FALL 2019

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STATE ASSOCIATION *of* COUNTY RETIREMENT SYSTEMS

CHINA'S MOVE

FROM FACTORY OF THE WORLD TO SILICON VALLEY OF THE EAST

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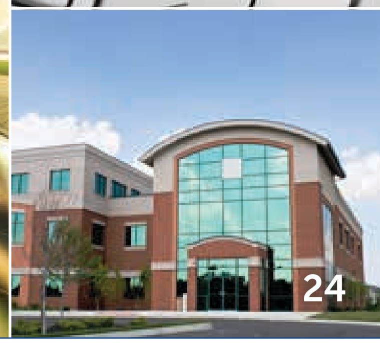

SACRS

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A Successful Affiliation

Fall is just around the corner, can you believe it? We had a great summer and this issue is proof of all the interesting things that our SACRS members are learning about, interested in, or are working on. Our July Public Pension Investment Management Program was well attended. But don't take just my word for it. At right is what Gregory La Blanc shared in LinkedIn about our successful affiliation. If you didn't get to attend this summer, be sure to try next year.

Every season brings with it an opportunity to network and learn together. My focus right now is on the upcoming Fall Conference in Monterey, California. November is a gorgeous time to visit the northern coastline and the return on your time spent with your fellow SACRS members cannot be beat.

Register now and I'll see you there,

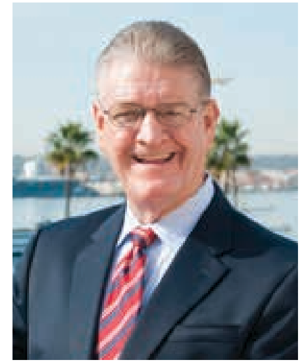
Sulema H. Peterson

Sulema H. Peterson, SACRS Executive Director

"Along with Thomas Gilbert, I hosted the trustees of the various hashtag#pensionfunds of SACRS (California county retirement systems), thanks to the leadership of Sulema Peterson. We are now in our second decade of partnership with SACRS and proud of our successful affiliation! This year featured talks by Rich Lyons and Dan Mulhern from University of California, Berkeley, Haas School of Business, Nari Rhee from UC Berkeley Center for Labor Research and Education, Harvey Leiderman from Reed Smith LLP, David Parham from SASB – Sustainability Accounting Standards Board, Jack Clark from Cal Rugby, Christopher Macke from American Realty Advisors, and Cal alum David Francl from SFPERS.

Thanks to all the speakers and to Marose Eddy and Kristina Susac for making it all possible."

Gregory P. La Blanc
Lecturer in Finance, Strategy, and Law
Haas School of Business
University of California, Berkeley



First-Rate Speaker Program
A Top Priority This Fall

Our all-too-short summer of beach days, desert sun, and vacationing is at an end, which means our Program Committee is hard at work trying to find compelling speakers for the SACRS Fall Conference in Monterey.

It's a big job to find people who can articulate their specializations, but we have made this one of our top priorities. I want to thank the Program Committee for all their work. It raises the quality of our programs when we have a diverse group of speakers, as well as a professional moderator in Frank Mottek. With more than 30 years of experience in radio and TV, Frank has become the voice of our SACRS conferences, and we're very lucky to have him participate.

*"Make sure you don't miss the fall conference; register on **SACRS.org** and book your flights and hotel as soon as possible."*

We have confirmed some excellent speakers for this Fall's Conference, including Catherine Mann, the global chief economist at Citi, and Dan Ivascyn, the group chief investment officer at PIMCO. These two global investment moguls will share their thoughts and outlooks of today's markets and tomorrow's opportunities. They are just two in what will certainly be an exciting line-up of talented presenters.

WANTED: SACRS Volunteers and Participants

Make sure you don't miss the Fall Conference; register on SACRS.org and book your flights and hotel as soon as possible.

While you're there, consider volunteering for one of our committees. We currently have openings on the Education Committee, which is responsible for developing and planning SACRS educational activities. In our mission statement, we say our #1 dedication is to education, so this is a vital committee.

We don't want product-driven sessions, but policy-driven ones. We don't want sales pitches; we want the information to be useful to our trustees. After all, our mission is to help educate trustees.

In that vein, we just wrapped up another successful SACRS-UC Berkeley Executive Education Program. This annual program supports our main goal as an organization – to provide top-notch education to our '37 Act county trustees, enabling them to better manage the money that thousands of California workers depend on as they reach retirement. This year's sessions were no exception.

When asked if they can effectively apply the content they learned, attendees rated the SACRS-UC Berkeley Executive Education as a 6.5 out of 7. They told us the program has a very good balance of academics (theory) and application and includes great content and engaging speakers. One attendee said, "As a new trustee, high-level education around various asset classes and asset allocation is very helpful." Don't fall behind your peers.

Make it a priority to join us July 2020 for the next SACRS-UC Berkeley Executive Education session. And be sure to come to Monterey for the SACRS Fall Conference November 12-15.

I look forward to you seeing you there.

Dan McAllister, *President of SACRS & SDCERA Trustee*

> Consumers have changed not only how but also what they purchase, and are spending less on goods and more on services.

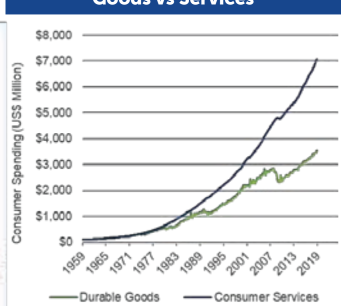
THE QUIET MEGA TREND IN RETAIL REAL ESTATE

The retail real estate investment landscape has shifted dramatically in recent years. But at the heart of it, we see two major mega trends at play. The first trend is well known – the exponential growth of ecommerce is changing how consumers purchase physical goods. This has benefitted logistics warehouse real estate while massively disrupting the fundamentals of retail real estate, especially malls, which are at the epicenter of the death of the department store. The second trend is less known, but equally powerful – consumers have changed not only how but also what they purchase, and are spending less on goods and more on services. Though this trend has accelerated since the financial crisis, it has been underway for decades, driven by a general increase in affluence, coupled with the increased efficiency and decreased cost of distributing physical goods. These services (i.e. food and beverage, fitness, beauty, health and medical, and business services), unlike goods, require a brick and mortar interface for point of sale consumption.

While most of retail real estate is being negatively disrupted by today's trends, there is a winner in the asset class that has emerged, hidden by the uncertainty and confusion surrounding retail in general – a property type we call "neighborhood retail," which has become the brick and mortar interface for the last-mile delivery of services.

Continued Growth in E-Commerce Market Share

Consumer Spending – Goods vs Services



Source: Consumer spending and growth in E-Commerce Market Share, Federal Reserve Economic Data as of February 2019; Retail Indicators Branch, U.S. Census Bureau as of March 2019; CenterSquare Investment Management, CoStar and ICSC as of December 31, 2018.

> In today's environment where so many other real estate assets appear richly valued, neighborhood retail assets trade at high cap rates (6-7 percent) because of the lack of institutional competition.

The Retail Evolution

As we think about ecommerce and evolving consumer behavior, our analysis yields a bifurcation in the consumer spending categories most impacted by ecommerce. Ecommerce currently accounts for 17 percent of consumer spending (excluding auto and fuel) and our analysis shows that percentage expanding to 31 percent over the next five to seven years. We expect goods categories like apparel, sporting goods, and pharmacies to see the biggest change in their physical versus online retail shares. On the other hand, services categories like beauty, food and beverage, and fitness will be most insulated by the shift toward ecommerce as brick and mortar locations are required for their consumption. These services categories account for almost one fourth of consumer spending and we expect that to continue growing over time, supporting the growing demand for retail space suited to these services and readily available to local consumers.

Category	Total Retail Spent (%)	CURRENT: Ecommerce penetration	CURRENT: Physical retail share	FUTURE: Peak Ecommerce penetration	FUTURE: Equilibrium Physical Retail Share
Electronics	6%	60%	40%	70%	30%
Apparel	8%	35%	65%	60%	40%
Furniture	5%	18%	82%	30%	70%
Sporting Goods/Music	3%	17%	83%	50%	50%
General Merchandise	18%	40%	60%	55%	45%
Building Materials	10%	5%	95%	10%	90%
Beauty	1%	1%	99%	5%	95%
Pharmacies	8%	5%	95%	60%	40%
Groceries	18%	3%	97%	10%	90%
Food and Beverage	17%	3%	97%	5%	95%
Business Services/Other	3%	2%	100%	5%	95%
Fitness	2%	2%	100%	5%	95%
TOTAL	**100%**	**17%**	**83%**	**31%**	**69%**

Sources: U.S. Census Bureau, CenterSquare Investment Management, as of May 2019. Data is as a percent of total retail spend - auto fuel and automobiles. Future data is predicted by CenterSquare based on an extrapolation of historical data. Actual results may differ substantially from projections presented.

Assets for the Last-Mile Delivery of Services

Neighborhood retail centers are the winners in this evolution of retail as they provide the physical space required for the last-mile delivery of these services. We classify neighborhood retail as multi-tenant strip centers between 10,000 and 50,000 square feet, unanchored, and with greater than five tenants occupying highly fungible space. These centers do not have an anchor tenant by design, as we see inherent risks for the big box tenants – they are expensive to backfill, account for a large portion of the asset's cash flows, have more negotiating leverage, don't have contractual rent escalators, have co-tenancy clauses that can impact other tenants, and have more exposure to being disrupted by ecommerce. We believe the most attractive centers are located in growth markets with strong demographics supporting demand, built after 2000, and situated on high traffic roads in dense and affluent markets. Historically, these assets have proven to be very resilient, with consistent occupancy in the mid-90 percent range during the worst of times, including the last recession.

10k - 50k SF with no anchor tenant	Institutional Class A centers built after 2000	Centrally located on highly trafficked roads	Multiple access points and convenient parking	Within 3-miles of affluent demographic trade areas

Source: CenterSquare

An Opportunity Ripe for Institutionalization

Given the lack of appetite for retail assets in the current environment, there is very little institutional investment in neighborhood retail today. This creates an opportunity to institutionalize the asset class, similar to what occurred in self-storage and student housing over the past few decades. In today's environment where so many other real estate assets appear richly valued, neighborhood retail assets trade at high cap rates (6-7 percent) because of the lack of institutional competition. Additionally, they generate high cash yields because they are efficient to own. These assets utilize triple net leases with annual rent escalators, and are inexpensive to lease because they are simple, fungible spaces with a variety of tenants that can backfill vacancy. They require limited tenant improvements and little frictional leasing costs. In addition, investment returns can be further enhanced through institutional asset management. Most of these properties have been owned by local operators that have neither invested capital into maintenance nor managed occupancy and rents to maximize revenues. This investment opportunity is especially attractive right now given the NCREIF Open End Diversified Core Equity (ODCE) Index is expected to decelerate to mid-single digit returns (partly driven by write-downs from mall exposure), while neighborhood retail can outperform on the cash flow alone. With an approach that features the aggregation of multiple centers across growth markets in the U.S., institutional investors have a compelling option to rebuild retail real estate exposure in a diversified portfolio insulated from the impacts of ecommerce and with a significant amount of current income.

Conclusion

With real estate markets priced seemingly to perfection, there are few remaining opportunities for the risk-adjusted returns presented by neighborhood retail. We believe the disruption in retail has hidden one of the better opportunities in real estate today – a property type that is quietly benefitting from the mega trend of growing services consumption and the increasing demand for their brick and mortar delivery point, Neighborhood Retail.

Scott Crowe is the Chief Investment Strategist at CenterSquare Investment Management, and a member of CenterSquare's listed real estate, listed infrastructure, and private real estate investment committees. Crowe works with each team's portfolio managers and investment professionals in the leadership of the investment process, with a particular focus on thought leadership by synthesizing our real asset views across the business. Prior to joining CenterSquare, Crowe was CIO of Liquid Alternatives at Resource Real Estate, Global Portfolio Manager at Cohen & Steers, and Head of Global Real Estate at UBS Equities Research.

FEATURED STORY

“Didi Chuxing exemplifies a new generation of innovation and entrepreneurs in China with the financial muscles and global know-how to make their mark on the international arena.”

CHINA’S MOVE

FROM FACTORY OF THE WORLD TO SILICON VALLEY OF THE EAST

China might seem like an unlikely candidate for innovation as it is traditionally better known for contract or original equipment manufacturing. However, we argue that with its natural advantage of a vast talent pool, financing and market access, China has most of the ingredients needed to transform into the “Silicon Valley of the East”.

In this report, we explore five important factors which we believe are key for any country to successfully cultivate innovation. These are: 1) access to market and location; 2) government support; 3) good ideas; 4) good staff and management; and 5) access to financing. Ultimately, we believe that China has the necessary skills and weaponry to fend off competitors and emerge victorious in the race to become the next innovation hub.

