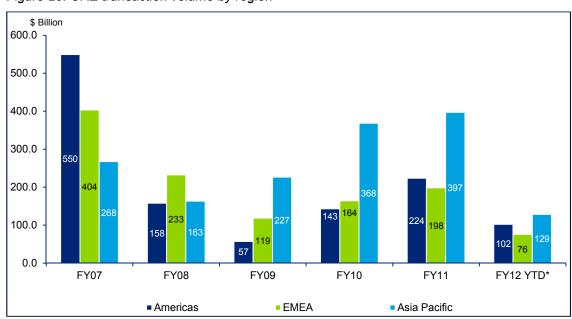


Figure 20: CRE transaction volume by region

*YTD represents data through 2Q12 Source: RCA, August 2012

U.S. remains an attractive cross-border CRE investment destination

New capital for investment in CRE globally dropped 9.4 percent YoY to \$298.0 billion, ⁴⁵ attributed to the economic slowdown. The U.S. continues to be the preferred investment destination, with 43.0 percent of capital ⁴⁶ likely to funnel into the region. Interest in U.S. CRE is validated by a recent Association of Foreign Investors in Real Estate (AFIRE) survey, wherein about 60.0 percent of respondents identified the U.S. as offering the best potential for capital appreciation. Further, over the past decade, cross-border investment in U.S. real estate was approximately 7.8 percent of total U.S. transactions annually, while other investments were made through REITs and co-mingled funds. ⁴⁷ Canada, Australia, Germany, the UK, and Switzerland have been the largest cross-border investors cumulatively since 2001. ⁴⁸ Despite economic concerns, the global investor interest in U.S. CRE continues to support the recovery in CRE transaction activity and pricing. In addition, modifications to loosen the Foreign Investment in Real Properties Tax Act (FIRPTA) regulations will likely attract more capital to the U.S. CRE market.

Outlook

Foreign investor interest in the U.S. CRE market may help players partially offset the impact of a domestic slowdown, especially as development activity remains minimal. In addition, cash-rich U.S. CRE players can opportunistically tap international prospects. For instance, the European economies present favorable opportunities (e.g., a high level of activity in France and the UK) to invest in high-quality as well as distressed properties, given that select properties appear attractively priced considering existing market conditions.

Bottom line

Foreign investment has contributed to the transaction market recovery. While much of this foreign investment has been focused on high-quality properties in major cities and financial districts within the U.S., opportunities exist in secondary and tertiary markets where investments have been traditionally slow. In addition, U.S. real estate investors will increasingly invest overseas as they seek growth and market diversification.

Issue Eight: Sustainability

Environmental sustainability performance in real estate is of significant interest to many, as buildings in the U.S. account for nearly 41.0 percent of energy usage, 73.0 percent of electricity consumption, 13.6 percent of potable water usage, and 38.0 percent of greenhouse gas (GHG) emissions. ⁴⁹ Investors' and tenants' property decisions are increasingly influenced by CRE players' adoption of sustainability initiatives. In addition, local government planning and zoning institutions today expect sustainability considerations to be built into development plans before granting entitlements. It is imperative, therefore, that CRE players understand the business value of sustainability, driven by stakeholder expectations, and follow established frameworks for sustainability reporting and disclosure.

Sustainability initiatives can be a powerful driver for developing innovative processes and operating models if all the risks and opportunities are appropriately considered. It may enable CRE players to reduce operating costs, boost revenues, it mitigate enterprise risk, it and build brand value. A recent study on the effect of sustainability initiatives on REITs' performance established that an increase in portfolio greenness (proportion of green properties to total portfolio) enhances a REIT's return on assets (ROA), return on equity (ROE), and ratio of funds from operations (FFO) to revenue. In addition, the study established that listed REITs with a higher proportion of green buildings exhibit significantly lower betas, implying superior risk-adjusted returns.

