NAREIM
National Association
of Real Estate Investment Managers

Dialogues

A PERIODICALS SUPPLEMENT TO INSTITUTIONAL REAL ESTATE AMERICAS, MAY 2016

SPRING 2016

The Challenges of Leadership

LET'S PLAY TWO

BEWARE THE DISRUPTORS

TEXAS TEA & CRE

THE COST OF BUILDING GREEN

CORAL REEFS, SHARKS, CMBS AND THE LAW OF UNINTENDED CONSEQUENCES

NAREIM Board of Directors
Patricia Gibson
Peter DiCorpo
Stanley Alterman
Kathryn Campbell
Scott Onufrey
Ryan Krauch
Kevin R. Smith
Amy Price
Christopher Merrill
Edward Casal
Jason Kern

President
Gunnar Branson

Meeting Manager
Sally Van Der Bosch

Dialogues Editor
Andrew Pandaleon

Design & Production
Campbell Symons Design

Photography
Tony Reynes, Northshore Digital Photography

Contact NAREIM at:
410 North Michigan Avenue
Chicago, Illinois 60611

312.884.5180
www.nareim.org

2016 MEETING SCHEDULE

MAY 03
CHICAGO
A&I – Accounting & Information

MAY 17
CHICAGO
20/20 Investor Summit

AUGUST 03
CHICAGO
HR – Human Resources

SEPTEMBER 27
CHICAGO
EO – Executive Officers Fall Meeting

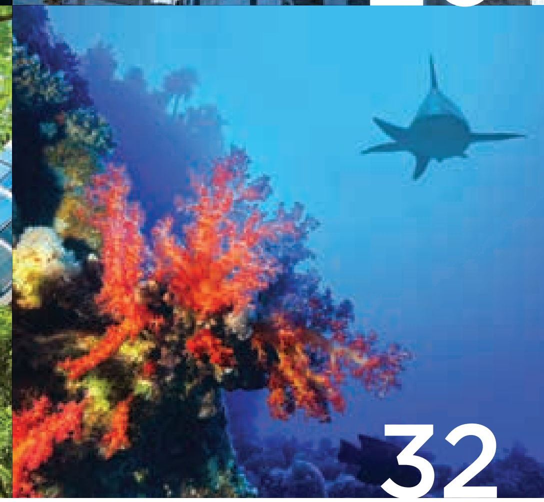
OCTOBER 18
LA JOLLA
A&E – Architectural & Engineering

NOVEMBER 09
CHICAGO
L&C – Legal & Compliance

DECEMBER 07
CHICAGO
C&I – Capital Raising & IR

> To register for these meetings, go to www.nareim.org

> To read these and other articles on you iPhone or iPad, download the free NAREIM Dialogues App from your app store.



Contents

SPRING 2016

2
THE CHALLENGES OF LEADERSHIP

12
LET'S PLAY TWO
By Jim Costello

16
BEWARE THE DISRUPTOR
By Gunnar Branson

20
TEXAS TEA & CRE
By Hans Nordby, Adrian Ponsen

28
ON THE COST OF BUILDING GREEN
By Andrea Chegut, Piet Eichholtz, Nils Kok

32
CORAL REEFS, SHARKS, CMBS AND THE LAW OF UNINTENDED CONSEQUENCES
By Jamie Henderson, Jim Clayton

THE CHALLENGES *of* LEADERSHIP

> “A leader is best when people barely know he exists, when his work is done, his aim fulfilled, they will say, ‘we did it ourselves.”
>
> – Lao Tzu

NAREIM Executive Officers Fall Meeting October 26th & 27th 2015

The last few years have been good for real estate investors. Values have risen to levels few would have predicted possible. Capital continues to flow into the sector and new investors around the world continue to have a voracious appetite for U.S.-based property. And yet, despite our good fortune, real estate usage, technology, regulations and capital demands are changing in new ways. Our formulas for success aren’t quite as fail-safe as they might have been before. To lead in today’s market is difficult, to do so in tomorrow’s seems almost impossible.

The NAREIM Executive Officer Meeting last October included fascinating discussions that challenged everyone in the room to think about the next generation of leadership skills. Speakers from around the country and across generations helped us to see more, to understand a different perspective, and begin to understand what some new assumptions might be. The following is a report of just a few of those discussions.

Can we face future challenges without challenging our beliefs?

Suzanne Duncan, Global Head of Research for State Street’s Center for Applied Research asked an unsettling question: “What if the way investment management has thrived in the past will lead to its eventual downfall?” Duncan’s recent research with 3,000 participants in 19 countries suggests that investment management, though profitable, is broken because on the whole, investment professionals are failing to deliver consistent alpha or meet long term goals of capital. Nor is there an effective match of assets and liabilities.

According to Duncan, “This is leading to distrust, dissatisfaction and disintermediation.” Only half of the investors believe that their investment manager is helping them attain their goal while two–thirds have no particular loyalty to their advisor. As a result, more institutions are taking investing into their own hands with direct forms of investing increasing every year – and not just passive investing. They are going after real estate whether they have the requisite skills or capabilities in house – but, “they think they can do the same or better job at less cost, because they may not believe investment managers are creating true alpha. Skepticism is at a level we’ve never seen before.”

ShopWithMe Photos by Benny Chan, Fotoworks

"What if the way investment management has thrived in the past will lead to its eventual downfall?"

Suzanne Duncan
State Street's Center for Applied Research

According to Duncan's recent report, Folklore of Finance: How Beliefs and Behaviors Sabotage Success in the Investment Management Industry, the entire investment management industry (including real estate) tells itself a certain set of stories as it makes investment decisions. (Go to http://www.statestreet.com/ideas/articles/folklore-of-finance.html to access the full report.) According to Duncan, the report explains that, "The beliefs that constitute the folklore of finance fall into three categories. The first two, the folklore of time and the folklore of false comfort, exist as a result of conscious decisions. Investment professionals know, for example, that investing based on past performance or imitating their peers does not contribute to achieving success…and yet both of these practices persist. Likewise, investors know the reason they invest is to reach long-term goals, yet they often fail to define success with these goals in mind. The folklore of knowledge, meanwhile, is rooted in unconscious thought. For example, without realizing it, investment professionals take credit for success while assigning blame to external factors. Equally unaware, investors demonstrate significant overconfidence in their own abilities."

The folklore of time gets many into trouble because long-term goals may be too abstract, or difficult to measure, and so we gravitate to benchmarking against peers or indexes such as the ODCE. Instead of measuring success by a seven to ten year timeline, quite often we default to an average real timeline of one to three years.
"We all know that this is not right, and yet…"

The folklore of knowledge, is particularly insidious. "98% of all cognitive functioning is done by the unconscious mind. We operate more often than not by habit and come to conclusions the same way." How much of our investment assumptions come out of habit, or what seemed to work in the past, versus a cold-eyed assessment of what is happening now?

And how often do investment managers take credit for success, but blame other factors for difficulties? Do we always tell others and ourselves the truth about what we know and what we don't know? How much of our investment decision making is driven by false confidence or even fear?

Is the real estate investment management industry thinking long term enough? How do we change our behaviors or structures to change? There is a clear imperative for everyone to examine their beliefs and assumptions, precisely what we always do at NAREIM discussions.

"For the last ten years, retail has lived in two worlds. The first is made up of brick and mortar retailers that can't figure out how to use technology. The second has e-commerce retailers that provide a great experience in the digital world, but have no idea how to bring that experience into the physical world."

Jonathan Jenkins
ShopWithMe™

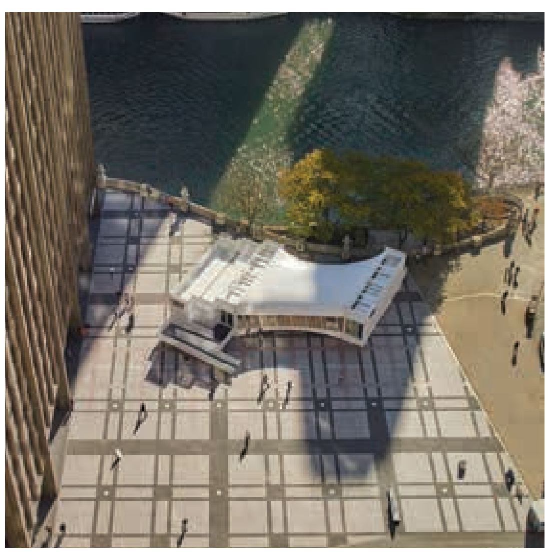
What could disrupt real estate as an industry?

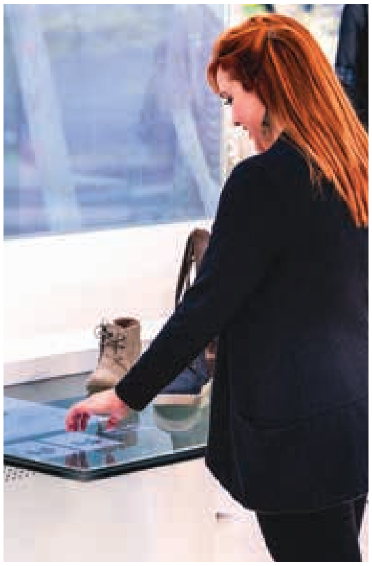
What would happen if a luxury retail experience could be set up anywhere – a parking lot, a plaza, an open field, or even a village on the other side of the world? How could technology change what a retail experience feels like? If a store could be set up or changed in a day, does that change the value of given spot, does it create "place"? These are just a few of the questions provoked by Jonathan Jenkins, CEO of ShopWithMe™ during a live preview demonstration of a new retail concept set up on City Front Plaza on Michigan Avenue and the Chicago River.

A fascinating structure designed by Giorgio Borruso and made up of modular units manufactured in Las Vegas then shipped by truck to any location, the store uses a combination of technologies to transform the retail experience for both the shoppers and the retailers.