The battle for dominance turned bloody. In a bid to muscle into the China market in 2014, United States-based ride-hailing firm Uber spent more than USD 1bn a year to attract Chinese passengers and drivers with generous bonuses. The Chinese incumbent Didi Chuxing was not about to surrender any inch of its home turf, itself reportedly bleeding 40 million yuan (USD 5.8m) a day at the height of the subsidy war. Didi was already dominant in China in that battle with more than 70 percent market share before it delivered a stab right into its rival's belly – taking a USD 100m stake in Uber's smaller US rival Lyft in September 2015. The move put a squeeze on Uber's core business unit. Uber's relentless advance was halted. It called a truce in August 2016, selling its China unit to Didi for USD 1bn in cash, along with an 18 percent ownership stake in the combined entity, which is valued at USD 35bn.

As Didi co-founder and angel investor Wang Gang put it, Uber was like an octopus where China was just one of its tentacles. Simply lashing out at that was useless, which was why it made a tit-for-tat move to cut into Uber's core US unit, drawing blood.

Evidently skilled in the art of war, the team at Didi, including its 34-year-old founder Cheng Wei and company president Jean Liu, an ex-Goldman Sachs managing director and daughter of Lenovo founder Liu Chuanzhi, one of the godfathers in China's technology sector, had in just five years built up the firm into a global force to be reckoned with. The company's ride-hailing app allows consumers to digitally hail and pay for taxis, private cars, limousines and commuter buses. It has 300 million users in 400 Chinese cities, and commands 85 per cent of China's ride-sharing market, estimated to be worth 286 billion yuan (USD 41.5bn) in 2018[1]. In its overseas forays, besides Lyft, Didi has also taken stakes in India's Ola, Singapore based GrabTaxi, and expanded into Latin America. Its financial backers include Chinese web giants Tencent and Alibaba, US smartphone giant Apple, Japan's Softbank and Middle East fund Mubadala Capital.

Didi Chuxing exemplifies a new generation of innovation and entrepreneurs in China with the financial muscles and global know-how to make their mark on the international arena. While China's first phase of innovation was concentrated in the manufacturing, logistics and supply chain management, its more recent advancements were concentrated in technology and healthcare. We believe that this next wave will broaden to biotechnology, artificial intelligence, security and robotics, with its move up the value chain taking place in 10-30 years – at a break-neck speed compared to the 60-70 years it took the US. Disruption will be the name of the game as future breakthroughs focus on improving efficiencies and throughput in existing industries.

From our analysis of leading innovative hubs such as California, where Silicon Valley is widely regarded as the crucible of creative technology developments, and Massachusetts known for cutting-edge drug discovery, we distilled five important factors needed to successfully cultivate innovation. These are: 1) access to market and location; 2) government support; 3) good ideas; 4) good staff and management; and 5) access to financing. We believe that countries in Asia with the potential to take on the mantle of innovation superpower are Japan, Korea and increasingly, China. The world's second-largest economy has reached such a scale that it is now able to reap the benefits of a cluster effect with a cohesive eco-system – of idea-generators, entrepreneurs, universities and capital providers – necessary for the success of innovation.

1 Huge domestic market to fund cash burn in overseas forays

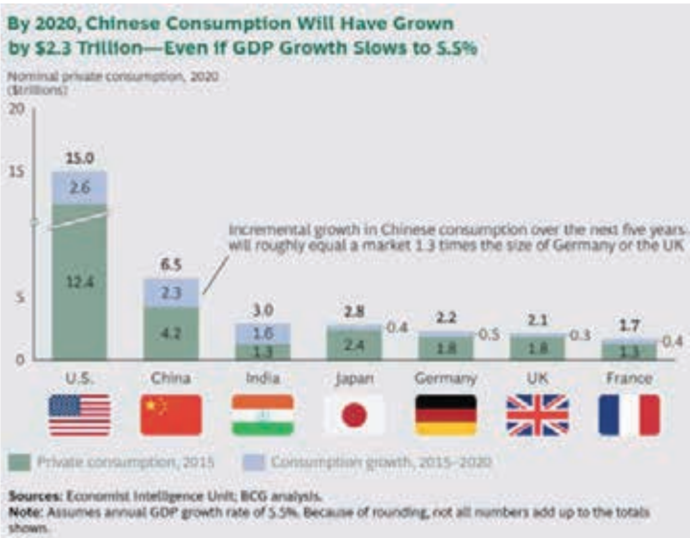
China might seem like an unlikely candidate for innovation. After all, the world's most populous nation, is more traditionally known to churn out cheap knock-offs that line the shelves of hypermarkets around the world. However, we argue that with its natural advantage of a vast talent pool, financing and market access, China has most of the ingredients needed for success. The key factor is its large domestic market which affords companies the cash cow to fund overseas expansion. As seen in Didi Chuxing, the firm's dominant position in its domestic market enabled it to meet global competitor Uber head on in its overseas expansion. According to co-founder Wang, the company was prepared to keep bleeding subsidies for a few years were it not for Uber's call to broker a deal. Founder Cheng has also reportedly said that profitability is not an immediate goal. The company has not provided financials, though estimates on the street put the firm's 2016 revenues at close to USD 3bn.

The first factor for successfully cultivating innovation is access to a huge domestic market. Japan and the US have proven this concept with its sizeable domestic reach. In the case of Korea and Taiwan, while many of its enterprises are extremely creative, they lack a large enough domestic market to incubate and grow into massive multinational companies. Entry into foreign markets require financial muscles to cushion the blows from incumbents and a fat cash cow at home to milk while enduring losses as brand recognition is built over time. Taiwan smartphone maker HTC's global expansion has been sub-par, mainly because its home market is too small to afford it the cash burn needed when going overseas to establish a name. Most mid-sized Korean firms have also had middling success, with the exception of the large chaebols such as Samsung and Hyundai.

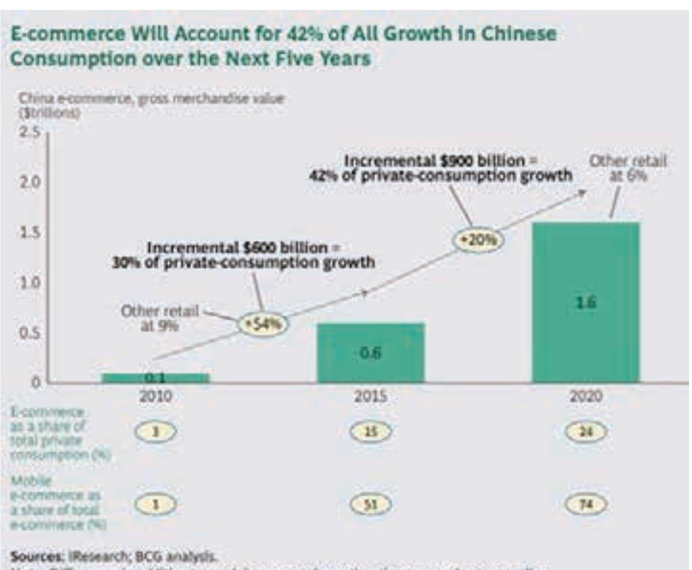
> *"The speed of adoption is rapid with 731 million Chinese having access to the internet at 53 percent penetration and 95 percent of internet users accessing mobile internet."*

China, on the other hand, is at the forefront with its huge and deep market where a massive 330 million[2] middle class population is willing and eager to embrace new ideas and technologies. Although termed an emerging market, its diverse consumer base provides a huge test bed for both mass and niche products that is needed for innovation. China also has the advantage of leapfrogging technology, as seen when the country moved directly to using mobile phones and skipped pagers. This advantage enables it to decisively adopt new technologies with no legacy issues. Hence the speed of adoption is rapid with 731 million Chinese having access to the internet at 53 percent penetration and 95 percent of internet users accessing mobile internet[3].

CHART 1: Growth of consumption and e-commerce in China



Source: Economist Intelligence Unit, BCG analysis



Source: iResearch, BCG analysts

Any prediction, projection or forecast on markets is not necessarily indicative of the future or likely performance.

"Although many of the US companies disrupting industries today are private enterprises, in our view most major technological advancements since World War II were initially driven by the government."

2 Government support incubating success

We believe that government support is a second key factor for cultivating innovation. Although many of the US companies disrupting industries today are private enterprises, in our view most major technological advancements since World War II were initially driven by the government. We analyse the case of the US, Japan and Taiwan.

The poster boys of innovation in the US today are privately-run behemoths such as Amazon, Google and Facebook, but many of the biggest technological advancements in recent years have been funded initially by the government. The ubiquitous internet and global positioning system (GPS) for example were both publicly-funded with the latter developed as a US military technology for space-based radio-navigation system. These inventions were then further developed for other commercial applications at substantial cost efficiencies. The US has reached a stage now where innovation is a 'grassroots' initiative led by private companies able to plug into an established eco-system.

Japan in its earlier years of industrialisation under its Ministry of Economy, Trade and Industry founded and financed JECC Corporation in 1961, where the company's computer leasing

program grew the Japanese computer market. The country's very large scale integration (VLSI) project in 1976 led to semiconductor market share growth and eventually created a massive cluster of semiconductor and technology parts manufacturers and brand names that dominated global markets in the 1980s/90s such as Fujitsu, NEC, Toshiba, Hitachi and NTT.

Taiwan's transition from manufacturer to knowledge-based economy was also kick-started by the government. Stateowned Industrial Technology Research Institute founded several tech juggernauts which were eventually spun off into chip companies such as TSMC, UMC and Mediatek. The government established Hsin Chu Science and Industrial Park in 1980 and encouraged universities to establish significant engineering capabilities, teaming up with technology companies, while setting up a NTD 800m Executive Yuan Development Fund for Innovative Enterprises.

China is now taking a similar path with its Made in China 2025 program having attracted billions of dollars in research. Its "Thousand Talents (Qianren Jihua)" program is trawling the world to entice world-class researchers to settle in China while many "sea turtles" or "(hai gui)" – welleducated Chinese who had earlier left the country for better job opportunities – are now returning as prospects at home improve. To date, 115 research institutes, universities, industrial parks and companies have been identified, 77 percent of which are found in nine provinces within China[4].

Government support has enabled Chinese companies such as Huawei to develop into the world's third-largest smartphone maker. Another lesser-known company, Hangzhou Hikvision, whose surveillance cameras are now top sellers in Europe and the US, is pushing innovation frontiers and has made headway in artificial intelligence and facial recognition technology. Its growth came on the back of support from the government bent on equipping all its train stations with video cameras after the terrorist attack by separatist groups in Yunnan. The Shenzhen-listed company, which is ultimately 42 per cent owned by the Chinese government, reported latest first half 2017 net profits of RMB 3.3 billion.

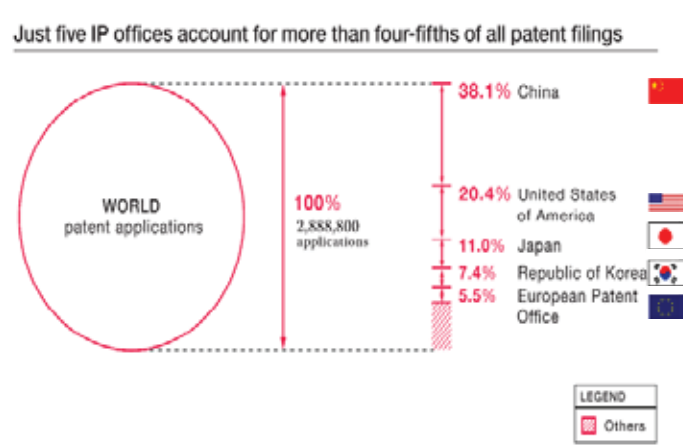
> *"The innovators go beyond the usual capital and financial cities of Beijing and Shanghai. In fact six Chinese cities filed more patents per 10,000 residents than Silicon Valley in 2015."*

3 Good ideas are a necessary ingredient

A third ingredient necessary for innovation is needless to say, good ideas and we use the amount of patent registrations as a gauge of China's potential for success. Spending on research and development (R&D) is crucial and China has spared no efforts as President Xi Jinping seeks to turn the nation into an Innovative Economy.

Success begets success and now China has reached a critical mass in R&D spending with clusters quickly forming around existing and future hubs. In fact, China now tops worldwide filings for patents, trademarks and designs, with new applications exceeding the combined total of the US, Japan, Korea and the European Patent Office in 2016[5]. This perhaps foreshadows the rise of a new technology superpower.