Currently, many CRE players adopt sustainability initiatives on an ad-hoc, project-wise basis; however, to be truly effective, a sustainability strategy should be implemented at the enterprise level, where it can impact social, economic, and environmental issues (Figure 21). In addition, players should increase collaboration among different business units to effectively manage sustainability-related goals at the enterprise level. To successfully implement sustainability initiatives, CRE players should identify strategic opportunities with regards to resource use (energy, water and material use), goals, and key performance indicators. Further, CRE players should adopt appropriate tools and processes that track and monitor the performance, enable comparison against benchmarks, and assist in timely reporting and disclosure to internal and external stakeholders.

vi According to the US Green Building Council (USGBC), LEED-certified buildings have lower operating costs and provide healthier and safer working environments for occupants. Further, the Energy Star program claims that buildings with the Energy Star label generally consume 35.0 percent less energy and emit 35.0 percent less carbon dioxide than average uncertified buildings.

vii According to research done by Eichholtz et al. (2010) and Fuerst and McAllister (2011), commercial buildings with energy efficiency ratings command significantly higher rents, more stable occupancy rates, and higher prices than otherwise comparable conventional buildings.

viii As per a study by Kok and Jennen (2012), lower levels of energy efficiency and sustainability have been associated with an increased risk of obsolescence.

^{ix} Refers to a building that is environmentally responsible and resource-efficient throughout its life cycle: from siting to design, construction, operation, maintenance, renovation, and demolition.

Figure 21: Sustainability framework for CRE players



Source: Deloitte Analysis

Outlook

By 2015, an estimated 40.0 to 48.0 percent of new non-residential construction by value will embed sustainable building practices (e.g., USGBC LEED). In addition, the sustainable construction portion of the largest non-residential retrofit and renovation activity will more than triple, growing to 25.0 to 33.0 percent of the activity by value. ⁵² Embedding sustainable building practices into CRE strategies, in addition to measuring and communicating performance, can enhance brand value. Also, quantifying and verifying sustainability performance will become increasingly important as external reporting standards continue to be developed.

Bottom line

Energy price volatility, increased water scarcity, concerns over GHG emissions, higher adoption of "green" building materials (low toxicity materials) and the costs associated with solid waste pose a high risk and need to be effectively managed by CRE players. Since many players are still in nascent stages of implementing sustainability initiatives, opportunities exist to enhance operating returns by investing in sustainable building and property management practices. Players that take a leadership role and build a long-term sustainability strategy will likely gain a competitive advantage by creating tangible and intangible (brand) value.

Issue Nine: Technology

Historically, CRE players have lagged other industries in technology adoption and innovation, focusing instead on core operations such as leasing and development. However, since the recession, the industry has had a protracted recovery in line with the broader economy, with fundamentals yet to bounce back to pre-recession levels and minimal development activity. In addition, CRE players are challenged by changing tenant demands corresponding to the latter's adoption of technologies such as cloud computing, social media, analytics, and mobile applications (apps). The use of commercial real estate has also changed significantly due to new technologies, and CRE has been impacted by online commerce, alternative work place strategies, virtual meetings and advancements in logistics. CRE players need to adapt to changing business conditions by leveraging these and other information technologies (IT) to increase functional integration across the enterprise.

Cloud Computing

Cloud computing is a term for delivering hosted services (infrastructure, platform, software) over the Internet. A cloud service is sold on demand, typically by the minute or the hour: it is elastic – a user can have as much or as little of a service as they want at any given time; and the service is fully managed by the provider. Cloud computing is a disruptive force comparable to the emergence of client/server architectures 25 years ago. It can support CRE stakeholders' key business objectives and functions because it offers:

- Better operational efficiency, thus lowering overall IT, personnel, and resource costs
- Better control and increased ROI on IT investments
- Improved business agility; e.g., more efficient deployment, greater flexibility and scalability than traditional IT models.

Current IT Potential Stakeholder **Benefits Function Trends Opportunities Impact** Higher cost savings and increased efficiency Management: Real-time Outsourced solutions Resources & Payroll portfolio visibility across om vendors such ADP diverse geographic (Edge improve decision making Sales & Marketing Employees: Real-time (Edge) enterprise information across the industry will Benefits likely increase employee Asset Management productivity. Use external software operational efficiency and cost savings (Core) Investors: Robust information flow will 으 potentially increase Construction & Design f Cloud Better business investor visibility. Excel-based point agility through faster execution (Core) Tenants: Cost-effective marketing campaigns and improved agility will Finance & lead to enhanced quality operational efficiency and of service and aid tenant (Core) Edwards cost savings retention. Leasing & Cash Management Society: Improved energy Use external software Improved efficiency will enable firm (Core)