According to Jenkins, "For the last ten years, retail has lived in two worlds. The first is made up of brick and mortar retailers that can't figure out how to use technology. The second has e-commerce retailers that provide a great experience in the digital world, but have no idea how to bring that experience into the physical world." The store we saw was an example of how Jenkins is working to bring both of those experiences together into one place.

Extremely portable and changeable, it spent two weeks in Chicago housing two different clothing retailers, TOMS® and Raven + Lily. Despite its small footprint, the store itself felt spacious, thanks to its smart design and a translucent ceiling material that bathed the space with natural sun light. A "pixel wall" made up of small moveable screens took up one wall, where changing light and graphics could switch from one retailer to another in an instant. The pixel wall was able to reconfigure itself as different kinds of shelves to hold different merchandise. If someone picked up a shoe on one shelf, another shelf nearby with a similar product would move towards the shopper automatically – similar to how online retailers can make recommendations for other products based on something you buy.





Tables in the space were made of “smart screens” that could display additional product information and suggestions when anyone picked up an item placed on them, again, just like an online experience. There was a good selection of products in the store, but in addition to what was on display, the entire product catalog of the retailer could be accessed via Smart Kiosks, also known as “Big Dippers”, throughout the store. So – if a shopper wanted a product, but couldn’t find the right size or color, it could easily be ordered and sent right to their home.

There was quite a bit of digital magic on display. Dressing rooms included smart mirrors that could display what the shopper has selected to try on from other smart fixtures or what they have in hand. The mirrors also showed other suggested products that could be tapped and delivered to them without ever leaving the room.

When it came time to leave, there was no checkout counter – instead, using a mix of RFID technology and mobile payment systems, purchases could be scanned and paid for as customers walked out. In addition, a virtual reality room provided 360 degree immersive video supporting the brand experience of the store. One NAREIM attendee confessed, “my mind is now completely blown.”

As the members walked away from the store, there was quite a bit of provocative thought. What could be done with something like this? Could retail work in places we’ve never thought of? Could pop-up retail become as important as food trucks for creating an urban experience? Does this help existing shopping centers? Does it threaten them?

This will be a technology and a company to watch in the months and years ahead.

Leadership and Bias: Are we finding talent when we see it?

Thanks to demographic forces and increasing pressure from institutional clients, succession is on everyone's mind. When facing the challenge of identifying and developing the next generation of leadership, many have despaired that there isn't enough good talent to be had – too few people have the training, the skills, or even the personality to lead real estate investment management firms.

What if the talent exists in abundance but we just aren't seeing it? An expert in human capital strategies and diversity, Ritu Bhasin, of bhasin consulting, inc. spent some time with the group helping to identify how natural bias in thinking can often get in the way of accessing, recruiting, and working with a broad and diverse universe of talented people. According to Bhasin, "Leadership teams have changed dramatically over the years, and they will continue to change. Your client base and your leadership teams, due to globalization and demographics, will be different in the years to come."

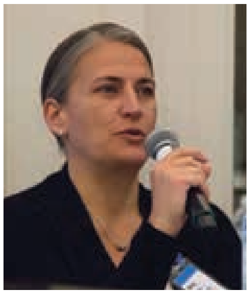
How we engage with that change, how we drive the culture and learning styles of our organization is central to future success. But it isn't easy for anyone. Recent events in the broader society have provoked difficult discussions about diversity. Commercial real estate investing has long been somewhat homogeneous as a cultural, social, political, and ethnic community, but as the world at large changes, so does real estate. Younger men and women from a broad range of experiences and cultural points of view are entering leadership roles, forcing many to question aspects of their management style, and perhaps bring new light to unexamined bias in thinking.

Do new leaders in real estate need to behave and look the same way as those before them in order to be successful? Do they need to have exactly the same experiences, culture, skills and leadership styles as those who lead today? Perhaps a more pointed question for everyone to consider is this: do they need to behave like Caucasian males in order to lead?

If they don't, then it is important when assessing, promoting, and developing leadership in the next generation that they are not unconsciously judged or measured by that metric. Most would agree with the notion that all people should be treated equally and everyone given a chance to prove what they can do. And yet, everyone, no matter how egalitarian or committed to merit-based leadership, unconsciously makes judgments about people based more on familiarity or similarity than performance or skills. Trusting someone who looks or behaves like you is far easier than trusting someone who is different.

"We are not wired for diversity. We are wired to be around people who are like us."

Ritu Bhasin
bhasin consulting, inc.



"I think there are differences in how women might approach a question and how they might articulate their point of view – that can contribute to better understanding."

Amy Price
Bentall Kennedy

Bhasin put it succinctly, "We are not wired for diversity. We are wired to be around people who are like us. From a biological perspective it's hard for us. And we are already in a global marketplace, forced to change….and we are bumbling through this."

The homogeneity of real estate investment management came about unconsciously, but for a rational reason. Investing is heavily dependent on others to perform as promised. Bad decisions or actions by a single person could be catastrophic for a firm and its investors. Trust is essential. If someone is the same as you, it is easier to trust them, just as humans throughout history have been able to trust family members, relatives and fellow members of tribes much more than those from other places with different habits, cultures and appearances.

According to Bhasin, "Real change happens when we make ourselves uncomfortable." In a world of rapid change, uncertainty and risk, we all have to get used to discomfort. "Research has shown that when there are people in a group with different experiences, it pushes diversity of thought." Everyone may look at the same data, but contextualize and prioritize it differently according to their own experience. By including multiple experiences in a decision process, you can avoid "group think" and see deeper into data.

The majority of leadership in real estate continues to be male, but a few women have made a big impact on decision processes. According to Amy Price, COO of the Americas for Bentall Kennedy, "I think there are differences in how women might approach a question and how they might articulate their point of view – that can contribute to better understanding. The challenge is making sure that different viewpoint is heard. It's hard to listen to different points of view."

According to Bhasin, "research suggests that the male and female brain are wired differently – and this can impact how women show up in leadership. Women tend to be more relational in their approach – and can therefore drive organization performance better – with more feedback, more collaboration, and ultimately more group cohesion."

"Many organizations actively focus their recruiting on schools where existing leaders are alumni. Whether we realize it or not, that seems to be an attempt to replicate ourselves."

Jeff Barclay
Goldman Sachs

Inclusion is worth extra effort to achieve, but it is certainly difficult. One short cut taken by organizations is to focus on looking diverse without addressing differences in behavior. Unfortunately, if everyone is still required to behave or think in the same way, the organization isn't able to benefit from difference – and there's a good chance that the diverse workforce asked to behave the same will leave when they find a place that welcomes difference.

So – how do we become more inclusive? There was quite a bit of lively discussion in the room as leaders discussed their own challenges, but one thought from Bhasin stood out, "When we discuss diversity, hiring, inclusion, and difference, there is a fundamentally difficult fact for all of us to face. Everyone engages in biased behavior." Whether we like it or not, no matter how open minded, thoughtful, or advanced a person might be, everyone makes decisions and judgments that are biased.

According to Bhasin, "Research shows that in the first three seconds of meeting someone, everyone's brain registers three characteristics: Race, gender, and age. That's how, from the beginning of time, humans were able to keep themselves safe. If someone is the same as me, that's okay. If not, I should proceed with caution."

If we are able to identify and become aware of our biases, it is possible to modify our behaviors for the better. Bhasin recommended that everyone take the Harvard Implicit Association Tests on-line. (go to https://implicit.harvard.edu/implicit/takeatest.html) Through a series of split-second reactions to photos, this test can help reveal your biases and blind spots.

In discussions, it became clear that there are many "blind spots" in behaviors. For example, Jeff Barclay of Goldman Sachs pointed out, "Many organizations actively focus their recruiting on schools where existing leaders are alumni. Whether we realize it or not, that seems to be an attempt to replicate ourselves." Bhasin described that as a "group-serving bias" that uses the following logic: "I went to X school and I am great, therefore if you went to X school you must also be great." Economists usually point out that correlation and causality aren't always strictly aligned. Many poor investment decisions have fallen apart due to this kind of logic.

Confirmation bias is another problem. Our natural tendency is to only accept data that supports a pre-existing thesis or point of view. If you believe that all people who came from a certain background are great, it is likely that you will overlook people who do not confirm that bias.

Bhasin entreated the leaders to, “always pause when your brain jumps to a quick conclusion about someone, either positive or negative. All of us need to pause and probe the assumptions that create any leap of judgement.” The issues of diversity and inclusion are not simple problems to solve. Like any smart investment in real estate, the investments we make in people have to be grounded in a healthy skepticism of our assumptions, a willingness to find something unexpected, and a humility that comes from understanding that our own brains can sometimes take too many short cuts.

If we approach people with the lessons learned from careful underwriting, investing and care of real estate assets, we may become a more inclusive industry.

Meeting of Minds

Thanks to the active participation of some of the more dynamic and thoughtful leaders in the industry, this most recent executive officers meeting challenged all attendees to think deeply. NAREIM Chair, Patricia Gibson pointed out, “we were able to rethink a bit of how we define success, explore our biases, consider succession planning, experience new ideas, listen to expertise on the SEC and hear from a range of exciting leaders, both new and experienced.”