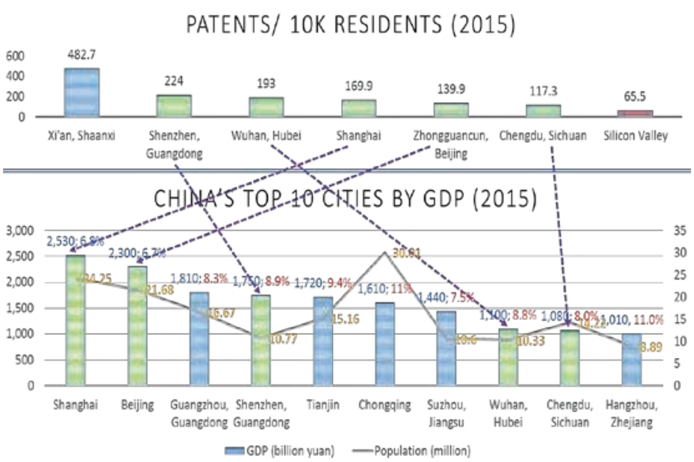
CHART 2: Proportion of global patent filings in 2016



Source: World Intellectual Property Organization, 2016

The innovators go beyond the usual capital and financial cities of Beijing and Shanghai. In fact six Chinese cities filed more patents per 10,000 residents than Silicon Valley in 2015[6]. Unlikely candidates such as Xi'an, famed for its terracotta warriors, Chengdu, home of the pandas, and Wuhan join the ranks, with Shenzhen, Hangzhou, Guangzhou, Tianjing and Nanjing also featuring prominently. Many Chinese cities are potential innovation hubs and share the same characteristics such as the highest GDP, with the top 10 cities also under the "Thousand Talents" programme supported by the government and great universities. These cities are becoming selfsustaining and spreading.

CHART 3: Patents filed within China's top 10 cities by GDP



Source: National Bureau of Statistics, 2016

> *The Chinese government's courtship of returning talents has borne some fruit with many "hai guis" returning to start or head Chinese companies, lending their expertise to contribute to the fourth factor necessary for innovation success: good staff and management.*

4 Sterling management and staff

The Chinese government's courtship of returning talents has borne some fruit with many "hai guis" returning to start or head Chinese companies, lending their expertise to contribute to the fourth factor necessary for innovation success: good staff and management. Take the case of drone maker Dajiang Innovative Technology, better known as DJI, whose founder Frank Wang Tao returned to Shenzhen in 2006 from building prototypes of flight controllers out of his dorm room at the Hong Kong University of Science and Technology. The company's quest for robot dominance in the sky has seen DJI drones now taking an estimated 80 to 85 per cent of the consumer drones market share.

5 Rich pickings with easy access to funding

One of the key features contributing to the US market's success is its developed capital market where start-ups can easily raise funds. In the 1990s and 2000s, China relied heavily on foreign direct investment to fuel its growth. Now the situation has all but reversed with funds from China flowing overseas as newly affluent locals hunt for overseas opportunities. Foreign private equity are also now knocking on China's doors, eager to fund any decent idea unlike in the past when start-ups notoriously had to sweat it out to raise capital.

With the successful USD 25bn initial public offering of Alibaba creating thousands of overnight millionaires and companies such as Tencent awarding HKD 2.6bn in stocks to award and motivate employees, Chinese companies now have the financial cache to attract and retain top talent to work in cosy offices and not just on dour manufacturing floors.

This final factor for innovation success – access to financing – is now in abundance in China. The country attracted USD 31bn in venture capital (VC) in 2016 or 25 per cent of global VC raising, as companies are drawn by the tax breaks such as eligible deduction on 70 percent on VC's taxable income. Provincial governments also have schemes to attract capital to their backyards such as Hubei government's USD 81bn funds for investments.

Chinese companies now have a combined market cap of more than RMB 1,000 billion[7], largely concentrated in Tier 1 and 2 cities with the Shenzhen Stock Exchange being a preferred market for innovative enterprise listings due to the prestige associated with it. Successful companies are based across all the major cities in China with notable examples being search engine Baidu, smartphone maker Xiaomi and PC maker Lenovo in Beijing; electric car maker BYD, drone maker DJI and social media company Tencent in Shenzhen while Hangzhou houses Alibaba, automaker Geely and beverage maker Wahaha. The vibrant capital market has afforded these Chinese companies the financial muscles to grow into world-class names.

All the pieces in place

In weighing China against the innovation models of Silicon Valley and Boston, we find that the country, with its vast talent pool, financing and market access, has all the pieces in place. It has a natural advantage, chief of which being its large domestic market which affords companies their cash cow to fund overseas forays. Furthermore, China's middle class consumers are more receptive to new trends and technologies.

While in the past, the well-trodden path of bright young Chinese with good research ideas would be to apply for a scholarship at a US or European university due to the lack of funding domestically, now things have changed. The scholars of today have less impetus to venture overseas to further their research or develop their ideas as the Chinese government is pumping millions into its universities, equipping them to rival the hallowed institutions of the world, including those in Cambridge Massachusetts.

Although China at first glance seems to be an unlikely candidate, having been more traditionally seen as the factory of the world, we believe that the country is able to vault ahead and transform into the Silicon Valley of the East. While not an epic battle on the scale of the classic tale of The Three Kingdoms, we believe that in this modern-day swordplay, China has the necessary skills and weaponry to fend off competitors and would likely emerge victorious in the race to become the next innovation hub.

Eng Teck Tan, *CFA, Senior Portfolio Manager, is a senior member of the Asian equity team at Nikko AM. He has been researching stocks and managing regional portfolios involving China-related investments since 1999. His experience with China A-share began in 2008 and he has been responsible for leading the China A-share equity strategy at Nikko AM since 2014.*

Amanda Lai, *Equity Analyst joined Nikko AM as an Equity Analyst in January 2013. She has over 6 years of industry experience with primary focus on Asia ex Japan Consumer Staples and the casino/gaming sector.*

SOURCES

1 Beijing research firm Analysys International
2 iResearch, BCG analysts
3 "Statistical Report on Internet Development in China", China Internet Network Information Center (CNNIC), January 2017
4 1000plan.org
5 'China tops patent, trademark, design filings in 2016', Worldwide Intellectual Property Organisation (WIPO), 6 December 2017
6 National Bureau of Statistics, 2016
7 Bloomberg, 2017

GETTING PUBLIC PENSIONS ON TARGET

U.S. public pension plans continue to reduce their return assumptions. With the ten-year economic expansion slowing across the globe, this makes sense. But since lower return assumptions mean higher valuations for liabilities, the downward revisions tend to be incremental, raising the question of whether even these new, lower numbers will be achieved. And if it looks like the current asset mix is unlikely to hit the target, are there any adjustments that might bring the plans closer without adding unnecessary risk?

To explore these questions, we recently analyzed a representative group of public pension portfolios. We found that the gap between assumed and expected median returns is narrowing, but still significant. At the same time, our work also points to practical steps many plans could take to close the gap in a prudent way—building resilient portfolios that are positioned for potential growth while mitigating downside risk.

For our study, we analyzed the portfolios of 55 state and local funds representing $2 trillion in assets and ranging in size from $3 billion to $224 billion. (See Figure 1 for details.) Working with data gathered by *Pensions & Investments*, we used BlackRock's Aladdin platform to map the portfolios to our most recent capital market assumptions (CMAs) and estimate their expected risk and return characteristics. We then organized the results according to different plan characteristics, to see what trends we could uncover and identify lessons that plans could learn from their peers.

FIGURE 1: Composition of the pension plan study group

Funded Ratio	# of Plans
Below 60%	12
60% - 75%	20
75% - 90%	16
Above 90%	7

Plan Assets	# of Plans
Below $10bn	14
$10bn - $25bn	20
$25bn - $75bn	16
Above $75bn	5

Source: BlackRock, with data from Pensions & Investments, April 2019. Actuarial and asset allocation data, provided by P&I, is as of 2017/18. Sample size was determined by availability of asset-level information.

EXPLORING THE GAPS

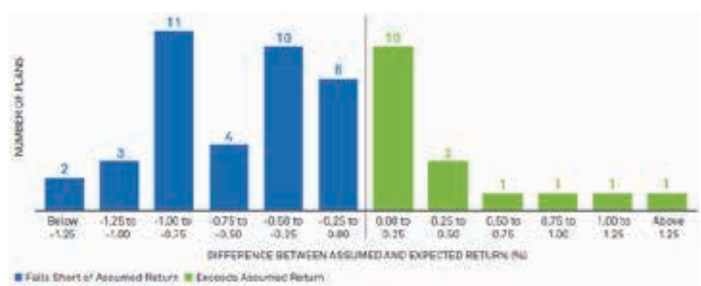
It wasn't a huge surprise that a majority of these plans have a gap between their own assumed returns and the expected return for their portfolios based on BlackRock's CMAs. Comparing the two for each plan, we found that about 70 percent of the plans may miss their mark over the next ten years. If this came to pass, however, it would actually be an improvement on the record of the prior ten years, when realized returns fell short of the 2017 assumptions for all but one of the plans, and half the group missed by 200 bps or more.

Some caveats: Our dataset gave us the plans' allocations as of 2018 but assumed returns as of 2017, so we missed the effects of any recent reductions in return assumptions. Also, BlackRock's CMAs are median or beta estimates and don't take account of any potential alpha the plans may capture. Still, we think our findings are illuminating.

As Figure 2 illustrates, the projected gaps are not uniform. Nor are the return assumptions: While the average assumed rate of return is 7.25 percent, the range (excluding an outlier) runs from 6.50 percent to 8.00 percent. Note, however, that a higher assumed rate of return need not imply a projected shortfall. Plans can elevate their expected returns by increasing the growth assets allocation or changing its composition. The difficulty, of course, lies in targeting those additional returns without breaking the risk budget—because as risk rises, so does the possibility that those higher "expected" returns won't be achieved.

We can clearly see this challenge in our sample group. Fifteen of the plans have expected returns of 7.25 percent or higher. For this cohort, the average level of risk (defined as standard deviation) is 12.5 percent —more than 110 bps higher than the 11.4 percent average risk for the group as a whole. The key question for these plans is whether they are being adequately compensated for the additional risk.

FIGURE 2: The difference between assumed and expected return



Source: BlackRock, with data from Pensions & Investments, April 2019. The chart shows the difference between the pension plans' own return assumptions and expected ten-year return on their portfolios, based on BlackRock's capital market assumptions as of October 31, 2018.

COMPARING GROWTH ALLOCATIONS

Regardless of size or funded status, most of the plans in our study have about three quarters of their portfolios invested in equities and alternatives, which we group together as growth assets. Where they differ is in the composition of those growth allocations, as reflected in Figure 3.

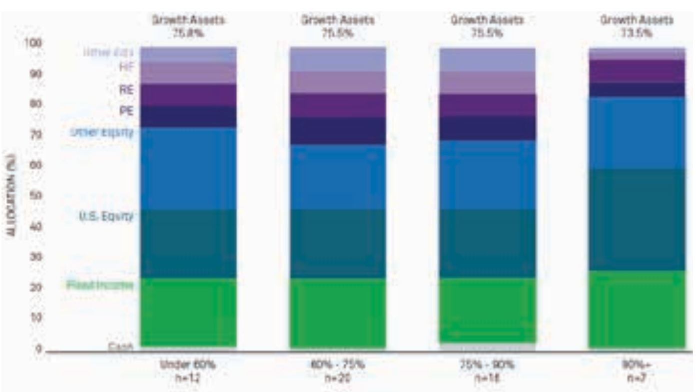
Plans with funded ratios above 90 percent have significantly more U.S. public equities, smaller allocations to alternatives, and by far the lowest average holdings of hedge funds. Plans with funded ratios below 60 percent hold more non-U.S. equities, and their largest alternatives allocation is to hedge funds.

> *"With the ten-year economic expansion slowing across the globe, building a more resilient portfolio to generate returns while buffering against volatile markets is critical."*

Is the strong performance of U.S. equities over the past decade partly responsible for the higher funded status of the latter group? Did underperforming non-U.S. equities and hedge funds play a role in the lower funded status of the former group? Separating cause and effect requires historical data on individual plans. But the most important question is about the future.

Based on these allocations, BlackRock's capital market assumptions indicate that both cohorts are likely to fall short of their average assumed rates of return, and by similar margins of about 45 bps, again excluding an outlier. The highest-funded cohort, moreover, has an expected return of 6.68 percent, below the 6.92 percent average for the study group as a whole, and is taking slightly more risk than average to target that return. The driver here is our modest outlook for U.S. equities. If plans in this cohort haven't done so already, they should rethink their positioning.

FIGURE 3: Cause or effect? How growth allocations differ by funded status



Source: BlackRock, with data from Pensions & Investments, April 2019. The chart shows the average allocation and mix of growth assets held by the study group, segmented by funded status.

DECONSTRUCTING THE RISKS

With growth assets in particular, risk is a key input in allocation decisions. Plans need to know not only how much risk they are taking, but also its factor composition and whether they are being adequately compensated for accepting it. The average 75 percent allocation to growth assets for our study group implies that these plans are, on average, heavily exposed to the economic growth risk factor.