Figure 22: Cloud adoption opportunities across key CRE functions

Source: Deloitte Analysis

Data sensitivity is a key issue when adopting cloud technology. Players in an early stage of adoption may decide to use public cloud systems' Software as a Service (SaaS) for tertiary functions such as human resources, payroll, sales, and marketing. Subsequently, they could adopt a public-private (hybrid) model and include "core" functions such as finance and accounting, construction and design, asset management, and leasing (Figure 22). Given the investments required for cloud computing, the adoption strategy may differ based on a company's size. Small and mid-sized CRE players (market cap of less than \$5.0 billion) are likely to opt for public clouds, whereas larger players may prefer a hybrid model (Figure 23). The CRE cloud market is anticipated to grow at a CAGR of 25.0 percent through FY15. That said, CRE players will need to overcome security, compliance, and data integration challenges to effectively use cloud computing.

Company Size Type of Cloud Adoption Why? How? Initially, these firms will Public These firms will probably implement public cloud Small and Mid-Size Cloud not have the budget to services in non-core Companies support extensive IT functions and gradually (MCap < \$5 Billion) XaaS infrastructure. include core business V applications. Customer C Hybrid cloud will enable Large players will initially large CRE players to use public cloud for non-Hybrid rationalize IT infrastructure core functions and **Large Companies** costs, address privacy eventually adopt a hybrid (MCap > \$5 Billion) issues, and leverage public model by using private cloud services for external cloud to manage core applications functions.

Figure 23: Type of cloud adoption by firm size

Source: Deloitte Analysis

Enterprise Mobility

Mobility is emerging as a game-changer in the CRE industry, with various stakeholders (e.g., consumers, tenants, renters, investors) expecting to interact with each other directly from their mobile devices. This trend comes as no surprise, as consumer interest in smartphones, tablets, video games, and embedded apps is growing by the day. Companies big and small, across virtually every industry, are clamoring to unlock the potential of mobility in their business. ⁵⁴ The trend is validated by estimates such as the apps market's expected growth to more than \$2.0 billion by 2012. ⁵⁵ Further, about two-thirds of all U.S. consumers will likely own a smartphone and half intend to own a tablet by 2013. ⁵⁶

Mobility in CRE can help to enhance the customer experience via convenience, flexibility, better information availability, and speed to market (Figure 24). Sales and marketing, and tenant servicing are the primary drivers of mobility adoption, with increased brand value the inherent goal. Industry players could start with vendor-purchased apps and eventually develop an enterprise mobility network. However, overall success will be driven by back-end automation and players' ability to navigate challenges around scalability, security, reliability, maintainability, flexibility, and integration.

Social Media / **Mobility Tools** Internal Benefits Effective Content / Data Management **Employee Engagement** Blogs Strong Internal Collaboration Effective Marketing and Localized Research Suppliers and Vendor Collaboration with Tenant Servicing Lead Generation External Benefits of Social Media Sales Mobile Apps Mobile Apps Mobility Tools Facebook Facebook Facebook Social Media Twitter Blogs Twitter Twitter Blogs YouTube YouTube Mobile Apps Effective Customer Relation Management

Figure 24: Enterprise mobility and social media tools and benefits

Source: Deloitte Analysis

Social Media

According to a recent study, more than 84.0 percent of all real estate professionals use social media, with Facebook being their preferred website. ⁵⁷ Combining the use of social computing tools such as Yammer, Chatter and Jive with established communication channels such as face-to-face interactions, email, phone calls, intranets, and mass media advertising can greatly expand a CRE company's touch points while also helping to develop insights based on people's behavior and relationships and supplementing the enterprise's traditional view of markets and employees. ⁵⁸

Typically, CRE players use social media to improve tenant engagement, lead generation, sales (new and repeat), and brand-building. Internally, effective use of social media improves collaboration across departments and mitigates information silos (Figure 24). Applicability and adoption of social media within CRE is likely to differ based on property type. For instance, retail real estate players should immediately embrace social media, given that their tenants deal with wired consumers. In the residential segment, a recent study revealed that 73.0 percent of homeowners prefer realtors who promote their offerings through video, but only 12.0 percent of the RE industry currently uses YouTube. It appears as though there is both a need and opportunity for real estate players to use video to promote their services. However, success of a social media strategy will require CRE companies to address security, privacy, and integration issues.