LET'S PLAY 2

By Jim Costello

{ "IT'S A BEAUTIFUL DAY FOR A BALLGAME, LET'S PLAY TWO!" }

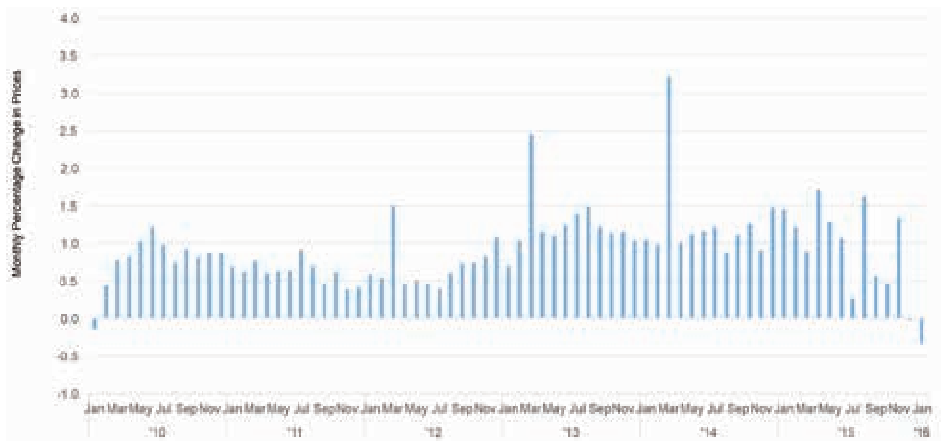
Jim Costello
Senior Vice President
Real Capital Analytics

Over the years, some of the most insightful comments expressed at NAREIM meetings have come from Jim Costello. A real estate and urban economist with Real Capital Analytics, Jim provided advice to the Treasury Department and other policy makers in the aftermath of the Global Financial Crisis and helped educate these professionals on commercial real estate performance. Jim has recently been made a member of the Commercial Board of Governors of the Mortgage Bankers Administration and is working there as well to help policy makers understand our industry.

Commercial property investors are at a confusing spot. After growing at a double digit pace in the last few years, both property prices and volume have now fallen. When positive trends were steady, experts and professionals at industry conferences were asking the same question, "What inning are we in?" We are now in game two of a double header.

There was an embedded set of assumptions in the way that question was asked. The main assumption was that the good times would not last forever. Additionally, there was an unspoken concern at industry conferences was that the end would come with pain, tears, sharply falling asset values and many participants looking for new work. It need not end that way.

In January, the Moody's RCA CPPI ™ recorded the first monthly decline in six years – falling 0.3% for the all-property composite and down 0.8% for core commercial properties (i.e, offices, retail, industrial). Is this monthly decline a sign that the last batter has struck out, the 9th inning is over and some will need to look for new work? Not exactly.



The assumption that the previous market cycle must end in tears is flawed. Yes, the declines in the Moody's RCA CPPI ™ into the Global Financial Crisis (GFC) were brutal and sharp, but every market cycle is not the same, just as every cycle is not the same in terms of drivers and outcomes. January's figures do not suggest that we are on a precipice due for a sharp fall in prices like that seen in the GFC.

Prices grew to then-record highs in 2007 on the back of excessive investor optimism on future growth prospects. At the end, buyers were paying for assets with cap rates lower than the rate of interest on their mortgages. Such deals would only make sense if property income grew well outside of historic norms. Unfortunately for those buyers, their assumptions on underwriting did not pan out and debt market liquidity disappeared at the wrong time.

Price growth in this cycle was a function of two forces. First debt market liquidity returned early in the first game of the double header led by insurance companies, then banks, and closing it out, CMBS lenders in later innings. With debt back at moderate LTVs, deals got done and both pricing and transaction volume picked up steam. The lack of debt market liquidity suppressed prices and deal activity, which came roaring back as debt normalized.

In later innings though, prices continued to grow as the metrics relative to other asset classes were just too hard to resist. As a result of Quantitative Easing and other Central Bank intervention, rates of return were pushed down at all points on the yield curve. The rich spreads offered by commercial real estate cap rates to bond instruments were simply too attractive – bringing more capital into the sector and continuing the upward pressure on pricing and volume.

So what drove the 0.3% decline in January and where is it going to end? Is commercial real estate no longer attractive, are investors looking for opportunities elsewhere? Is the game over with only the ground crew left to service a mess?

The Moody's RCA CPPI ™ acts a bit as a spot market price, but even still, trailing activity has an influence on current values. The fact that cap rates had flattened out nationally in recent months was a clear indicator that some change to the pattern of price growth would be coming. If cap rates are flat, unless property income is growing at double digit rates, price growth cannot continue at double-digit rates.

Compounding this flattening of cap rates, liquidity in the commercial real estate debt markets experienced a shock late in 2015. CMBS spreads went up 40 bps in September in response to corporate bond market uncertainty. The pace of deal volume slowed as buyers and sellers came to grips with that movement. With some CMBS debt costs higher some buyers may not have been as willing to stretch on prices.

None of these recent changes in the commercial property markets leave us in a place where prices will fall at double-digit rates as in the aftermath of the GFC. Debt liquidity experienced a shock, but it is not going away. Life Insurance companies are active as are banks despite challenges from new CCAR and HVCRE regulations. Furthermore, with ongoing low interest rates, the CMBS debt costs have eased somewhat into March of 2016.

As a sign of the importance of this debt market shock, prices for apartment properties were up 0.8% in January. This sector of course is heavily dependent on the GSEs for financing and they have stayed in the game even as other lenders pulled back. Once the story on the sources and quantity of debt for 2016 becomes clearer, buyers and sellers will be able to agree on prices more easily and, while not growing at double digit rates, transaction activity can continue.

Additionally, commercial real estate is still offering an attractive spread between cap rates and bond market instruments. Yes, the Federal Reserve Bank raised the Discount rate a smidge, but all other points on the yield curve are now lower with investor jitters keeping the all-important 10yr UST back below 2% as of late March 2016. There is not much pressure to see further cap rate compression given an expectation that at some point we will see a 10yr UST back in the 3% range. With the spreads in place today, current cap rates will still offer investors an attractive yield relative to other fixed income asset classes.

We are left in a new game in a double header. Our best offense won it for us in the first game, but it will not be back for the second. The next game will be more challenging – there will be innings where the market is down, yet other innings with thrilling gains. Some investors who only focused on the cap rate compression-driven gains of the last game may sit out this second match, but many others will still find reason to be in it.

In the words of Ernie Banks, "It's a beautiful day for a ballgame, let's play two!"

BEWARE
THE DISRUPTOR

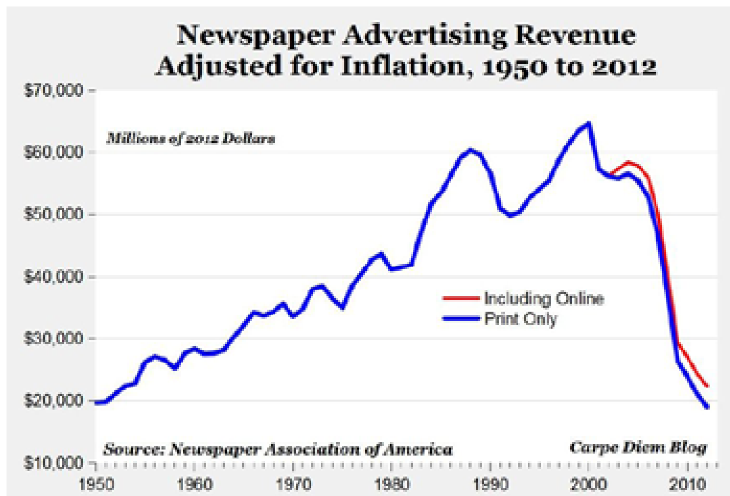
By Gunnar Branson

Gunnar Branson
President & CEO
NAREIM

Gunnar Branson is the President & CEO of the National Association of Real Estate Investment Managers (NAREIM). Before joining NAREIM in 2011, Mr. Branson worked for over 25 years in commercial real estate, professional services sales, product innovation and marketing as a consultant, and as marketing leader for companies such as GE Capital, Heller Financial, Wells Fargo, Fidelity, Jones Lang LaSalle, and others.

There has been a recent abundance of examples that graphically demonstrate what happens when disruptive technologies and business models are introduced to an industry. Every year, billions of dollars in revenue are taken away by competitors that weren't considered a credible threat – until they were.

Could the bookstore giants of the 1980's know that a little e-commerce business called Amazon would take everything away? In 2000, when American print-based newspapers enjoyed a record $65.8 Billion in advertising sales, did they believe that by the end of the decade, they would only share $17.5 Billion in advertising? Did Sony Music predict that they would lose half their business to a computer company by 2010?



Today, Uber is threatening the entire taxi business without owning a fleet of cars or employing drivers, Airbnb is eating away at the hospitality business without owning a single hotel, and Facebook, the world's most popular media company is taking viewers away from all other media without creating any content of their own.

In each of these and many other cases, it isn't established competitors that threaten to destroy incumbents, but outsiders. Motorola, Nokia, and Blackberry didn't lose to each other – instead, they lost to Apple, a company that wasn't even in the phone business until 2007 when they introduced the iPhone. Circuit City didn't lose to Best Buy, any more than Borders lost to Barnes & Noble or Tower Records to Virgin Megastores.

When considering competition, it is prudent to consider all the companies in your space, consider their strengths and weaknesses, and then align strategy to compete against them. But is that enough? In most examples of disruptions, the incumbents were very competitive in their space, enjoyed dominant market share, and considered their importance and position unassailable, until an outsider changed the rules of engagement.

Of course, the real estate investment management business is different from consumer driven businesses like entertainment, media and taxicabs. How could an outside disruptor take away something as sophisticated and specialized as institutional real estate investing? After all, this is an industry defined by long-term relationships, deep real estate experience, extensive checks and balances, and limited sources of capital. An algorithm can't raise capital or execute an investment strategy…or can it?

For the sake of argument, imagine what would happen if a non-financial, non-real estate firm decided to enter real estate investing. What would happen if a compulsive disruptor like Apple, with over $200 Billion in cash burning a hole in their corporate coffers started to take a closer look?

In most examples of disruptions, the incumbents were very competitive in their space, enjoyed dominant market share, and considered their importance and position unassailable, until an outsider changed the rules of engagement.

Likely, they would perceive vulnerability in the value proposition currently offered by investment management firms. Institutional investors, although perhaps satisfied by the risk-adjusted returns they currently enjoy through some of the best investment teams in real estate, are clearly interested in something more: more transparency and more control, while wanting a bit less: less fees and less time between commitment and investment. Although investment advisors have done very well for institutions over the past few decades, real estate investing, as it exists today is by no means a perfect fit. Disruptors are always attracted to markets where there is a clear disconnect between customer desires and industry offerings. It is unlikely that Uber would have been so quickly adapted by millions of taxi customers if their needs had been fully met by the incumbents.