As Figure 4 shows, exposure to the economic growth risk factor accounts for over 70 percent of the total risk the plans are shouldering. The potential downside is significant. Our modeling indicates that a 15 percent drop in the S&P 500 could result in an average 11.8 percent drawdown—a major setback for these plans.

But here, too, the average doesn't tell the whole story. When comparing individual plans in our study group, we note one pair with the same amount of total risk, but the expected return for one of them is almost 60 bps higher than the other. A more diversified portfolio is the reason. Looking at the group as a whole, we have identified several other opportunities to improve diversification, either to reduce risk with little sacrifice in expected returns, or to improve expected returns without adding significantly to risk.

With the ten-year economic expansion slowing across the globe, building a more resilient portfolio to generate returns while buffering against volatile markets is critical. Many of the plans have relatively light allocations to traditional fixed income, which (thanks to interest rate normalization) appears to be regaining its role as a diversifier of equity risk. Additionally, factor-based strategies have the potential to diversify economic growth risk while still generating returns.

FIGURE 4: Heavy exposure to the economic growth risk factor

Source: BlackRock, with data from Pensions & Investments, April 2019. The chart shows average allocation for the 55-plan study group (left) and risk exposure broken down by the macro risk factors used by BlackRock (right)

There is, of course, no single solution for these plans, much less for public pensions in general. But incremental improvements in different areas can add up, bringing plans closer to their goals as they compound over time. And we know of no better way for plans to discover what levers they might want to pull than by learning from their peers and viewing their portfolio through a risk and factor lens.

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*BlackRock authors include **Sunil B. Shah, CFA, ASA**, Head of the Client Insight Unit, which delivers portfolio analytics and insights to BlackRock's institutional clients, **Jonathan Cogan, CFA**, Member of the Client Insight Unit, and **Ben Ho**, Member of the Client Insight Unit. BlackRock, Inc. is an American global investment management corporation based in New York City. Founded in 1988, initially as a risk management and fixed income institutional asset manager, BlackRock is the world's largest asset manager with $6.84 trillion in assets under management as of June 2019.*

CLIMATE INVESTING:

MOVING FROM **CONVERSATION** TO **ACTION**

A GROWING NEED FOR CLIMATE ACTION

For decades, experts have warned that the physical, economic, and regulatory risks posed by climate change could mean significant losses for investors. Consequently, investors have been debating how to interpret and measure climate risk in their portfolios and what actions can help safeguard investment from a risk and return perspective.

In 2018, three key developments helped shift the climate conversation from debate to action and have created a new sense of urgency among investors. They include:

- **Clear manifestation of the physical impacts of climate change.** As extreme weather events have become more frequent, the physical impacts of climate change have become more visible and obvious. In Australia, for example, it is predicted that the impacts of prolonged drought on the agriculture sector caused by changing climate patterns over the last few years may reduce Australia's GDP by a full percentage point over a two-year period.[1]
- **Quantification of economic risk.** In November 2018, a report published by 13 United States government agencies drew widespread attention. It warned that without significant steps to address global warming, annual losses in some economic sectors could reach hundreds of billions of dollars by 2100.[2]
- **Climate regulation.** An overhaul of the European legislative framework that will directly impact investors made significant advances in 2018,[3] as Europe begins to operationalize the Paris Climate Agreement. In the UK, the regulators are also exploring means to implement the recommendations set out by the TCFD.

Together, these developments have crystalized for investors the urgent need for taking action to limit the impact of climate change on their portfolios. In this paper, we aim to support that action by:

- Highlighting climate-related regulatory developments that are influencing investors' portfolio needs;

> *"Both governments and investors are increasingly looking for ways to comply with the TCFD's framework, which focuses on assessing, responding to, and disclosing climate risks in investment portfolios."*

- Outlining a range of approaches available to address climate change within an investment portfolio; and
- Providing an overview of State Street Global Advisors' climate capabilities.

ALIGNING ACTION WITH CLIMATE COMMITMENT

Against the backdrop of the macro developments outlined above, at State Street Global Advisors, clients seek our guidance based on two key drivers of action:

The Evolving Regulatory Landscape: Clients are working to meet evolving regulatory and voluntary climate-related obligations (e.g. disclosures).

A Desire to Align Investors' Actions with Organizational Objectives: Clients are expanding their investment objectives to include climate-related goals, prompted by the physical and economic impacts of climate change.

Below, we describe these drivers in detail.

The Evolving Regulatory Landscape

Investors are striving to stay abreast of the evolving regulatory landscape with respect to climate change. In recent years, governments — especially in Europe — have increased efforts to operationalize their commitments made through the Paris Accord. This complements the work of the Financial Stability Board's TCFD that produced voluntary guidelines.

To meet the commitments articulated in the Paris Accord, European policymakers aim to "mainstream" sustainability into the existing legislative framework, most notably embedding explicit requirements to assess, disclose, and mitigate long-term climate-related risks. This is because policymakers view the financial services sector as having an important role in achieving those commitments. The European Climate Legislation Initiatives located on page 18 provide an overview of the existing and incoming legislation that is driving investors to seek out climate solutions to help meet their regulatory obligations.

EUROPEAN CLIMATE LEGISLATION INITIATIVES

EUROPEAN CLIMATE TARGETS

As part of its signing to the 2015 Paris Accord, the European Commission has committed to three climate and energy targets by 2030:

- 40 percent reduction of greenhouse gas emissions
- 27 percent renewables in final energy consumption
- 30 percent energy savings

Examples of Existing European Legislation

European Union

- The Non-financial Reporting Directive compels certain companies to include business-specific disclosure on environmental matters and other ESG data in a new Non-Financial Information Statement (NFIS)
- The revised Shareholder's Rights Directive requires institutional investors and asset managers to develop an engagement policy that strengthens shareholder engagement and promotes long-term sustainability.

France Since 2015, France has enacted national legislation aiming to reduce greenhouse gas emissions by 40 percent by 2030 compared to 1990 levels.

- Institutional investors are required to annually disclose how governance factors are integrated into their asset management practices.
- Managers with more than €500 million under management must also disclose how they assess climate-related portfolio risks and align capital allocation decisions to international and national low-carbon goals.

United Kingdom The Financial Reporting Council established a Corporate Governance Code and Stewardship Code to govern the interaction between the investor and investee company.

Forthcoming Legislation

2018 European Commission Action Plan on Sustainable Finance The European Commission's proposed rules would apply to asset owners, managers, insurance distributors, investment advisors as well as other market participants and aims to:

- Reorient capital flows towards sustainable investment in order to achieve sustainable and inclusive growth;
- Manage financial risks stemming from climate change, resource depletion, environmental degradation, and social issues; and
- Foster transparency and long-termism in financial and economic activity.[5]

In May 2018, the Commission published proposals, and set up a Technical Expert Group (TEG), to further develop actions relating to ESG taxonomy, benchmarks, disclosures, and financial advice. We expect the final rules to be published in April 2019, following which secondary legislation will be developed.

Additionally, in 2018 the UK proposed to provide enhanced guidance to companies on their climate-related financial disclosures and to introduce broad-based public reporting requirements that would be fashioned on the TCFD recommendations.

Additionally, both governments and investors are increasingly looking for ways to comply with the TCFD's framework, which focuses on assessing, responding to, and disclosing climate risks in investment portfolios. At present, two thirds of G20 countries, including Australia, Hong Kong, Japan, South Africa, and the United Kingdom, have engaged with the TCFD[4] and have either conducted private sector consultations on sustainable finance and disclosure, or issued disclosure guidelines and frameworks. At the same time, investors have committed to comply with the Task Force's recommendations, and are working to find investment solutions that help them demonstrate alignment.

> *“As climate science and data availability improve, approaches to climate solutions evolve, offering investors a broader range of options to help meet their organization's investment objectives.”*

Aligning Investors' Actions with Organizational Objectives

There are many ways to address climate change within a portfolio. As climate science and data availability improve, approaches to climate solutions evolve, offering investors a broader range of options to help meet their organization's investment objectives. Below, we have identified the common ways in which investors can express their climate commitment in their portfolios:

Exclusionary Screening. Targets meaningful carbon reduction across asset classes by:

- Screening out the companies with high emissions and fossil fuel reserves, and/or companies in key industries with significant climate-related risk exposure, such as coal.

This is implemented as a standalone screen or in combination with other investment approaches.

Mitigation. Targets specific net carbon reduction goals by:

- Reducing the carbon intensity of a portfolio by a desired percentage while staying within a specified tracking error range against a specific benchmark.
- Increasing exposure to companies generating 'green' revenues from low carbon opportunities.

Mitigation and Adaptation. Targets carbon reduction and provides exposure to businesses that are adapting to the impacts of climate change by:

- Reducing exposure to below-average carbon emitters, fossil fuel assets, and 'brown' revenues derived from extraction or power generation of fossil fuels.
- Increasing exposure to 'green' revenues and to companies that are adapting their business models to climate risks and opportunities.

A SPECTRUM OF CLIMATE INVESTMENT SOLUTIONS

EXCLUSIONARY

Screen Out

- Worst polluters
- Fossil fuel reserves
- Coal

MITIGATION

Target Net Carbon Emission Reduction

- ↓ Reduce exposure to carbon intensity and fossil fuel reserves
- ↑ Increase exposure to companies generating revenues from low carbon opportunities (green revenues)

MITIGATION AND ADAPTATION

Mitigate and Adapt in a Risk-Controlled Way

- ↓ Reduce exposure to worse-thanaverage carbon emission, fossil fuel assets (carbon reserves), and brown revenues
- ↑ Increase exposure to companies generating revenues from low carbon opportunities (green revenues)
- ↑ Increase exposure to resilient companies (adaptaion)

Asset Stewardship

Source: State Street Global Advisors, MSCI, FTSE, S&P Trucost.

This represents a new frontier in climate investing and is one of 5 Trends in ESG Investing in 2018.

Asset Stewardship.

- Regardless of portfolio approach, asset stewardship is an inextricable part of any climate investment approach.
- Climate stewardship allows for ongoing engagement with companies about the risks and opportunities presented by climate change.
- For some investors, this represents their primary climate-focused tool, regardless of whether they also invest in portfolios with specific climate objectives.

The appropriate approach for a particular investor depends on a variety of considerations, including investment objectives, climate-related objectives, and risk tolerance, among others.

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For four decades, State Street Global Advisors has served the world's governments, institutions and financial advisors. With a rigorous, risk-aware approach built on research, analysis and market-tested experience, we build from a breadth of active and index strategies to create cost-effective solutions. As stewards, we help portfolio companies see that what is fair for people and sustainable for the planet can deliver long-term performance. And, as pioneers in index, ETF, and ESG investing, we are always inventing new ways to invest. As a result, we have become the world's third largest asset manager with nearly US $2.80 trillion under our care.*

SOURCES

1 http://aicd.companydirectors.com.au/membership/ company-director-magazine/2018-back-editions/october/economist-the-big-dry

2 https://nca2018.globalchange.gov/

3 European Commission Action Plan on Sustainable Finance, published in March 2017

4 https://www.cisl.cam.ac.uk/resources/sustainablefinance- publications/sailing-from-different-harbours

5 European Commission Action Plan: Financing Sustainable Growth https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52018DC0097&from=EN

HELP ME HELP YOU:

Five Ways to Maximize Vendor Resources for High Quality Member Service

I'm a third-generation public servant. My grandparents, parents, brothers and I worked for County and City governments. Suppertime conversations revolved around general services, environmental management, public works, the city clerk and council, retirement, and fire services. There was an acronym for everything. Public servants speak in code.

Why would almost everyone in my family want to take on a public sector job? A job that demands a lot, but pays less in comparison to the private sector? Is it so we can make a difference in the lives of others? Did we choose this career path? Was it pre-determined based on genetics and upbringing? Do we feel compelled to serve people, communities, and those who need representation? Is it the guiding beliefs, morals, and values of the public sector culture? I cannot answer these questions: It would break the code.

We each have different stories that led us to public sector employment and stories that led us to continue there.

In 1996, I started working for a county retirement system. I've worked in the pension administration profession since. I have worked at the retirement systems for two 1937 Act Counties, and I have worked for a private sector pension administration software company twice. Working in retirement is rewarding. Contributing to the lives of public servants, our retirement system members, is a gratifying experience – both professionally and personally.

> *"At this time, there have been no votes to support or oppose any specific legislative bills that are moving through the legislative process."*

Yet, so too is contributing to retirement systems from the vendor side – supplying specialized services and sharing comprehensive knowledge that helps systems make the most informed decisions to serve their members. As I've progressed in my career and gained experience in both government and private enterprise, I have learned that the beliefs, values – the code, if you will – are not necessarily as different between the two sectors as believed. At least, they don't need to be. Though they play two distinct roles, both have a shared responsibility in the success of members. When there is alignment between customers and vendors, everyone wins – most importantly the members. And if your vendor is not aligned with your values and goals...