Outlook

CRE players can use information technologies as strategic tools to drive improvements across the enterprise. Cloud computing increases operational efficiency, mobility improves the customer experience, and social media helps CRE firms gather pertinent data around consumer behaviors, which can be further studied through sentiment analysis to derive meaningful insights. However, concerns about security, privacy, and data integration persist across the new wave of technologies.

Bottom line

As enterprise IT functions become increasingly available via cloud computing services, traditional IT solutions will likely become less competitive. Further, the advent of smartphones and tablets increased consumer demands to be "connected," and the convergence of traditional and new media is likely to spawn a new era in technology-driven communication. CRE players already are playing catch-up to consumers: they should aggressively adopt technological innovations to spur growth and maintain their competitive edge.

Issue Ten: Analytics

Because they will be operating in an uncertain economic environment for the foreseeable future, CRE players will need to concurrently address business challenges, improve operational performance, and effectively manage enterprise risk. This requires:

- · Better understanding of tenant business and value drivers
- Effectively managing pricing, operational costs, and capital deployment
- Achieving better visibility into enterprise-level performance metrics
- Increasing access to actionable information and insights to business users across the organization
- Acquiring and retaining the right talent
- Managing large amount of unstructured data flowing through the enterprise and unearthing patterns and insights.

Analytics can help CRE players address these needs by integrating capabilities in data management, statistics, technology, automation, and governance into a potent catalyst for making better and faster decision-making.⁶⁰

Gather Predictive Analytics Advanced Analytics: Analyses both structured and unstructured data by leveraging capabilities such as data mining, forecasting, econometrics, optimization, simulation, and text analytics to predict future events and evaluate possible scenarios Analytics Sophistication & Strategic Value Performance Management Performance Management: Manages business performance and takes better and faster decisions through relevant comparison of key performance indicators with budgets, forecasts, prior performance, and benchmarks **Descriptive Analytics** Reporting: Creates formatted Querving: Retrieves data from Analysis: Enables users to analyze the stored various sources, based on specific integrated data to understand past business and interactive views of information, such as reports and criteria and creates views customized performance and probe for new trends that serve as dashboards to business objective and audience an input to better decision making **Data Management** Data Integration: Combines data from different sources and Database Warehousing: Creates a repository of provides it in a unified, reconciled, and reliable format enterprise data to facilitate reporting and analysis **Data Capture Internal Data External Data** Lease Accounting **Vacancy Rates Property Performance Investor Relations Economic Growth Supplier Relations Human Resources** Rent Growth **Tenant Interaction Employment** Property Maintenance Portfolio Performance Capital & Risk **Absorption** Interest Rates

Figure 25: Analytics architecture for CRE players

Source: Deloitte Analysis

Many CRE players are in the initial stages of implementing analytics (Figure 25) across key operational areas such as leasing, property management, budgeting, and tenant servicing. By property type, we believe that retail and multifamily are likely to lead analytics adoption, due to their need to analyze complex consumer data. Analytics can positively impact performance across a number of focus areas, with risk and finance the top analytics domains (Figure 26). Analytics can facilitate finance transformation by providing accurate and timely reporting on key performance indicators, in-depth analysis of business performance, and robust, forward-looking insights.

However, CRE players need to invest in improving data quality and data governance to reap the benefits of analytics.

Top Analytics Domains Key Focus Areas **Analytical Insights and Decision Support** Customer Finance Workforce Chain Project tenant performance **Tenant** Attraction and Predict tenant default Improve tenant satisfaction Retention Forecast future lease demand based on Lease Revenue macroeconomic and local market factors Optimization Optimize revenue from available space Determine appropriate lease rates Analyze portfolio performance **Portfolio** Determine best performing properties Management Manage core/non-core assets Assess optimum energy requirements Energy Analyze operations that can be shared or Management migrated to the cloud Manage data centers efficiency Decide on new development/renovation Capital Perform budgeting and forecasting **Deployment** Determine potential M&A opportunities Enhance and optimize workforce **Talent** processes and intelligence Attract and retain the appropriate talent Management for current and future business needs Medium Low

Figure 26: Analytics utility across key focus areas for CRE players

Source: Deloitte Analysis

Outlook

Given the advent of "big data's" increase in sophisticated capabilities to unearth valuable insights, the analytics value proposition is expected to continue to rise. In the medium-to-long term, CRE players will likely move higher in the analytics maturity continuum and adopt predictive and prescriptive analytics in addition to descriptive analytics. Further, the level of analytics implemented will likely be a key differentiator in assessing tenant mix and retention strategies across sub-sectors.