Investment management firms emerged in real estate to solve for a fundamental disconnect between the demands of real estate investing and the needs of institutional investors. In order to acquire, improve, and benefit from commercial real estate, any investor needs ready access to very large and very patient pools of capital. Waiting weeks or months to aggregate that capital when a transaction becomes available is not feasible. Institutional capital, meanwhile, does not usually have the capability or bandwidth to efficiently acquire and manage real estate. By raising large pools of discretionary capital, a bridge is created through investment advisory firms to access real estate investments.

However, this is a somewhat awkward bridge between two very different worlds. The factors that currently make this difficult look much like the kinds of challenges disruptors like to solve. With a determined focus on providing real-time data, more investor control, and faster velocity of both capital raising and investing, a new, data-enabled investment platform would be very attractive to institutional investors.

A company like Apple might view a typical two-year fund-raising process as something that could be dramatically changed. If they developed an electronic syndication or "crowd funding" process similar to what Realty Mogul, FundRise, Peer Realty, or Cadre Real Estate use – it might be possible to raise the capital needed for any given acquisition in a few hours or days. If ready access to capital doesn't require large amounts of "dry powder", why have a fund at all? The management cost to maintain a platform that raises capital this way could theoretically be far less, along with the time and cost of dormant capital, while providing the institutional investor with far more transparency and control.

It would not be easy to create this kind of disruptive platform. The depth, breadth, and accuracy of real-time data required to roll up from the asset level to the ultimate investors would be considerable. Although electronic syndication platforms are beginning to emerge, they are still far from any real critical mass, and meanwhile there are legitimate concerns around control, confidentiality, and potential for fraud. Legal and regulatory issues present considerable challenges, as do the fiduciary requirements of institutions – but they are not impossible to surmount. It might be too difficult, risky, or time consuming for a successful real estate investment advisor to want to create such a platform, but that is precisely why an outside company with deep pockets, technical know-how, and a strong brand reputation might find this interesting.

There have been periodic discussions about an alternative to the current model for real estate investment management since the beginning of this sector, and so far, the big disruption has not happened. Real Estate Investment Trusts were supposed to take over everything once upon a time, and though they have grown considerably in the last twenty years, they have not replaced private investing. New electronic schemes for exchanges or clearing houses have been experimented with over the years, but no leader has emerged yet. Crowd-funding is intriguing but still small. Perhaps algorithms cannot replace the work of investment advisors. Perhaps our existing processes and technology will only change gradually.

Or perhaps not. Change can take forever to start, but when it does, it can happen so quickly that it takes everyone, especially the incumbents and experts, by surprise. Are we paying enough attention to the disruptors? Can we adapt to change when it comes? As difficult as it may be to create the digital institutional investment platform of the future, once it is built, the market is likely to change rapidly. Just as Apple iTunes took away over half of the $38 Billion music business in less than ten years, if institutional investors were able to easily and less expensively allocate their funds to real estate through a digital platform, how long would it take for investors to abandon the co-mingled funds of today?

This hypothetical platform of the future will likely still need investment and real estate professionals to find great assets, figure out how and where to create value, operate them and effectively sell them at the end of the term – but it does pose some very serious questions about how our businesses might evolve in the years to come:

Change can take forever to start, but when it does, it can happen so quickly that it takes everyone, especially the incumbents and experts, by surprise. Are we paying enough attention to the disruptors?

- How could an investment management firm optimize operations around asset-by-asset funding?
- How much more efficient can we make operations (and therefore how much can we lower costs to investors) with a new capital raising model?
- How would the communications with investors change?
- Does a new capital raising structure allow for different, more flexible, or specialized investment theses?

Whether we lead the change, or have the change imposed upon us by an outside disruptor, this is the time to begin asking, and perhaps answer a few of these questions.

Texas Tea & CRE

The Commodities Rout & Its Implications For U.S. Commercial Real Estate

By Hans Nordby, Adrian Ponsen

Hans Nordby
Managing Director
CoStar Portfolio Strategy

Adrian Ponsen
Senior Real Estate Economist
CoStar Portfolio Strategy

Regular NAREIM meeting attendees are very familiar with Hans Nordby and his colleague's fascinating take on markets, demographics, and the quirks of our economy and its effect on real estate investing. Hans leads CoStar Portfolio Strategy, (formerly Property & Portfolio Analytics), and is a frequent speaker on economic topics. Adrian's writings on macro-economic impacts on the real estate space are particularly insightful and useful.

Commodities and commercial real estate are joined at the hip in more ways than one. Commodities such as iron ore, aluminum, and copper are, literally, the building blocks of the commercial real estate sector. Over 85% of American workers use the world's most heavily traded commodity (oil) to drive to the office, retail, or industrial buildings where they work. For owners of U.S. commercial real estate, the implications of today's changing tides in the commodities sector (and lower long-term prices for raw materials) will stretch beyond just resource-rich regions of the country such as Texas and North Dakota. This piece begins with an overview of where commodity markets stand in early 2016, followed by an analysis of the commercial real estate sector's winners and losers from lower-for-longer prices of raw materials.

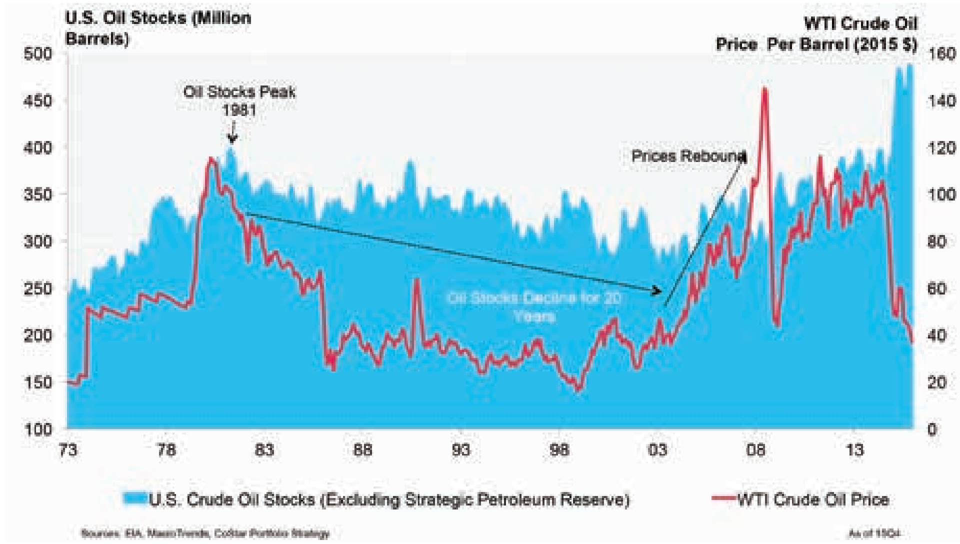
Deeply Discounted Commodity Prices Are Here To Stay

Of all the commodities whose values have sunk recently, the downturn in oil markets has been the most well-publicized and with good reason. Energy is a major line item in the average American consumer's budget and also a key input in the processing of other commodities, such as iron ore and limestone into steel and cement. As a result, low commodity prices act as a tax break for most consumers, as well as a discount on construction cost for builders. And a substantial subsidy it is – at the time of this writing, WTI crude oil prices are $37/per barrel, down about 65% from 2014 highs. The current supply and demand balance in energy markets suggest that a major price spike (one that would be enough to wipe out most of the recent declines) is a long way off. Top OPEC producers, such as Iran and Iraq, intend to increase production this year. Meanwhile, economic growth (which drives oil demand) is slowing in China, the U.S., and Europe.

The most bearish signal for oil prices is the current level of oil stockpiles, which is well into record highs and still rising. During the energy market downturn of the 1980s, it took more than 20 years of working off oil stockpiles before inflation-adjusted oil prices could hold above $40 per barrel. During that downturn, many of the factors at play were similar to those seen in oil markets today, including a strengthening dollar, elevated U.S. production, and Saudi Arabia pumping aggressively to defend its share of oil market revenues. Another 20-year stretch of low oil prices seems unlikely, but with prices over $40/barrel, the vast majority of today's producers can continue to make money pumping oil. This suggests that prices will again need to stay below this benchmark for an extended period of time to bring down the global supply glut.

OIL INVENTORY GLUTS TAKE YEARS TO WORK OFF

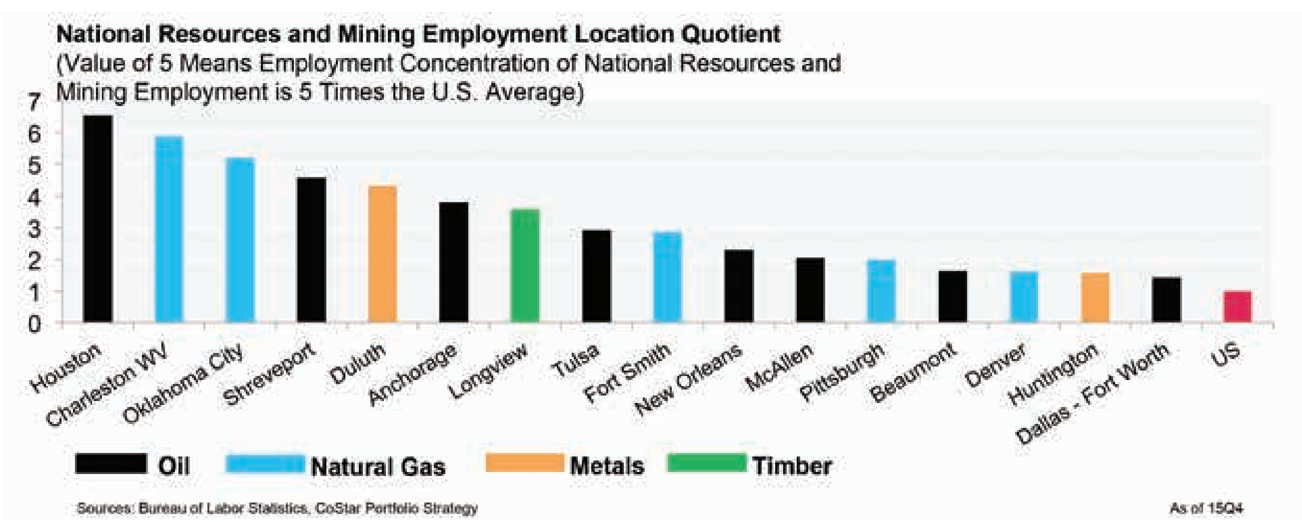
U.S. Oil Stocks & WTI Prices



Houston, We Have A Problem

The U.S. metropolitan areas hurt most by the downturn in commodity prices are those with economies driven by extraction of oil, natural gas, coal, or iron ore. The chart below highlights some of the U.S. metropolitan areas most exposed to natural resources and mining employment. Most of these are relatively small markets, off the radar of institutional investors. Only four have populations over two million: Pittsburgh, Denver, Dallas-Fort Worth, and Houston.