Well, let's assume that they are, and as such, I want to share five ways that retirement systems can maximize vendor services for better member service.

1 Understand your vendor. Vendors don't just "sell something" – they supply specialized services; wide-ranging knowledge developed from experience. Understanding the vendor's background can provide customers with knowledge as to where the vendor can provide the most value, helping you make well-informed decisions. We have our own internal culture, strategies, organizational structures, business drivers and challenges, all of which affect you and ultimately, members. Be sure you understand your vendor, know their mission to make sure your relationship is rooted in shared values – the values that your members demand and deserve.

2 Define your roles. Advocate, technical expert, trainer/educator, collaborator, identifier of alternatives, fact finder, business process specialist and reflector. Your vendors can describe themselves in many ways. Of course, they can't be all things to all customers, so it's vital that you clearly define expectations. Mutual understanding of role expectations is paramount and makes it possible for each party to concentrate on activities which best match their capabilities. Your vendor will take on specific characteristics in the business relationship, but ultimately, effective consultants have two roles:

- A resource role, providing specific service to each customer based on expertise; and
- A process improvement role, facilitating and enabling the customer to reflect on and understand their own organization and its processes

In order to fulfill the second of those roles, means that you – the customer – need to be open to honest reflection and business process change.

3 Communication is critical. From open access to information and staff to keeping informed of priorities, continuous communication between the vendor and the customer are vital. Establishing trust before service is critical, and the more you discuss the details up front, even difficult ones, the easier it will be to adjust the relationship over time.

4 Include vendors in your strategic plans. – It is important to adjust and maintain the relationship in order to "play the long game." The relationship should be built to last. What are the long-term prospects of the vendor? If they're already providing you with something, tap them for their thoughts on future strategies. Knowledge and insight from your vendor may bring to light abilities and best practices more widely exploited within the industry. This will make it much easier to meet the ever-evolving needs of your members and organization.

5 Strategic renewal and sustained regeneration. Build upon and improve the relationship over time. Both the customer and vendor need to continually measure the progress of their partnership. Discuss all issues – even the difficult ones. Be honest about what is working and what is not, and wisely evolve your initiatives over time as needed. Maintain an emphasis on an opportunity-driven mindset. Such innovations promote fundamental changes from past strategies, services, capabilities, and business models.

Continuous progress and growth in the vendor-customer relationship is what we should all seek, because that is nature of our relationships with members. Your members will seek ever-improving and adapting service, and maximizing the quality – and in some cases, the scope – of that service can only happen when you are aligned in values, defined in your individual responsibilities and honest in your communication. I am happy to discuss any of these ideas in more detail. I am also happy to speak in code and exchange stories about experiences serving members.

Christie Porter is a Senior Retirement Program Specialist with Levi, Ray, & Shoup's (LRS) Retirement Solutions Division. LRS is a global provider of technology solutions with multiple lines of business, including LRS Retirement Solutions, and with more than 900 employees around the world. In her role as a Senior Retirement Program Specialist, Porter is responsible for understanding the customers' pension administration business, creating customer testing documentation and providing customer training. Before joining LRS in 2019, she was the Chief Operating Officer at San Bernardino County Employees' Retirement Association where she oversaw the retirement services, disability services, member account auditing, and communications function. Porter earned her B.A. in Business Administration from California State University, Fullerton and holds the designations of Project Management Professional (PMP) and Certified Employee Benefits Specialist (CEBS).

State Association of County Retirement Systems

LEGISLATIVE REPORT

The Legislature reached the July 12 policy committee deadline for bills in their second house, which mandates that any bills that were not heard in their respective policy committee will be considered two-year bills that can either be moved again next year or held for the rest of session. As with other legislative deadlines, the policy committee deadline resulted in a significant reduction in the number of bills moving forward through the legislative process.

Immediately following the policy committee deadline, the Legislature adjourned for summer recess from July 12 to August 12, where members returned to their district until session reconvenes. Once back in Sacramento, the Legislature has roughly one month to pass all the remaining active bills out of the Appropriations Committees, off the floor of their second house, and to the Governor by September 13.

Legislation of Interest

What follows is an update on the bills we are tracking on behalf of SACRS.

SB 783 (Labor, Public Employment and Retirement Committee) – County Employees Public Retirement Law. This is a SACRS sponsored bill that provides an opportunity for CERL systems to suggest any *non-substantive* fixes to CERL law. Suggestions are being debated within the SACRS Legislative Committee and language will soon be drafted for Board approval.

AB 181 (Rodriguez) – Emerging Asset Managers. This bill would require CalPERS and CalSTRS to provide an annual report to the Legislature on the use of emerging managers that are responsible for the asset management within their respective investment portfolios. An emerging manager refers to a start-up, relatively new, and/or minority and women owned investment firm. The goal of this bill is to encourage the utilization of emerging managers to not only diversify investment firms, but also the diversity of their respective investment portfolios.

It is not likely that AB 181 will move further this session, as it is a new Senate policy not to refer bills that solely mandate reporting. The use of emerging managers will still exist as a program, but the reporting requirements contained in this bill will not progress further in the legislative process.

AB 664 (Cooper) – Sacramento County Peace Officer Retirement Pilot. This bill would require the Sacramento County Retirement Board to change how it evaluates a peace officer's application for disability retirement by requiring SCERS to evaluate an officer's disability by whether the member can perform all the "usual and customary" duties of a peace officer.

The bill is sponsored by the Law Enforcement Managers Association.

The bill's proponents note that peace officers, whether they typically work a desk job or a patrol job, generally face the same risks and are subject to the same general requirement to be able to chase suspects and make arrests. Therefore, if an officer who works a desk job sustains as injury that would prohibit them from patrolling, the individual should receive a disability retirement. The bill seeks to establish this broader and accommodating standard.

Those in opposition note that if an officer has a desk job, he or she can still do that desk job, and it is not usual or customary for that officer to patrol, then the officer should not receive a disability retirement. Managers and supervisors are more likely to hold these roles. Because of this, this standard is more likely to affect officers in these roles than rank-and-file patrol officers.

SCERS and LACERA oppose the bill, noting that the bill increases pension costs because more members can seek disability benefits due to the broader standard the bill establishes. Because this bill only applies to Sacramento County, they argue that the bill could give the incorrect impression that SCERS has not treated its members fairly and is applying disability retirement law inconsistently. Sacramento County also noted their concerns with the bill.

Based on the positions and advocacy of SCERS, LACERA and Sacramento County, the Chair of the Senate Labor, Public Employment and Retirement Committee indicated that he was not inclined to support the bill. The author pulled the bill from committee before it was heard, causing it to fail the policy committee deadline. It is unlikely that the bill will move further this legislative session.

AB 672 (Cervantes) – CalPERS Disability Reinstatement. This bill clarifies that a person who retires from CalPERS for disability cannot work in another public position that has the same duties or activities as position from which the person received disability, unless the person reinstates from retirement.

CalPERS supports the bill, arguing that it will ensure accountability and the ability to pay benefits consistently and appropriately by standardizing restrictions on disability. There is no registered opposition.

The bill was signed by the Governor in its introduced form on July 12.

AB 1184 (Gloria) – Public Records: Email Retention. This bill would require all public agencies to retain emails pertaining to the "public's business" for at least two years.

This bill is supported by the California Newspaper Publishers Association, the California Immigrant Policy Center, the First Amendment Coalition, and others. It is opposed by local government entities, like the California State Association of Counties and the League of California Cities because the bill would increase the burdens for both public agencies and California Public Records Act requests.

The bill passed out of the Assembly 59-8, with 13 members not voting and the Senate Judiciary Committee 7-1. It will be heard in the Senate Appropriations Committee in August before heading to the Senate Floor in September.

AB 1320 (Nazarian) – CalPERS and CalSTRS Turkey Divestment. This bill prohibits CalPERS and CalSTRS from making any new investments or renew existing investments of public employee retirement funds in any investments owned by the Turkish government. These provisions would only be required upon passage of federal law that imposes sanctions on the government of Turkey for the failure to officially acknowledge its responsibility for the American Genocide.

The author notes that the goal of this legislation is to ensure that California's investment priorities mirror the state's longstanding position on this topic. This bill will ensure that California is not financially rewarding and investing in governments who violate human rights. CalPERS, CalSTRS, and other local government organizations are in opposition because the policy restricts the board's ability to invest in specific areas and fulfill its fiduciary responsibility.

The bill passed out of the Assembly 63-0, with 17 members not voting. It passed out of the Senate Labor, Public Employment and Retirement Committee and the Senate Judiciary Committee unanimously. It will be heard in the Senate Appropriations Committee in August before heading to the Senate Floor in September.

SB 184 (Moorlach) – Judges Deferred Retirement. This bill, known as the Judicial Fairness Act of 2019, authorizes a deferred retirement option under the Judge's Retirement System II. Judges would be permitted to leave judicial office and receive a retirement allowance at a later date upon reaching the requisite JRS II retirement age.

The bill is sponsored by the Alliance of California Judges and is supported by the CA Judges Association and numerous CA judges and justices of the Superior Courts and Courts of Appeal. There is no opposition on file.

The bill has passed unanimously out of the Senate and the Assembly Public Employment and Retirement Committee. It will be heard in the Assembly Appropriations Committee in August before being sent to the Assembly Floor in September.

SB 266 (Leyva) – CalPERS Disallowed Compensation: Benefit Adjustments. This bill would require that if a pension is calculated using a benefit that is later disallowed, the retiree shall not be responsible for paying back income derived from that benefit. Rather, the employer is held financially responsible.

The bill is sponsored by the California Professional Firefighters and the Peace Officer's Research Association of California. Local governments are in opposition, arguing that disallowed benefits paid to a retiree must be recouped, otherwise it could be deemed as a gift of public funds. Further, they argue that SB 266 places 100 percent of the liability for overpayment on public agencies, abdicating all responsibility previously held by CalPERS to ensure that benefits are correctly calculated.

The most recent amendments to the bill require the system to provide confidential contact info of affected retired members and their beneficiaries to relevant employment entities, as well as allowing for an additional compensation item to be included for review in a collective bargaining agreement.

A similar bill (SB 1124) by the same author was vetoed by Governor Brown.

The bill passed out of the Senate 31-4, and out of the Assembly Public Employment and Retirement Committee 7-0. It will be heard in the Assembly Appropriations Committee in August before heading to the Assembly Floor for a final vote in September.

Michael R. Robson *has worked since 1990 in California politics and has been lobbying since 2001 when he joined Edelstein, Gilbert, Robson & Smith LLC. Prior to joining the firm, he began a successful career with Senator Dede Alpert as a legislative aide soon after she was elected to the Assembly in 1990. He became staff director/chief of staff in 1998, while the Senator served in the position of Chair of the Senate Appropriations Committee. He is experienced in all public policy areas with particular expertise in environmental safety, utilities, revenue and taxation, local government finance, education, and the budget.*

Trent E. Smith *worked for over 12 years in the State Capitol prior to joining the Edelstein, Gilbert, Robson & Smith LLC. He started his career in 1990 working for the well-respected late Senate Republican Leader Ken Maddy. He was later awarded one of 16 positions in the prestigious Senate Fellowship Program. Upon completion, he started working in various positions in the State Assembly. He worked as a Chief of Staff to Assembly Member Tom Woods of Redding and later to Orange County Assembly Member, Patricia Bates, who served as Vice Chair of the Assembly Appropriations Committee. In this position, he gained a unique and valuable knowledge of the State budget and related fiscal policy matters. In addition, he has extensive experience in numerous policy areas.*

U.S. Industrial Property Investment

A Good Relative Performer

The U.S. industrial property market has attracted a lot of interest from investors in this cycle. The Industrial sector's strong outperformance in the NCRIEF Property Index (NPI) compared to other sectors (apartments, office and retail), has been quite broad in recent years. We believe that, in addition to a favorably long growth cycle, structural changes in our economy (e-commerce/shopping habits, workplace technology adoption and urbanization), are influencing property market fundamentals to the benefit of industrial properties. Despite current economic uncertainties, we believe these dynamics are durable. In this article, we will review the current economic context and the specific factors driving recent industrial property market fundamentals and investment returns, as well as strategies that might best capitalize on these trends.

Real Estate and the US Economic Backdrop

U.S. real estate continues to perform well. Unlevered core total returns, as measured by the NPI, ticked up to 6.5 percent on a trailing four-quarter basis in the second quarter of 2019.[1] The performance, however, was uneven: Industrial boomed, sustaining low-teens annual total returns, while retail malls languished, with total returns of just 0.5 percent over the same period. The performance of individual office and apartment markets and subtypes varied widely, revealing both risks and opportunities for investors. Industrial market performance also varied, but with much higher total return levels (13.9 percent in the four quarters ending second quarter 2019). In fact, all but two of the 43 largest markets (Minneapolis and St. Louis) outperformed the NPI all-property average in the trailing four quarters, as of 6/30/2019.