Bottom line

Analytics solutions can process the unstructured data captured from non-traditional sources such as geographical information systems (GIS), social media, mobile communications, emails, and videos. In addition, the analytics delivery model is changing from desktop-based software solutions that operate in silos to more integrated and accessible solutions that use cloud and mobile technologies. CRE players may benefit from leveraging analytics to drive bottom-line growth in the long term, especially as the slow, post-recession recovery lends limited support to topline growth.

^x Big Data refers to enterprise data that is unstructured, generated from non-traditional sources, and/or real-time – in addition to being large in volume.

Acknowledgments & Contacts

Author & Executive Sponsor

Bob O'Brien

Vice Chairman & Partner
U.S. Real Estate Services Leader
Deloitte & Touche LLP
+1 312 486 2717
robrien@deloitte.com

Co-author

Surabhi Sheth

Manager - Real Estate Eminence Group Deloitte Services LP +1 678 299 7330 susheth@deloitte.com

Contributor

Saurabh Mahajan

Assistant Manager - Real Estate Eminence Group Deloitte Services LP +1 678 299 7269 samahajan@deloitte.com

Acknowledgement

Robert Libbey, Eminence Group, Deloitte Services LP

Subject Matter Expert Interactions

William Sarni, Director and Enterprise Water Strategy Practice Leader, Deloitte Consulting LLP

Kristen Sullivan, Partner, Sustainability & Climate Change, Deloitte & Touche LLP

Gregory Aliff, Partner, Energy & Resources, Deloitte LLP

Courtney Naudo, Senior Manager, Strategy & Operations, Deloitte Consulting LLP

Real Estate Services Industry and Functional Leaders

Bob O'Brien

Vice Chairman & Partner
U.S. Real Estate Services Leader
Deloitte & Touche LLP
+1 312 486 2717
robrien@deloitte.com

Jim Berry

Partner
Audit & Enterprise Risk Services
Deloitte & Touche LLP
+1 214 840 7360
jiberry@deloitte.com

Matt Kimmel

Principal
Financial Advisory Services
Deloitte FAS LLP
+1 312 486 3327
mkimmel@deloitte.com

Chris Dubrowski

Partner
Professional Practice Director
Deloitte & Touche LLP
+1 203 708 4718
cdubrowski@deloitte.com

Guy Langford

Principal
M&A, Distressed Debt & Assets Leader
Deloitte & Touche LLP
+1 212 436 3020
glangford@deloitte.com

Ken Meyer

Principal
Consulting
Deloitte Consulting LLP
+1 973 602 5237
kenmeyer@deloitte.com

Larry Varellas

Partner
Tax
Deloitte Tax LLP
+1 415 783 6637
Ivarellas@deloitte.com

End notes:

¹ Global Economic Outlook, 3rd Quarter 2012, Deloitte University Press

² Global Economic Outlook, 3rd Quarter 2012, Deloitte University Press

³ Global Economic Outlook, 3rd Quarter 2012, Deloitte University Press

⁴ Global Economic Outlook, 3rd Quarter 2012, Deloitte University Press

⁵ Institute of Supply Management, August 2012

⁶ CB Richard Ellis - Econometric Advisors (CBRE-EA), baseline outlook data, 2Q12

⁷ CB Richard Ellis - Econometric Advisors (CBRE-EA), baseline outlook data, 2Q12

⁸ CB Richard Ellis - Econometric Advisors (CBRE-EA), baseline outlook data, 2Q12

⁹ STR reports Q2 results, Hotelnewsnow.com

¹⁰ CB Richard Ellis - Econometric Advisors (CBRE-EA), overview and outlook, 2Q12

¹¹ CB Richard Ellis - Econometric Advisors (CBRE-EA), baseline outlook data, 2Q12