MOST U.S. COMMODITY MARKETS DRIVEN BY OIL & NATURAL GAS



A prolonged downturn in commodity prices would do some damage to the Pittsburgh, Denver, and Dallas-Fort Worth economies. But these metros are fairly diversified, with Denver and Dallas having particularly strong growth drivers, enough so that the fallout will likely be limited to specific submarkets. Examples of energy firms making layoffs in Dallas are few and far between today, as oil firms have shifted operations to Houston in recent decades, leaving behind smaller offices (mostly in Fort Worth and Irving) for executives hoping to remain in the metroplex. Meanwhile, corporate relocations by companies like Toyota and Liberty Mutual continue to power the economy in Dallas, where employment growth was an impressive 3% in 2015. Companies such as Linn Energy and WPX Energy have recently vacated office space in Denver's CBD, but job growth in the Denver metro overall also remains above 3% and office vacancies are continuing to decline.

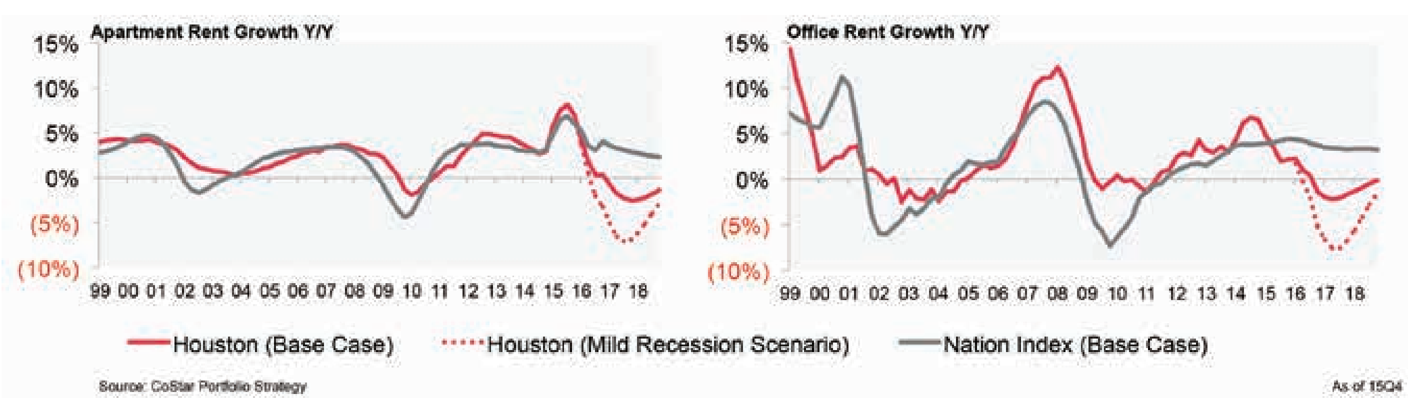
Houston is the lone major U.S. market with massive exposure to energy-related firms. Its concentration of employment in the natural resources and mining sector is more than six times the U.S. average. The Greater Houston Partnership estimates that the energy sector accounts for 40% of the metro's employment base. Houston's total employment growth has slowed from an average annual pace of 3.8% from 2012–14 to less than 1% in 2015.

Of course, economic drivers (and the demand for space they generate) only account for half of the equation; supply matters as well. Houston commercial real estate landlords also have to contend with record levels of new construction in the apartment and office sectors. During 2015, 12.8 million SF of office space (akin to about 4.3% of the metro's total office market) completed, amounting to the most office year-over-year supply growth in over 25 years. Another 6.8 million SF remains under construction today (52% of which hasn't yet been leased) and on track to complete over the next two years. Within Houston's apartment market 32,000 apartment units are under construction, about 21,000 of which are expected to complete in 2016 (amounting to 3.8% growth in the metro's apartment stock), making for a high not seen in three decades.

Provided that the U.S. economy can avoid recession (our base case implies GDP growth averaging 2%–3% from 2016–18), the decline in Houston rents expected in both property types should be comparable to what the market experienced in 2009–10. However, with the current economic expansion now entering its seventh year, there are risks of another recession taking hold at some point over the next three years. Such a scenario would pull the rug out from under oil demand and oil prices, doing further damage to Houston's economy. Under a mild recession (with U.S. GDP falling by 1.6% in 2017), CoStar's models suggest Houston apartment and office rents will fall by 13% and 12% respectively from current levels before bottoming out and beginning a recovery.

IF THE U.S. STAYS OUT OF RECESSION DURING 2017–18

Houston Can Avoid Extreme Rent Losses



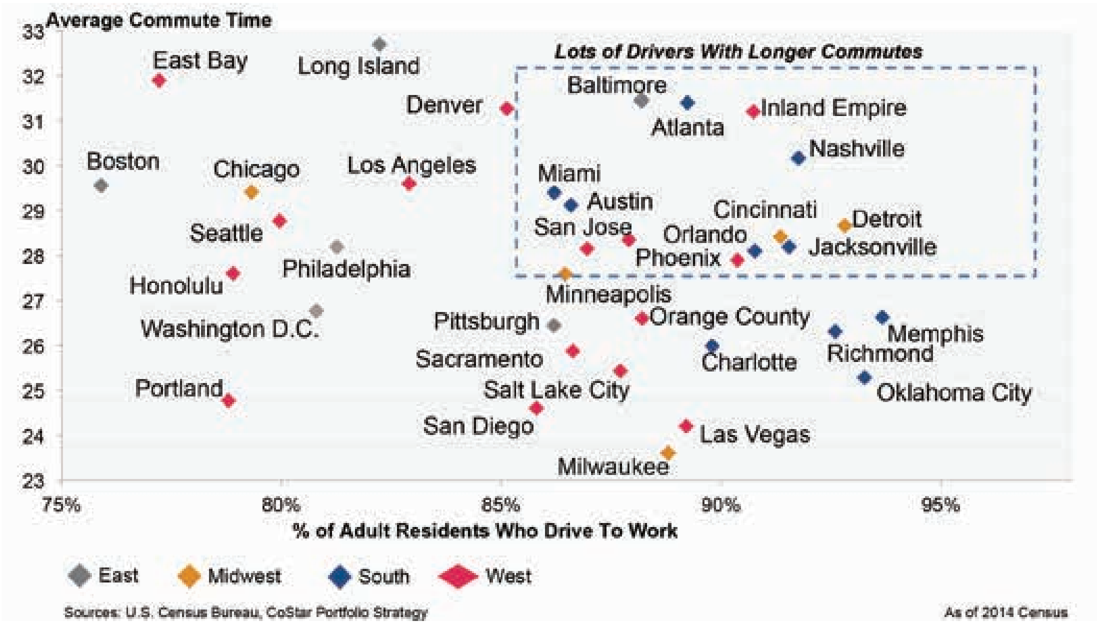
Consumers And Developers Stand To Gain

Despite Houston's woes, most U.S. metros will benefit from commodity prices remaining low. The U.S. Energy Information Administration (IEA) estimated in late 2015 that lower gasoline prices would save the average U.S. consumer $700 in 2015. A recent study of credit card activity by JPMorgan Chase Institute shows that 80% of those savings are being put toward discretionary spending, mostly dining out, entertainment, groceries, clothes, electronics, and appliances. This recent cash injection into consumers' pockets is making its way into the registers of malls, power centers, and grocery-anchored centers nationwide, benefiting retail landlords.

The oil dividend is not paid equally in all cities. Urbanistas in San Francisco and New York take public transportation and live in apartment buildings – they don't feel love coming from cheap gasoline. Avid drivers get the savings at the pump, and they live in markets such as Baltimore, Atlanta, Inland Empire, and Nashville, where commute times are 20% higher than the national average. Based on the IEA estimate of $700 saved annually by the average U.S. consumers, two- or three-person households in these gas-guzzling metros are likely saving $1,500–$2,500 per year. Apartment landlords appear to be capturing some of these consumers' newfound savings as well, with some of the nation's strongest rent growth surfacing in these long-commute metros. To wit, apartment rent growth in Atlanta and Inland Empire accelerated during the second half of 2015, ending the year above 7.5% in both markets.

GAS-GUZZLING MARKETS BENEFIT MOST

From Lower Oil Prices



PLACES FOR PRODUCTIVE PEOPLE™

At Lionstone, we identify and execute smart investments by understanding the evolution of internationally competitive cities then pinpointing where the most productive people in America want to live and work.

Investing strategically in Places for Productive People.™
That's a Lionstone Investment.