The U.S economy continues to be resilient, despite local and global uncertainties, but there are looming medium-term risks. Among the greatest is that leading indicators such as the yield curve point to a rising probability of recession after next year, a scenario that would undermine occupational and investor demand for property. But while real estate is not impervious to the economy, we believe it should remain resilient thanks to a moderate supply pipeline, reasonable valuations (cap rates relative to 10-year treasuries), and manageable debt burdens (see Exhibit 1). Timing the cycle precisely is impossible, but in our view, given these conditions, real estate should hold up well relative to stocks and bonds over a five-year horizon, particularly on a risk-adjusted basis.

> *"The U.S. industrial property sector continues to perform well with healthy demand absorbing available supply, low availability rates nationally and across most markets, and above-average rent growth during the past year."*

EXHIBIT 1: U.S. Real estate indicators dashboard

	METRIC	20-YEAR AVERAGE	STANDARD DEVIATION	JANUARY 2008	SIGN	JUNE 2019	SIGN
ECONOMY	YIELD CURVE (LONG LESS SHORT)	160 BPS	130 BPS	-20 BPS	↓	-20 BPS	↓
	CREDIT SPREADS (BBB-TREASURY	180 BPS	80 BPS	250 BPS	↔	150 BPS	↔
SUPPLY	CONSTRUCTION (% OF GDP)	0.9%	0.2%	1.1%	↔	0.9%	↔
REITS	REIT NAV PREMIUM/DISCOUNT	+2	11%	-18%	↓	4%	↔
VALUATIONS	CAP RATE	6.2%	1.3%	5.0%	↓	4.4%	↓
	CAP RATE SPREAD TO TREASURIES	2.5%	0.9%	1.3%	↓	2.3%	↔
	CAP RATE SPREAD TO BBB	0.8%	1.1%	-1.2%	↓	0.8%	↔
MORTGAGE DEBIT	MORTGAGE DEBT (% OF GDP)	18.7%	2.8%	22.1%	↓	20.5%	↔
	AVERAGE LTV	65%	3.0%	69%	↓	60%	↑
	CMBS OPTION-ADJUSTED SPREAD (OAS)	200 BPS	100 BPS*	400 BPS	↓	90 BPS	↑

* 1/2 STANDARD DEVIATION

Sources: Federal Reserve (Treasury yields, BBB yields, mortgage debt), NAREIT (REIT NAV and prices), NCREIF (cap rates), Real Capital Analytics (LTV), Barclays Live (CMBS spread), Bureau of Economic Analysis (GDP), DWS calculations. As of June 2019. The comments, opinions and estimates contained herein are for informational purposes only and sets forth our views as of this date. The underlying assumptions and these views are subject to change without notice. Past performance is not an indicator of future results. There is no assurance that investment objectives can be achieved. Some of the above information is a forecast or projection. Any projections are based on a number of assumptions as to market conditions and there can be no guarantee that any projected results will be achieved.

U.S Industrial Outlook and Strategy

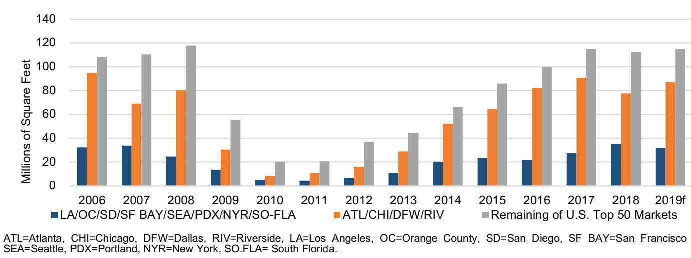
Current Conditions

The U.S. industrial property sector continues to perform well with healthy demand absorbing available supply, low availability rates nationally and across most markets, and above-average rent growth during the past year (about 4 percent). Importantly, strong occupancies and sustained rent growth over the past five years (about 26 percent in total) should continue to support elevated income growth for core industrial owners. The national vacancy rate, ended the second quarter of 2019 at 7.1 percent, 330 basis points below the 20-year average. Net absorption (the change in occupied space) outpaced construction deliveries again in 2018. Quarterly supply and demand figures can be choppy, but annual figures have been very stable at healthy levels (around 1.5 percent to 1.7 percent of stock annually for the past two years).[2]

Market Segment Performance

The performance prospects for the U.S. industrial market are favorable on both an absolute and relative basis. National supply and demand trends fairly stable with few signs of weakness across property markets. That said, we are beginning to see greater variations in performance between geographies. Larger development pipelines in the primary inland warehouse hubs and in a broader set of lower-barrier regional and local markets have fueled this divergence. Elevated supply can create more competitive leasing environments, moderate potential rent gains, and potentially greater vacancy risks in the event of a cyclical turn. We would not "write-off" the national warehouse hubs or other high quality locations, but we do believe that fundamentals across locations should guide investment strategy to the healthiest metro and submarket locations. The high barrier market group (see dark blue bars in Exhibit 2) has sustained lower levels of development over the past five years, with lower vacancy rates and stronger rent growth and total returns, and we believe that this dynamic will continue.

EXHIBIT 2: Development patterns across selected geographies

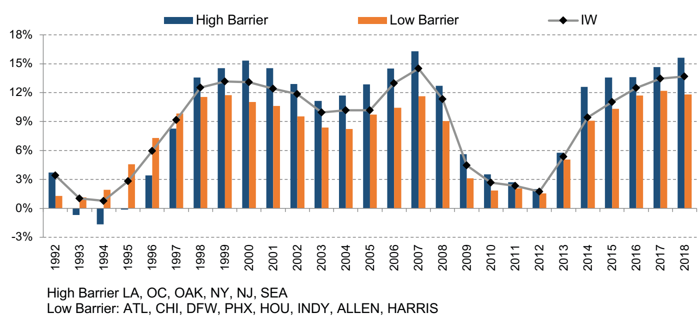


Source: CBRE-EA and DWS. As of March 2019. The comments, opinions and estimates contained herein are for informational purposes only and sets forth our views as of this date. The underlying assumptions and these views are subject to change without notice. Past performance is not an indicator of future results. There is no assurance that investment objectives can be achieved

Healthy market fundamentals and intense investor demand continued to support very strong investment performance, with one-year total returns in the second quarter of 2019 of 13.9 percent - a staggering 740 basis points above the NPI average.[3] The industrial property sector has outperformed the NPI average by 490 basis points annually over the past five years, returning 13.7 percent. We maintain a favorable outlook for the sector due to relatively good income growth prospects, but performance is not uniformly strong across geographies.[4]

Markets with greater land supply barriers have outperformed and we believe should continue to do so. Exhibit 3 highlights how primary east and west coast markets have consistently outperformed in the past two decades. In fact, the performance gap has tended to widen as cycles matured. These markets not only serve large local populations, but are transportation gateways to the nation. We believe that their combination of size, transportation infrastructure, high incomes and property values, economic growth and land supply constraint have driven relatively good long-term industrial market performance.

EXHIBIT 3: Trailing 5-year NPI industrial returns by market type (low-barrier vs. High-barrier)



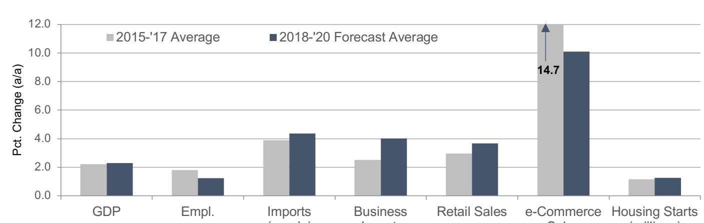
Sources: NCREIF and DWS. As of December 2018. Past performance is not indicative of future results. No assurance can be given that any forecast or target will be achieved.

> *"Despite a maturing growth cycle, rising interest rates and threats of a trade war, strengthening GDP growth, persistently strong job gains, rising incomes and double-digit e-Commerce sales growth are supportive of industrial real estate."*

Outlook and Strategy

The drivers that have lifted industrial sector fundamentals and investment performance in this cycle remain strong and appear durable. Despite a maturing growth cycle, rising interest rates and threats of a trade war, strengthening GDP growth, persistently strong job gains, rising incomes and double-digit e-Commerce sales growth are supportive of industrial real estate.[5] Most drivers, according to Moody's, are forecast to perform in-line with or better than in the past three years (Exhibit 4).

EXHIBIT 4: Economic drivers of industrial space demand

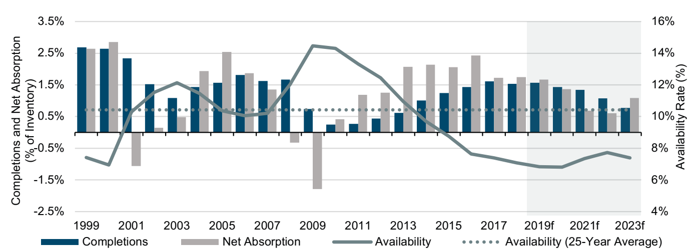


Sources: Moody's and DWS. As of June 2019. Past performance is not indicative of future results. No assurance can be given that any forecast or target will be achieved.

Our outlook for the U.S. industrial market remains favorable over the next two years and perhaps longer on a relative basis due to several factors: current low vacancy rates, a disciplined construction pipeline, relatively persistent demand drivers (population and consumption growth), persistent demand from e-commerce, and supply constraints close to large population centers. These factors position the sector for a good cycle. It is notable, however that demand has moderated recently compared to early in the recovery cycle (2013-2016). This downshift seems appropriate given a maturing economic cycle. Prior years demand was likely boosted by some level of pent-up demand exiting the GFC. Additionally, we believe that retailers and logistics providers have become more efficient in their warehouse usage.

We expect that lower-barrier locations in the South and Midwest will experience more supply competition and less rent growth than higher barrier locations in the West and Northeast. These areas are generally under-served by modern warehouse and can absorb new supply as a function of replacement stock. Larger supply-constrained markets have experienced some moderation as local demand drivers have eased, but lower vacancy rates have also limited absorption potential. National supply and demand are forecast to reflect lower availability in the near term, but a more pronounced cyclical shift, where construction reaches parity with demand in 2020 and then outpaces it in 2021 and 2022 (see Exhibit 5).

EXHIBIT 5: Industrial net absorption and completions percent of inventory and availability rate (1999 – 2023)*



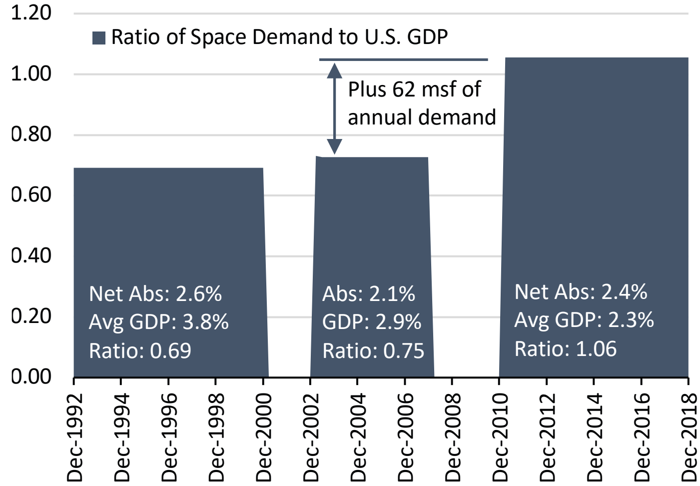
* Total for U.S. Sum of Industrial Markets (CBRE-EA)

Source: CBRE-EA (History) and DWS (Forecast). Data as of June 2019. Note: f = forecast. The comments, opinions and estimates contained herein are for informational purposes only and sets forth our views as of this date. The underlying assumptions and these views are subject to change without notice. Past performance is not an indicator of future results. There is no assurance that investment objectives can be achieved. Forecasts are based on assumptions, estimates, views or analyses, which might prove inaccurate or incorrect.

> *"We believe that favorable investment performance is available over the next several years, especially relative to other sectors, but the economic outlook includes warning signs that we are nearing the end of a cycle."*

We believe that favorable investment performance is available over the next several years, especially relative to other sectors, but the economic outlook includes warning signs that we are nearing the end of a cycle. Even a relatively soft landing would dampen property market performance. Despite rising macro risks, we believe industrial demand drivers should weather this cycle relatively well.