¹² CB Richard Ellis - Econometric Advisors (CBRE-EA), baseline outlook data, 2Q12

¹³ Quarterly survey of commercial / multifamily mortgage bankers originations, MBA

¹⁴ Commercial / multifamily real estate finance forecast, MBA, February 2012

¹⁵ Worldwide CMBS issuance, Commercial Mortgage Alert, July 2012

¹⁶ Commercial / multifamily real estate finance forecast, MBA, February 2012

¹⁷ US Capital Trends - The Big Picture, RCA, July 2012

¹⁸ "Survey of Credit Underwriting Practices", Comptroller of the Currency Administrator of National Banks, June 2012

¹⁹ Delinquency rates on loans and leases at commercial banks, Federal Reserve, July 2012

²⁰ Trepp LLC, 4Q11 data, March 2012

²¹ Mortgage delinguency rates for major investor groups, MBA, May 2012

²² "US REITs Outperforming Other Investments", International Business Times, May, 2011; "REITs Outperform Broader Market in Q2 and First Half", NAREIT, July 2012

²³ Buyer-seller composition, RCA, June 2012

²⁴ Pregin Investor Outlook: Real Estate, H2 2012, August 2012

²⁵ Pregin, September 2012

²⁶ Pregin Investor Outlook: Real Estate, H2 2012, August 2012

²⁷ NAREIT, September 2012

²⁸ Thomson One, June 2012

²⁹ Thomson One, June 2012

³⁰ "The Rich rush to REITs", Onwallstreet, March 2012

³¹ Mid-Year Review, RCA, July 2012

³² "Commercial Real Estate Values Rise Slowly, Steadily", Nuwire Investor, July 2012

³³ Mid-year review, RCA, July 2012

³⁴ "Most Economists Agree Home Prices will Bottom by 2013, But Majority Surveyed Expect Homeownership Rate To Dip Further", June 2012, Pulsenomics LLC

³⁵ U.S. Census Bureau, August 2012

³⁶ National Association of Realtors, August 2012

³⁷ National Association of Realtors, August 2012

³⁸ National Association of Realtors, August 2012

³⁹ Realty Trac, July 2012

⁴⁰ 1Q12 foreclosure prevention report, Federal Housing Finance Agency (FHFA)

⁴¹ "Survey of Credit Underwriting Practices", Comptroller of the Currency Administrator of National Banks, June 2012

⁴² Federal Reserve, 1Q12

⁴³ National Association of Realtors, August 2012

⁴⁴ National Association of Realtors, August 2012

⁴⁵ "The Great Wall of Money", DTZ Research, March 2012

⁴⁶ "The Great Wall of Money", DTZ Research, March 2012

⁴⁷ "Cross-border Capital Tracker", 2Q12, RCA

⁴⁸ "Cross-border Capital Tracker", 2Q12, RCA

⁴⁹ Green building facts, U.S. Green Building Council

⁵⁰ "Sustainability 2.0: Using Sustainability to Drive Business Innovation and Growth", Deloitte Review, 2012

⁵¹ Eichholtz, P., et al., "Portfolio Greenness and the Financial Performance Of REITs", Journal of International Money and Finance (2012), doi:10.1016/j.jimonfin.2012.05.014

⁵² "Green Outlook 2011: Green Trends Driving Growth", McGraw Hill Construction (2010)

⁵³ "Cloud Computing: Impacts and Opportunities for Owners, Managers, and Providers", Deloitte dbrief, March 1, 2012

⁵⁴ Shehryar Khan, Founder and former CEO, Ubermind, Inc.; "Tech Trends 2012", Deloitte

⁵⁵ "Strategy Analytics: Apple Dominates Mobile App Space with Content while Android Aims for Numbers," Businesswire, July 21, 2011

⁵⁶ "TMT Tablet Study - Devices, Consumption, and the Digital Landscape – 2012". Deloitte

⁵⁷ "How The Real Estate Industry Is Using Social Media?" Powerupsocialmedia.com

⁵⁸ "Tech Trends 2012", Deloitte

⁵⁹ "How The Real Estate Industry Is Using Social Media?" Powerupsocialmedia.com

⁶⁰ "Crunchy Questions for Sticky Issues: Using Analytics to Outsmart Competitors", Deloitte Analytics, June 2011