LionstoneInvestments.com

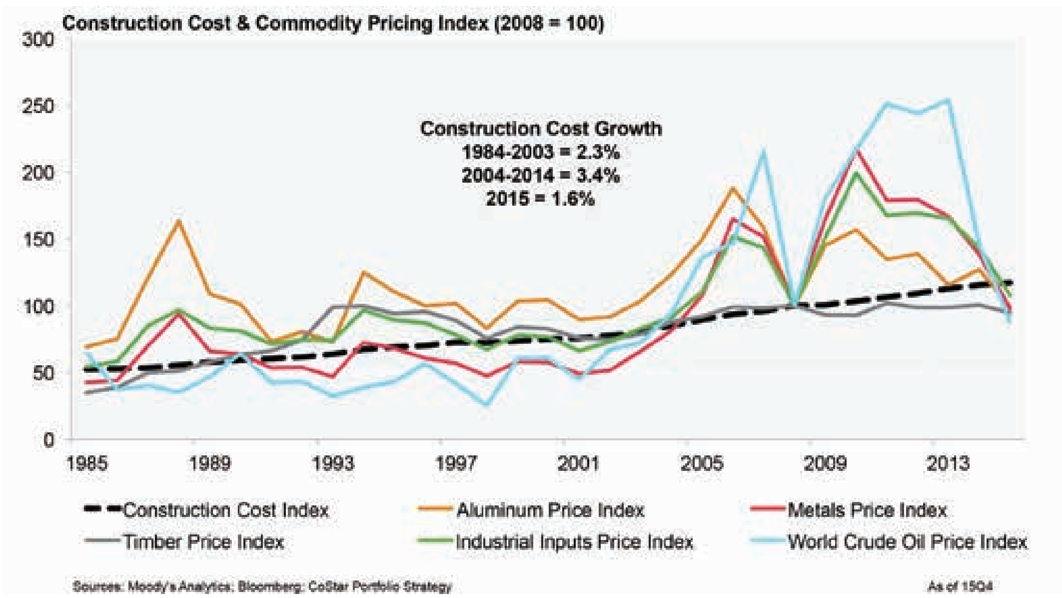
STRATEGIC INVESTMENTS
IN REAL ESTATE

LIONSTONE INVESTMENTS

Falling commodity prices have also translated into a much needed slowdown in the growth of construction costs. Going forward, slowing global economic growth (particularly in Asia) means less demand for building-related materials over the medium term at least, as China fills up its ghost cities. Cheaper oil also means cheaper coal – and lower costs manufacturing materials key to the construction process, such as steel and cement. In fact, aside from the depths of the recession in 2009, construction price growth in 2015 was the slowest in 14 years. As the development cycle ramps up nationwide, falling costs of raw materials and transportation are partially offsetting rapid increases in the costs of construction labor and equipment, ultimately helping to preserve developers' bottom line. This is a benefit to those getting underway on new buildings today but perhaps a net loss for owners of existing buildings, as they are now less insulated from new construction

STEEL: BUY YOURS ON SALE IN 2016

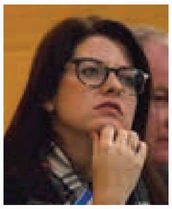
Construction Costs Vs. Commodity Prices



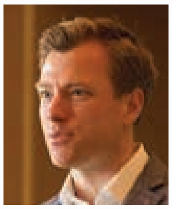
ON THE CO$T OF

BUILDING GREEN

By Andrea Chegut, Piet Eichholtz, Nils Kok



Dr. Andrea Chegut
Research Scientist
Director of The Real Estate Innovation Lab
Massachusetts Institute of Technology – Center for Real Estate



Dr. Nils Kok
Associate Professor of Real Estate Finance and Economics
Co-Founder GRESB
Maastricht University – Department of Finance

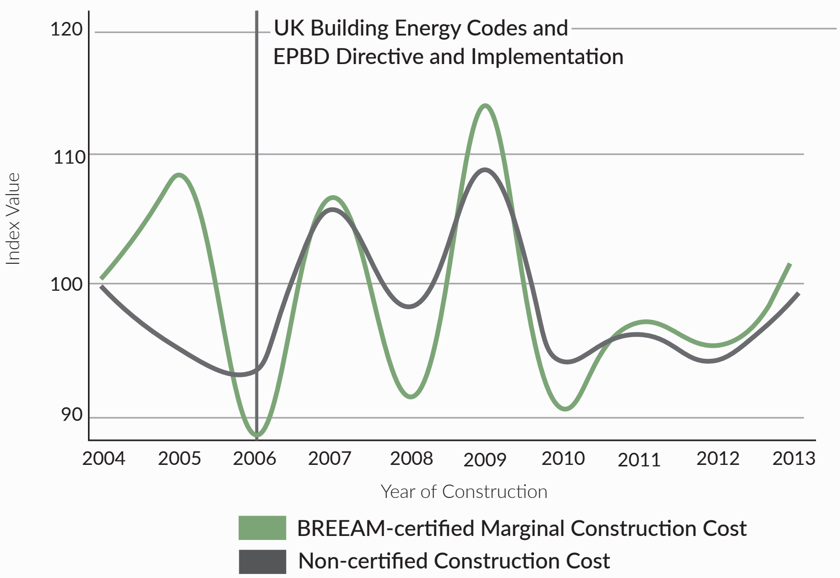
Prof. Dr. Piet Eichholtz
Professor of Real Estate Finance and Economics
Co-Founder GRESB
Maastricht University – Department of Finance

Whether it has been at our Architectural & Engineering Meeting at MIT, or in Executive Officer Meetings, Dr. Chegut and Dr. Kok have led frequent NAREIM discussions and helped members see well beyond the bare financials of commercial real estate to sustainability and the societal impact of our activities. This executive summary of a recent report that explores the true price of green innovation is a must read for any investor in the built environment.

"GREEN" CONSTRUCTION is gaining in popular market awareness, with 13% of the United States commercial office stock now certified by LEED and/or ENERGY STAR. It has become common knowledge that buildings can play a key role in the reduction of energy consumption and carbon emissions. Yet new construction and building refurbishments are still mostly conventional: in the United States just 38 percent of current construction is earmarked as "green," while some 12 percent of total construction employment was in green construction in 2011.[1]

[1] McGraw-Hill Construction (2013)

Traditional and Green Construction Cost Indices



Notes: The figure displays the BREEAM-certified and non-certified samples' construction cost indices over the 2004 to 2013 period. Index values are deflated by the UK Consumer Price Index. Year 2004 is the index base period.

“Green” constructionGiven the fact that much of the research on green-certified buildings documents positive income and value premiums, averaging 16 percent for transaction prices and 7 percent for rents, the lack of broader uptake of green construction is a bit of a puzzle. The marginal income should be sufficient to tantalize even the most cynical real estate developers – why would anybody leave a $100 bill on the sidewalk? This raises questions about the barriers that prevent more widespread adoption of green building design and construction practices. For example, conventional wisdom has it that the value premiums are just not high enough to recoup the additional costs associated with green construction, especially when it involves the refurbishment of existing buildings.

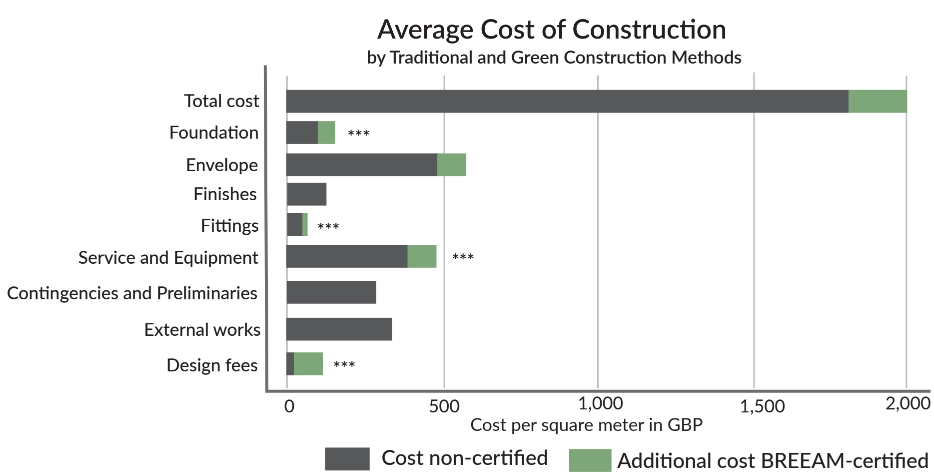
This is an important issue, but the costs of building green have hardly been investigated, making a simple cost-benefit analysis for green construction hard to obtain. This lack of information may be one of the reasons why developers do not yet construct sustainable green buildings in larger quantities.

A recent MIT working paper by Andrea Chegut, Piet Eichholtz and Nils Kok entitled "The Price of Innovation: An Analysis of the Marginal Cost of Green Buildings," aims to fill this gap. It compares 200 BREEAM-labeled commercial construction projects in the United Kingdom to 300 conventionally constructed projects over the 2003 to 2014 period (BREEAM is the equivalent to LEED). The paper employs detailed data regarding different construction cost components and construction contracts, and controls properly for location, building characteristics, property type, building ownership, and construction materials.

Surprisingly, the paper finds that the average additional cost of green-labeled construction projects is zero – on average across the study period as evidenced by the traditional and green construction cost indices estimated by the authors. In other words, green construction is not more expensive than conventional construction. This holds for new construction and the refurbishment of existing buildings alike. These key results go straight against conventional wisdom. But they make it even more of a puzzle why green construction is still not the market standard: a positive value premium at no extra cost should provide a very strong incentive for all developers to build green.

The authors investigate this further, and document that one aspect of construction is substantially more expensive for green buildings: their design. Design fees for green buildings are on average over 65 percent higher than the costs of conventional building design. For the buildings with the highest sustainability scores, this difference increases to about 180 percent.

While these differences are impressive, design fees represent just 3 percent of total construction costs on average – as evidenced by construction stage and the average construction costs for green and non-green construction. This small magnitude of cost difference seems unlikely to be the key to solving the low-diffusion paradox. However, it is crucial to realize that design fees are largely paid before construction has started, and even before a developer has any certainty whether the project can be developed at all.