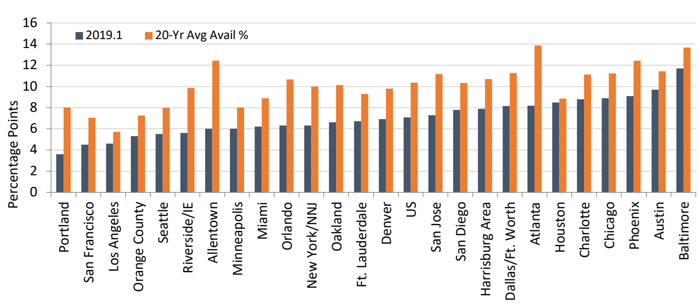
EXHIBIT 6: E-commerce's impact on industrial demand



Persistent development and moderating demand in the second half of our outlook is expected to moderate rent growth potential, especially in the markets with the greatest supply pipelines. National totals remain within historical norms, but there is a potential for more competitive conditions across a greater number of markets compared to the past few years. New development is expected to add about 1.5 percent of stock per year through 2020. Demand is forecast to average about the same. Later in the forecast, the outlook represents a loss of traditional drivers plus some impairment of e-commerce drivers, resulting in total demand of only 0.6 percent of stock annually in 2021 and 2022. We estimate that e-commerce related activity (see Exhibit 6) has stimulated about one-third of total demand in this cycle. Our late-cycle outlook includes some demand resilience on that front, compared to prior cycles, when internet retailing was not as prevalent.

One primary reason for the belief that the industrial sector will hold up well through a full cycle is the uniformly low current availability rates across most markets. We expect that markets where demand support has been strongest, those that serve the large east and west coast population centers, will outperform as tight availability and greater land supply constraints serve to limit new competition (see Exhibit 7).

EXHIBIT 7: Availability rates of major industrial markets

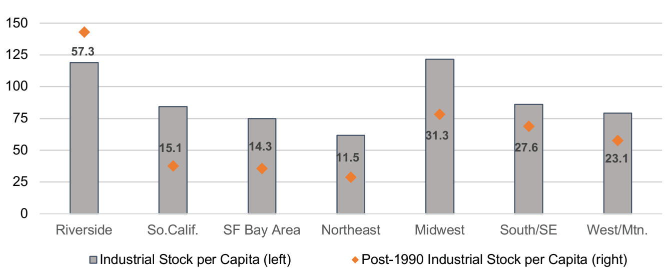


Sources: CBRE-EA (History) and DWS. Data as of March 2019. No assurance can be given that any forecast or target will be achieved.

Metro availability rates have been well aligned with past rent growth and total investment returns as reflected in NPI. With the exception of Minneapolis, we believe that the markets occupying the left side of Exhibit 7 will continue to have better future prospects, while those to the right of the U.S. average, (with the exception of San Diego and San Jose) will be average or below average performers. San Jose's availability rate is elevated due to a unique dynamic where older obsolete industrial facilities are often held vacant as land banks.

Functional infill warehouse facilities, particularly in larger, densely populated markets stand to benefit - not only from future economic growth but also from supply chain reconfiguration. The ratio of modern warehouse stock to local population (per capita stock) indicates that primary US metropolitan areas have limited logistics capacity. Exhibit 8 reveals that the Northeast region, as well as the San Francisco Bay Area and Southern California (ex-Riverside) have more limited modern warehouse stock. Revived urban development has given new life to demand for close-in distribution facilities, despite higher occupancy costs. Real estate costs tend to rank low compared to other logistics costs, significantly less than transportation, inventory carry and labor.

EXHIBIT 8: Industrial stock per capita across U.S. Regions

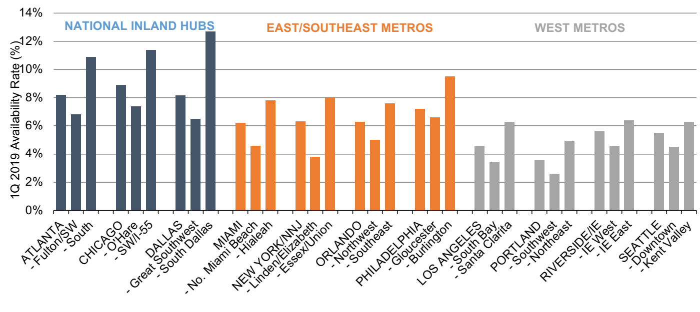


Sources: CBRE-EA and DWS. Data as of June 2019. No assurance can be given that any forecast or target will be achieved.

> *Property and market segmentation are crucial considerations in the coming year, as the tide of fundamentals improvements and capital markets gains that lifted nearly all markets in past years will likely be less uniform in the future.*

Property and market segmentation are crucial considerations in the coming year, as the tide of fundamentals improvements and capital markets gains that lifted nearly all markets in past years will likely be less uniform in the future. The past performance of a limited set of supply-constrained markets may be impressive, but an exclusive strategy may not be as executable due to a limited availability of investments. In addition to metro constraints, we have found that infill submarkets of lower-barrier national warehouse hubs can provide for constrained environments. Exhibit 8 illustrates recent availability rates across several markets and submarkets. It shows that fundamentals can differ greatly across markets, but also between individual submarket locations. We believe, although there is not assurance that it will, that targeting infill locations with greater constraints (structurally lower historical availability) will lead to better relative performance. This sample of markets reflects tighter metro market conditions in the West, but also highlights opportunities in constrained locations of lower-barrier metros. We expect that the dynamics favoring strong fundamentals today will endure.

EXHIBIT 9: Availability rate by metro and submarket (1Q 2019)



Source: CBRE-EA. Data as of March 2019. No assurance can be given that any forecast or target will be achieved.
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In summary, despite the current competitive investment environment, we believe that near-term and longer-term prospects for the industrial property sector remain bright and warrant investor attention. There are cyclical and structural factors that should benefit the sector on a relative basis throughout this economic cycle and we believe future cycles. We believe recent market rent gains and current healthy availability fundamentals should continue to support healthy income growth and stimulate good relative returns. Disciplined market and asset selection are paramount to achieving attractive relative returns performance.

Ross Adams is the North American Industrial Property Market Specialist in Research and Strategy for Alternatives at DWS. He joined the Company in 1999 with 10 years of industry experience.

SOURCES

1 NCREIF. As of June 2019.
2 CBRE-EA. As of March 2019.
3 NCREIF. As of March 2019.
4 DWS and NCREIF. As of March 2019.
5 DWS; Moody's Analytics. As of June 2019.

DUE DILIGENCE

A Dive Into the Downside

Senior debt is considered the safest investment in the capital structure. Yet every loan has potential risks. Before investing with a private credit manager, it is important to understand how the manager evaluates risk and structures transactions accordingly. This is especially important late in the credit cycle when leverage and adjusted earnings may be reaching a peak.

"A model is only as good as its assumptions, which means that a manager needs to use its experience to aggressively challenge assumptions and validate cashflows in several possible circumstances."

The loan due diligence and approval process is broadly referred to as underwriting, and its rigor can vary by manager. A strong underwriting process should include modeling various downside scenarios that evaluate the borrower's ability to generate sufficient cashflow to service debt and support ongoing operations, while also maintaining an acceptable loan- to-value ratio. A model is only as good as its assumptions, which means that a manager needs to use its experience to aggressively challenge assumptions and validate cashflows in several possible circumstances.

HOW DO LENDERS EVALUATE LOANS?

Cashflow lenders use qualitative and quantitative analyses to evaluate each loan opportunity and prospective borrower. The qualitative analysis includes assessing the borrower's competitive positioning, operations and overall market dynamics. The quantitative analysis includes assessing a borrower's historical performance and the sustainability of prospective cashflows. A best practice is preparing a detailed financial model that presents multiple scenarios including growth, baseline and downside cases.

WHY IS THE DOWNSIDE CASE SO IMPORTANT?

It is no surprise that credit committees often focus on the downside case. If things go according to plan during the investment horizon, there is generally little concern about loan recovery. If a situation deteriorates due to company- specific events or an overall market shift, recovery risk may increase.

Evaluating downside scenarios also facilitates a constructive discussion about the borrower, the quality of earnings or available information, the industry and an appropriate capital structure based on the level of risk inherent in the transaction.

Further, the combination of credit and structuring decisions that incorporate disciplined modeling and detailed due diligence, as well as active post-closing account management, should result in better recoveries across a private credit manager's portfolio.

HOW DO LENDERS BUILD A DOWNSIDE CASE?

Creating a downside case begins with identifying a variety of potential negative events that could affect a company and/ or its industry. Events might include the impact of a recession, loss of a major customer, product obsolescence, emergence of alternative and disruptive business strategies, possible regulatory changes, change in the competitive landscape, lack of expected synergies or run rate assumptions, or a combination of factors that result in the borrower generating less cash. The downside case is customized for each prospective borrower. Underwriting teams review historical financial data, meet borrower management and review third-party reports. Asking extensive questions provides a better knowledge of the borrower's business strategy, market dynamics and competitive positioning. A thorough model includes a five-year review of a borrower's historical financial performance and five years of financial projections. Typical offering memorandums provide only two to three years of historical financials and three to five years of projections.

Many managers will request and review additional detailed historical financial data, including performance through the prior recession, customer or product-level historical trends and other company- specific data to assess the sustainability of a borrower's anticipated cashflows. A company's inability to provide detailed historical data can be a red flag.

Based on the results of its due diligence, the underwriting team then determines which critical variables to sensitize a borrower's performance in the next cycle or a stress scenario. Experienced mid-market lenders also refine downside cases based on the performance of other borrowers in their portfolio and the industry through prior cycles.

FACTORS CONSIDERED IN A DOWNSIDE CASE USUALLY INCLUDE:

- **HISTORICAL CYCLE.** Review the borrower's financial performance in a prior down market or the last cycle or two. What happened to revenue, margins and costs? How long did it take to recover? Recognizing that the last cycle was 10 years ago, a lender needs to adjust this analysis to account for changes to the underlying business after the last cycle.
- **REVENUE DECLINE.** Evaluate the impact of losing a key customer, a reduction in average selling price or the possible availability of product substitutes.
- **INPUT COST PRESSURES.** How do changes in wages, cost of materials (including tariffs), infrastructure needs, freight, etc., affect profitability? How flexible or variable is the company's cost structure?
- **EBITDA ADJUSTMENTS.** Are the EBITDA adjustments truly non- recurring? Or are they ongoing cash costs that need to be deducted? Are maturity or run rate assumptions supported?
- **OTHER REQUIRED CAPITAL.** What ongoing capital is required to maintain equipment and remain competitive in the market? How old is the fleet? What is the capacity of existing facilities? What other required capital outlays might negatively impact a borrower's cashflow?
- **WORKING CAPITAL CHANGES.** Consider liquidity needs caused by less effective management of inventory, payables and receivables. Alternatively, can a borrower free up cash by minimizing working capital investment in a downturn?
- **OTHER EXTERNAL FACTORS.** How might regulatory changes, technology shifts, software implementation or integrating acquisitions affect cashflow?
- **UNFAVORABLE INTEREST RATES.** What is the impact of the forward LIBOR curve?

HOW DOES THE DOWNSIDE CASE AFFECT INVESTMENT DECISIONS?

Downside case analysis helps lenders determine the appropriate amount of debt that will allow a borrower to support debt service and other liquidity needs in a variety of cycle and stress scenarios. It also allows a manager to proactively structure a transaction for protection.

One key financial metric that lenders use to evaluate debt service is the "fixed charge coverage ratio", which is typically calculated as EBITDA less capex, divided by interest plus principal payments, taxes and sponsor management fees. FCCR should remain above 1x in the downside case after shutting off subordinate debt interest payments and management fees following a default.

Loan to value is another key factor lenders consider. If the downside case results in increased leverage, the amount of the senior loan should remain below the total expected value of the business. With purchase price multiples at historic highs, it is important to recognize that the expected value will most likely be lower than the entrance valuation.

Modeling is inherently an inexact science, but it does highlight the expected degree of variability in company cashflow. Armed with the understanding of downside scenarios, a private credit manager should propose a capital structure that results in sufficient FCCR and LTV during a period of stress. By recognizing these risks, managers can structure transactions to include a higher initial cash equity contribution, or a lower funded senior and total leverage at close that results in an appropriate LTV.

Additionally, private credit managers might require that other debt is structured as unsecured mezzanine versus second lien debt. During periods of stress, unsecured mezzanine debt interest payments can be suspended for a pre-negotiated timeframe to give the borrower additional liquidity, while second lien or unitranche interest payments cannot be shut off.

> *"Modeling a downside case should always be a component of due diligence, but it is especially critical in later stages of the current economic recovery."*

THE COMMITMENT TO DILIGENCE AND PRUDENT STRUCTURING

Modeling a downside case should always be a component of due diligence, but it is especially critical in later stages of the current economic recovery. The extent to which a manager employs downside modeling and uses it to structure transactions appropriately provides a valuable insight into its commitment to building a diverse, high quality portfolio of loans that are structured to withstand potential stress and cycle scenarios.