Notes: The figure reports the total mean construction and elemental costs per gross square meter for the BREEAM-certified and non-certified samples over the 2003 to 2014 (Q2) period. The light gray bars depict the non-certified samples' mean costs and the dark grey bars depict the BREEAM-certified samples' additional mean costs. Statistical significance at the 1, 5 and 10 percent levels denoted by *, **, ***, respectively.

[2] Geltner et al., 2013

A substantial part of a project's design fees have to be paid to prepare the initial plan that is needed to get planning permission from the municipality. And almost all of the remainder of the fees will be paid before construction even starts, so in a phase when market take-up (in the form of tenants and/or buyers) is still uncertain. So in essence, design fees are investments with a very high risk, since these fees are paid during a phase when developers still face fundamental uncertainty regarding the success of their project. Moreover, given the phases of the project in which design fees are paid, they will be paid mostly from the developer's own equity.[2] At these stages, external financing can be difficult to obtain. Even if a developer knows that green buildings command a sales premium in the marketplace, uncertainty preceding the construction phase and lack of funding may prevent the developer from spending the additional fees needed for green building design.

The study also finds that green construction projects take longer to complete – on average 30 percent longer as compared to conventional buildings – and that the exact contract length is less predictable than in conventional construction. This creates an additional disincentive to build green. The construction project's length determines how long a developer has capital locked up in a project, so a longer contract period creates an opportunity cost, preventing the capital from being employed in the next profitable project. At the same time, the added uncertainty regarding the contract period creates more risk regarding this opportunity cost.

It seems there are three major impediments to building green, even though the overall costs of green construction do not exceed those of conventional construction. These impediments are design fees, contract length, and uncertainty concerning contract length. These three results may provide insight into barriers to the adoption of otherwise economically rational – and potentially profitable – sustainable construction practices.

The design fees can be regarded as the premium that a developer has to pay for the option to develop a building. The fact that the results show design fees that are almost double for the most advanced green buildings reduces the likelihood that developers engage in the option to develop such projects. Moreover, the longer project length and higher variation in development duration for more efficient green buildings increase the uncertainty of total project costs, and may impact the developer's expected return on equity.

In addition, lack of solid information on the total cost of construction and development may lead the developer to believe that the cost of "going green" is much higher than it actually is. These findings are important for developers who are trying to increase sustainability development practices, institutional investors seeking green buildings in the market place and policymakers who aim to diffuse green buildings.

Interestingly, the paper also documents that the added design costs for sustainable building projects seem to be coming down: in the later years of the sample period, design fees of sustainable buildings were on par with those of conventional buildings, possibly reflecting the fact that the property development industry has been gaining experience in this area, albeit slowly. This bodes well for the future diffusion of sustainable construction.

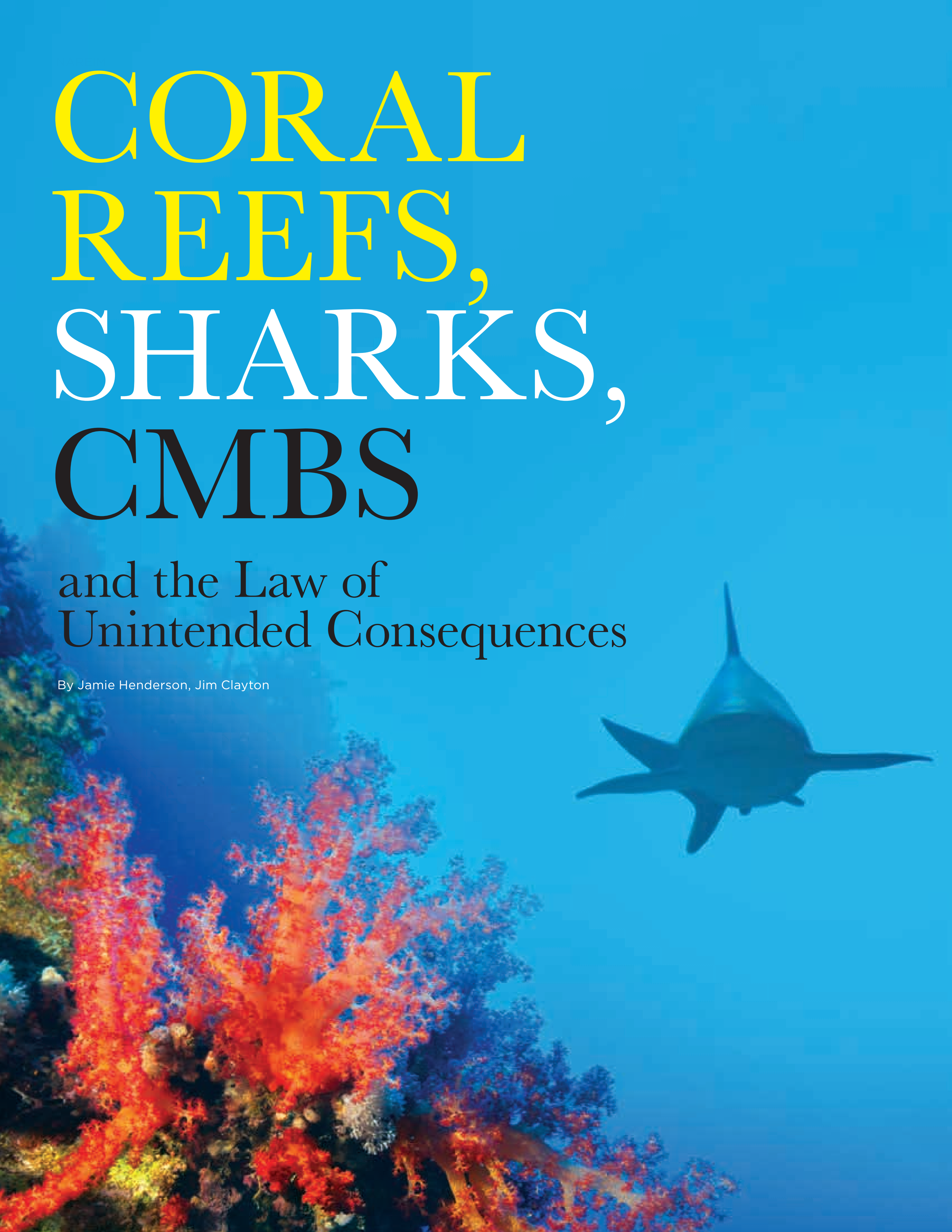
It is increasingly common knowledge that energy efficiency plays an important role in the reduction of the carbon externality from buildings. Green building innovation typically does not occur during the stabilized asset management phase, but during (re)development. Change for the building sector in abating carbon emissions and energy consumption is most effective at the time of property design and construction – developers, investors and policy makers should take notice.

Link to full MIT working paper:
http://mitcre.mit.edu/wp-content/uploads/2016/01/The-Price-of-Innovation_WP5.pdf

CORAL REEFS, SHARKS, CMBS

and the Law of Unintended Consequences

By Jamie Henderson, Jim Clayton



> "Scientists have recently begun to understand the vital role played by top predators in ecosystems and the profound impacts that occur when those predators are wiped out. Now, researchers are citing new evidence that shows the importance of lions, wolves, sharks, and other creatures at the top of the food chain."[1]

Jim Clayton
Head of Investment Strategy & Analytics
Cornerstone Real Estate Advisors

Jamie Henderson
CIO, Alternative Investments
Cornerstone Real Estate Advisors

Active participants in the NAREIM discussion, Cornerstone Real Estate Advisors colleagues Jamie Henderson and Jim Clayton bring a thoughtful point-of-view to almost every topic.

Jamie leads Cornerstone's Alternative Investment Group where they originate high yield commercial real estate investments, including mezzanine, transitional first mortgages, B-Notes and preferred equity investments as well as asset management and fund raising activities. Jim is responsible for monitoring and forecasting real estate investment and capital market trends, advising on fund and client investment and portfolio strategy, and delivering applied research and strategic thought pieces. Prior to joining Cornerstone in 2008, Dr. Clayton was the Director of Research at the Pension Real Estate Association (PREA), where he led PREA's research and investor education outreach activities.

In 2013 researchers from the Australian Institute of Marine Science (AIMS) published a fascinating study on the ecosystem of coral reefs. The results derive from continuous observation and monitoring of reefs about 185 miles (300 km) off the coast of Northwest Australia over the previous 20 years.[2] During that time, the scientists observed that the ecosystem of a coral reef has a fragile equilibrium in the sense that all the members of the system must remain in harmonious balance for the coral to thrive and the reef to maintain its resiliency to disturbances that threaten its state of stability. When the population of any one group that lives on the reef gets out of balance, algae blooms occur and these smother new growth causing the reef to begin to die. One of the key findings of the study is that sharks play a remarkable and somewhat counterintuitive role in reef health, and removing sharks from the system can destabilize the ecological balance of the system from which the reef may not recover. When the shark population is impacted by over-fishing, primarily by Indonesian fisherman who have had permission to fish in these waters for years, mid-level predators thrive and subsequently eat the herbivorous – algae eating – fish. Enter the "law of unintended consequences." With fewer herbivorous fish to keep the algae in check the reef gets sick and the entire ecosystem is threatened and can fail. And what, you are no doubt asking yourself, does this have to do with real estate and specifically financing it with securitized loans through commercial mortgage backed securities (CMBS)? We believe that the commercial real estate (CRE) mortgage finance system has many parallels with the coral reef ecosystem. An unbalanced proportion of predators (sharks) or perceived predators (non-balance sheet lenders) can damage and ultimately destroy ecological balance threatening the reef's existence (having real impacts on the economy).

CMBS lending currently accounts for about 17% of the outstanding balance of commercial and multifamily mortgage loans in the U.S. real estate lending marketplace (the ecosystem). This is down significantly from a pre-Great Financial Crisis (GFC) peak reached after a decade of amazing growth saw CMBS market share nearly triple from 9% in 1996 to 26% in 2007. During the 2005-2007 period CMBS issuance accounted for as much as 50% of the market (ecosystem out of balance). This, as we all know, had significant negative consequences for not only the CMBS bond buyers, but the industry as a whole. Today there is in excess of $600 billion of CMBS loans outstanding, more than half of which is maturing over the next two years. Furthermore, CMBS is in many cases the only execution available for huge swaths of the commercial real estate market as well as the very large loan space. However, the securitized lending sector that was once hailed as a major innovation is struggling to regain traction – regulators seem to have equated CMBS lenders with sharks and are intent on the equivalent of over-fishing via regulatory action, apparently unaware of the damage that over-fishing can potentially inflict upon the mortgage finance ecosystem.

[1] Source: "The Crucial Role of Predators: A New Perspective on Ecology" by Caroline Fraser, Yale University Environment 360 Newsletter, September 15, 2011 (http://e360.yale.edu/feature/the_crucial_role_of_predators_a_new_perspective_on_ecology/2442/).

[2] "Caught in the Middle: Combined Impacts of Shark Removal and Coral Loss on the Fish Communities of Coral Reefs" by JLW Ruppert, MJ Traveers, LL Smith, M-J Fortin and MG Meekan, PLOS ONE Journal, September 2013 http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0074648.

"The whole food chain is being thrown out of whack … This means that the reef has far less resilience, which is a real worry."[3]

The post-GFC regulatory response to the lending and borrowing excesses of the 2005-2007 period has not necessarily been swift, but it has been extensive. Since 2010, regulators have brought forth a host of new legislation designed to curtail what has been categorized as bad behavior (generally on the part of lenders) in an effort to minimize systemic risk. There are at least six new or modified regulations that are either in-force or pending that have the potential to adversely and severely impact primarily the CMBS lending market, but also will impact the lending practices of mid to large sized banks. These new rules include: Dodd-Frank Risk Retention, Basel III designation of development and transitional property financing by banks as "High Volatility Commercial Real Estate" (HVCRE) under certain conditions, Liquidity Coverage Ratio, Risk-Based Capital, Regulation AB II and last but not least, the Volker Rule. After not reigning in apex predator over-population before the crisis, could these new reactionary regulations be conflated with over-fishing by the Indonesian fisherman? What are the unintended consequences of an unprecedented level of regulation in the lending industry? What happens to the reef when the sharks are removed, or in this case not permitted to grow to a size consistent with ecological stability of the mortgage finance system?[3]

A look at the current capital markets environment can help provide a glimpse of potential impacts of restricting the shark population on key elements of the food chain and hence the ecosystem. National property price indices show that prices today have fully recovered and exceed pre-recession levels. Transaction activity totaled $534 billion in 2015, almost back to 2007 levels, and is expected to continue to grow over the next few years. There is sustained long run demand for debt capital to finance these properties and there is in excess of a trillion dollars (as per Trepp) of commercial real estate mortgage debt maturing over the course of the next three years, a large portion of which is pre-crisis CMBS debt of various health and quality. The historic take-out for a significant amount of this debt has been banks and CMBS lenders. Suffice it to say that the demand for debt capital is nearly at an all-time high and will continue to grow. The supply of debt dollar, due in large part to the regulatory activities cited above, is being curtailed. What is the outcome? Who will fill the gap? Will the mid-level predators rise to the occasion? Will they have the discipline not to grow too quickly nor consume too much? Will there be increased pressure on spreads, cap rates, leverage? What impact does this have on the credit quality of small and regional bank portfolios? Does it increase or decrease? Do they eat what was formerly being eaten by CMBS?

It is our opinion that some level of regulation is appropriate and necessary – too many sharks is just as perilous as too few. Capitalism is replete with examples where both over-regulation and lack of regulation had severe and many times unanticipated consequences. In the event that all of the aforementioned regulations are enacted as drafted, a tested and relied upon source of liquidity in the commercial real estate market will be markedly reduced. It will likely not be eliminated, but it will be reduced. The cost of money is going to increase and the ability/cost to finance very large deals and very small/secondary deals is going to change in a way that is at odds with ordinary evolution. This alone could send a shock wave through the property markets. As we witnessed first-hand, the single family housing crisis created a massive credit event that rippled through what were previously considered un-correlated asset classes. A reduction in credit availability at a time of strong demand could likewise dislocate both the credit and space markets (particularly because it is occurring within the same sector).

[3] "**Researchers find coral reefs at risk when sharks overfished**" by Shireen Gonzaga, Earthsky, September 2013
http://earthsky.org/earth/researchers-find-coral-reefs-at-risk-when-sharks-overfished

Get Noticed.
Get Your Message Across.
Get Connected.

Whether you just want the latest industry news or you want to position your firm as an industry leader, IREI delivers products at all levels to help you succesfully develop your business.

Newsfeeds:

Stay on top of the news with FREE daily news alerts delivered to your inbox.

Institutional Real Estate Americas:

Provides you with insights and perspectives not found anywhere else. Subscriptions include both print and digital versions for your convenience, with free trials available.

Advertising:

Placing your message in *Institutional Real Estate Americas* gives you the best return on investment. Our audience controls 90% of the institutional real estate marketplace, which ensures that your message gets to the right people.

Sponsorship:

Looking to combine it all? That's where our sponsorship program comes in. Our sponsorship packages include the products above, but also data, consulting and a seat at our private editorial board meeting.

Institutional Real Estate
Americas

Investor focused — connecting people, data, insights

28 An emerging group
A roundtable on emerging managers
with Loretta Clodfelter

39 The four food groups
Office, industrial, retail and multifamily
by Denise DeChaine

51 A work in progress
Are emerging markets more investable now?
by Andrew Burrell

61 Building sustainability
The tools to create a green portfolio
by Tony Liou

COMMENTARY
1 > Editorial
What we're watching
by Geoffrey Dohrmann

5 > Market Perspective
Science fiction and institutional real estate
by Roy Schneiderman

DEPARTMENTS
9 > Market Pulse
13 > People
15 > News & Views
67 > Data Bank
69 > By the Numbers
72 > Photo Finish

www.irei.com — An Institutional Real Estate, Inc. publication — April 2016

To learn more about these products and how IREI can work with you, contact:

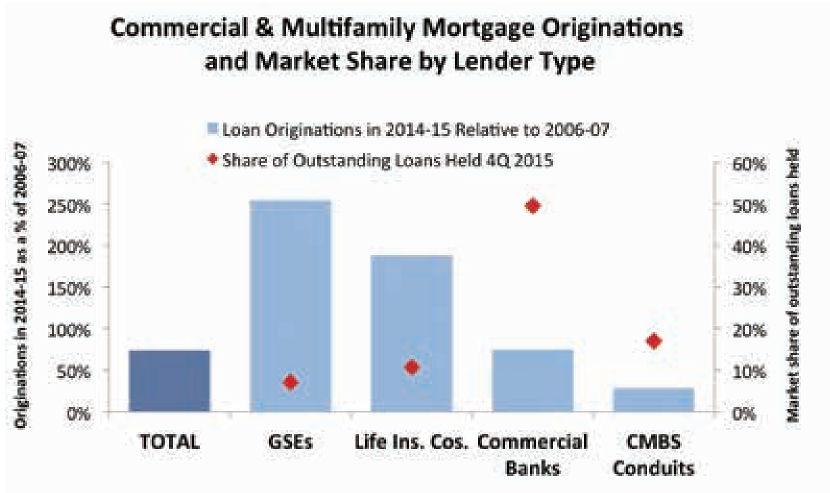
Jonathan Schein
SVP, Managing Director of Global Business Development
Institutional Real Estate, Inc.
j.schein@irei.com
+1 212-332-7180

Cynthia Kudren
Senior Account Executive, Advertising
Institutional Real Estate, Inc.
c.kudren@irei.com
+1 917-620-4666

INSTITUTIONAL REAL ESTATE, INC. | 2274 Camino Ramon, San Ramon, CA 94583 USA
Phone: +1 925-244-0500 • Fax: +1 925-244-0520 • www.irei.com

people data insights

BANK AND CMBS LENDING LAGGING AND CONSTRAINED BY BASEL III AND DODD-FRANK REGULATIONS



Bars show the relative recovery by lender type as average quarterly loan originations in 2014 and 2015 expressed as a percentage of average quarterly originations in 2006 & 2007.

Source: Cornerstone based on data from the Mortgage Bankers Association and the Federal Reserve.

We believe that financial market participants and regulators can gain key insights from ocean ecosystems – wolves in Yosemite Park would work too! The parallels between financial markets and nature is recognized in an emerging new paradigm for financial economics that focuses more on the evolutionary biology and ecology of markets rather than the more traditional physicists' view.[4] In this sense we question whether "over-regulation" is necessary at this stage, as the evolutionary underpinnings of behavioral finance would suggest that CMBS borrowers, bond investors, rating agencies all have learned from past mistakes and have adapted their behavior, or have been eliminated from the ecosystem. The next several years will likely bring heightened global capital markets volatility largely due to disparate central banking activity and uncertainty about the global economy. Commercial real estate (our reef) will need steady, well capitalized and predictable capital market participants that are transacting (dining) at all risk levels in order to prevent material capital markets induced dislocations. The regulatory bodies that govern the legislation would surely benefit from a careful review of the ecological impacts of over fishing.

[4] "Bubble, Rubble, Finance in Trouble?" by A. Low, The Journal of Psychology and Financial Markets 06/2002; 3(2):76-86.


REAL ESTATE INVESTMENT MANAGEMENT
Multi-
skilled,
multi-
experienced.


Obtain accurate risk analysis from a mobile-enabled solution that delivers a complete view of your investors' fund and property performance — down to the tenant level.
SOCIAL. MOBILE. SMART.