Ultimately, a private credit manager's commitment to detailed underwriting and prudent transaction structuring will help offer investors stable returns as a result of lower defaults and higher recoveries throughout economic cycles and periods of stress.

__Andrea Tunick__ is a Director, Sponsor/ West Region Credit Officer and leads the underwriting team for the West Region of the Corporate Finance Group. She focuses on structuring, underwriting and closing cash flow loans for new platforms, as well as monitoring the loan portfolio. Tunick has 15 years of underwriting and due diligence experience. Prior to joining NXT Capital, she was an Assistant Vice President at GE Antares Capital and Merrill Lynch Capital. Her background also includes completing financial due diligence for private equity transactions in KPMG's transaction services group.

__Dan Green__ is a Director, Sponsor/ East/South Region Credit Officer and leads the underwriting and portfolio risk management for NXT's East and South Region Sponsor teams, where he structures, underwrites, negotiates and manages investments for the firm. Green brings 10 years of leverage finance experience to NXT Capital. Prior to joining NXT, he structured, underwrote and managed traditional senior secured and unitranche investments as a member of GE Antares Capital. Green began his career as an auditor with Deloitte and held positions at LaSalle Bank.

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SHORT TAKES

Conversations with Spring Conference Keynotes

If you missed the experience of being at the beautiful Resort at Squaw Creek in Lake Tahoe in May, here are highlights and takeaways from a few of the conference headliners.

DON EZRA

Don Ezra has an extensive background in investing and consulting, and is also an accomplished author. His current focus is on helping people prepare for a happy, financially secure life in retirement. At SACRS 2019 Spring Conference, Ezra presented **Retirement Readiness for Life After Full-Time Work**.

SACRS Magazine: You have a website, *donezra.com*, that is free, has no ads or sponsors, and is dedicated to retirement planning. However, you do not like the term "retirement" – how come?

DE: I hate the old notion of retirement. I think the label itself deserves to be retired! It is a start of a new life. I call it Life After Full-Time Work or Life Two. It's far from the end of life. Everything else is a prologue to the stage of life after full-time work. It's our freedom, our time of enjoyment, and our time of greatest happiness.

SACRS Magazine: In your keynote, you issued SACRS attendees a friendly challenge.

DE: Yes. I complemented the audience for helping many people prepare to enjoy life after full-time work. But I also challenged everyone to do more. Planning for retirement doesn't have to be complicated, difficult, or confusing. The greying of America needs help with the transition to Life Two. We need to do a better job of educating people. We know that most people don't start planning for retirement until age 50 when they start to worry that they will outlive their assets. Soon after the anxiety sets in and that can have a negative effect on health and productivity.

SACRS Magazine: Is that why your website focuses on Life Two planning?

DE: Nine years ago, when I graduated from full-time work, I realized that most of us have not prepared for Life Two. I used my own experiences as well as the experiences of others that I talked to and came up with a Life Two framework. It is divided into four parts: Happiness and psychology (because that's the goal and how to get there); investment (because that's what powers our vehicle); longevity (because we should have an idea of how long that life will be) and finance (putting it all together). This is a more complete picture of Life Two and on my website I have blogs dedicated and labeled with these categories.

SACRS Magazine: You noted in your talk that the best way to prepare for Life Two is to know what the options are because that puts a person in the driver's seat and helps alleviate both rational and irrational fears. What are the most common types of retirement fears?

DE: There are three types of Life Two fears. Some people have one, some have two, and some have all three. One fear is in the category of psychology, where the person asks, "Who am I?" Often we are defined by our work, in particular if we are successful in what we do. Another is more practical, "What will I do"? Some people find the idea of idleness to be unbearable. And the last common fear is financial, which might be less of a problem for SACRS' people, this idea of will I outlive my money?

SACRS Magazine: How should one go about addressing these different fears?

DE: Of the three, the financial one can be best addressed by knowing where you stand. On my website I have a tool to help calculate investment needs. Psychology and practical fears should be addressed five years before retiring. It could be one year before, but why not do it earlier and get some extra productivity? Life Two is an opportunity to reinvent oneself, but it can be difficult. I ask people three questions:

1. How would you live your life if you had all the money you needed?
2. How would you live your life if you had only three to five years left to live?
3. How would you live your life if you had just 24 hours to live?

There are no right or wrong answers. Your priorities should come out of the responses to these questions. You will be able to better identify what makes you happy. What would you change? What are your regrets? It is important to think through these things BEFORE retiring. And if thinking about retirement gets you agitated, then there is definitely a need to think about it.

GENERAL WESLEY CLARK

Wesley K. Clark, Sr. is a retired General of the United States Army and former NATO Supreme Allied Commander. He graduated as valedictorian of the class of 1966 at West Point and was awarded a Rhodes Scholarship to the University of Oxford, where he obtained a degree in Philosophy, Politics, and Economics. A 2004 Presidential candidate and best-selling author, General Clark has written four books and is a frequent contributor on TV and to print.

SACRS Magazine: In your keynote, **Five Challenges and A Cry for Help**, you note that America's five most dangerous 21st-century challenges are disparate, but must be addressed if America is to remain a global leader. You opened with a list of countries that are of particular military concern. Can you do a quick re-cap of those and why you see them as a threat?

GWC: Iran is a threat because it is politically acceptable, since 1979, to go after the U.S. The government needs an enemy, otherwise if has to focus on the humble state they are in. Their code-name for America is the Great Satan. I think they are moving toward something ugly, for Iran winning is equal to surviving. We need the Iranian government replaced, but we don't have those people. We don't have a strategy for winning.

Others I mentioned were Venezuela, which is like a slow moving Cuban missile crisis, the South China Seas, because it has become a fortified area that the Chinese have secured, North Korea because of its focus on economic development and acknowledgement that they need resources from outside, and the Ukraine because it is a crisis in reserve, it remains a potential hot spot.

These are all challenges that are long term and bigger than any single administration. The strategy we need is absent in a political system that encourages policymaking to suit short-term, partisan political needs.

SACRS Magazine: In your top five concerns, many were here on the homefront, like cybersecurity.

GWC: We invented the Internet and yet we are the most vulnerable. Fifth-generation, or 5G, networks have no security. We could have mandated it. It is one of the most important networks of the 21st century and it is vulnerable to cyber attacks. It is much too frail.

SACRS Magazine: Another challenge facing America in your view is financial systems.

GWC: Yes, unstable financial systems. There is too much debt, it is like rocket fuel and makes the economy grow. And we do need to keep the economy growing but the disparity of wealth is not sustainable. We have a growing problem.

SACRS Magazine: Climate disruption (aka climate change) made your short list too.

GWC: We have major institutions that need to come to terms with climate change. Can we answer the challenge? That's the question. I know China can. They have smart people and you better respect China. They are becoming more interested in tackling climate change and as an alternative to democracy they can mandate more and do better long-term planning.

SACRS Magazine: The fifth and final challenge you mentioned is back to China and Russia.

GWC: China and Russia don't like our power and they don't like how we use our treasury. Both China and Russia have big aims: Russia for parts of Europe and China wants to expand more in the Pacific. We have to find a way to live together. We have investments in China, so we don't want to see them collapse.

We need to realize that the age of America's dominance is over.

SACRS Magazine: Your talk was called *Five Challenges and A Cry for Help*. So far we have recapped the five challenges, what is the cry for help?

GWC: The cry is for the financial sector to help address these challenges. SACRS is an important group. Don't underestimate your enormous influence.

ROBERT F. SMITH

As Founder, Chairman, and CEO of Vista Equity Partners, Robert Smith directs Vista's investment strategy and decisions, firm governance, and investor relations. Vista currently manages equity capital commitments of over $46 billion and oversees a portfolio of over 50 software companies that employ over 60,000 people worldwide. Since Vista's founding in 2000, he has overseen over 350 completed transactions by the firm representing over $120 billion in transaction value. In 2017, Smith was named by Forbes as one of the 100 Greatest Living Business Minds.

SACRS Magazine: The portfolio of companies when taken together make Vista the 4th largest enterprise software company in the world, after Microsoft, Oracle and SAP. There are 220 million users of Vista's software. How did Vista become so big?

RS: Vista exclusively invests in software, data, and technology-enabled organizations led by world-class management teams. As a value-added investor with a long-term perspective, we support companies through operational improvements, best practices, and train executives on how to run their companies better. We have been quite efficient at at it for 19 years.

SACRS Magazine: What do you look for in a company to invest in?

RS: The Vista approach to creating value focuses on unlocking potential that others cannot see. Vista provides advantage through a disciplined investment focus on companies that provide mission-critical software, data, and technology-enabled solutions. We look for ways to build massive amounts of productivity.

For example machine learning is accelerating productivity to a degree that we can do things today that was not possible 10 years ago.

SACRS Magazine: In your keynote while talking about the importance of cybersecurity and threats, you said we shouldn't expect to win at it. How come?

RS: You are basically playing for a tie everyday. There are bad actors out there that want to go after guys like us. You have to stay vigilant, have good early warning systems, and understand the hot spots. You have to invest in people, process, and capabilities.

SACRS Magazine: Speaking of investing in people, you are a strong believer in mentors.

RS: When I was an intern at Bell Labs I had a great mentor. I would ask questions, but instead of giving me the answers he helped me figure it out for myself. He gave me the joy of figuring it out. That really launched me. That is what America is about: giving someone else your time, effort, and energy. Focus on being an expert on your craft. There is great benefit at doing that, not just for you. Work hard to be the best and drive that expertise to make a difference in your field.

I'm the son of school teachers. America still has the lead on education but we need to think about how we can stay competitive as a country. We need to put the resources in place and ensure education is being delivered to all kids. We must liberate those citizens that don't have access to good education. Innovation and big thinking has to evolve to include *all* people. The more smart people we have the better, so that we can act and drive forward as a whole.

GLORIA BORGER

Gloria Borger is CNN's chief political analyst, appearing regularly on The Situation Room with Wolf Blitzer and Anderson Cooper's AC360 and across the network's primetime programs. Borger plays an instrumental role in the network's daily coverage while reporting on a variety of political and breaking news stories, including America's Choice 2016, the Supreme Court rulings of 2015, the 2014 midterm elections and more. In addition, Borger is the correspondent for an acclaimed series of in-depth specials, Gloria Borger Reports and was pivotal to CNN's Emmy award-winning election night coverage in 2012.

SACRS Magazine: In your talk, **An Insiders View of Washington DC**, you noted how much journalism has changed.

GB: This is a very different job. The American press has never been called the enemy of the people before. I spend my day trying to see who has lied to me. You really have to find people to trust. The media has become more splintered. People now pick what they read and tune in to what they agree with more than trying to learn what they need to know.

This new era I'm covering in is topsy-turvy. President Trump likes to be his own press secretary. We have never had that before. Daily press briefings are no longer happening. It's been a hard time.

SACRS Magazine: And of course social media has changed things a great deal.

GB: I never thought that as a journalist I would wake up to see what the president has most recently tweeted about. Every tweet is now an official record. You can see the correlation between what President Trump sees on TV and his tweets. And he is very good at using Twitter to change the subject or get an audience. His background is entertainment and he is schooled in television.

If we don't have the facts, how can we disagree? How can we talk to each other?

SACRS Magazine: In your talk you made some general observations about the 2020 presidential elections. What are some highlights?

GB: The last time the Democratic Party had this many candidates was when Jimmy Carter was nominated. Who knew Jimmy Carter? Who knew he could win? But the candidates need a message that is more than "I'm not him" – with the party base moving to the left, a candidate needs to appeal to the base *and* appeal to the independents.

Trump has spent two years solidifying his base. He needs to reach independent voters he does not yet have.

With the American voters, how much will be about the future of their country? People judge their president in different ways, but in the end it's usually about "what is best for my family" and how comfortable people feel over what is best for the country.

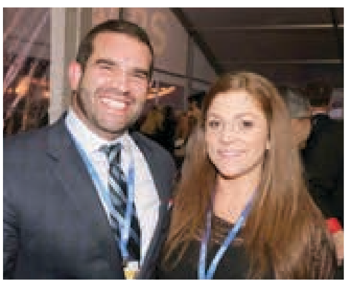
SACRS 2019 SPRING CONFERENCE

MAY 7-10

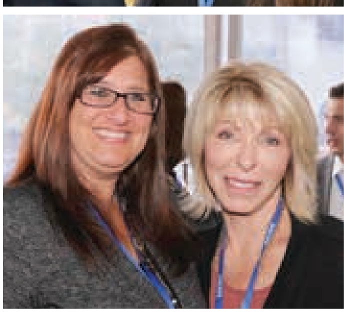
RESORT AT SQUAW CREEK • LAKE TAHOE, CA

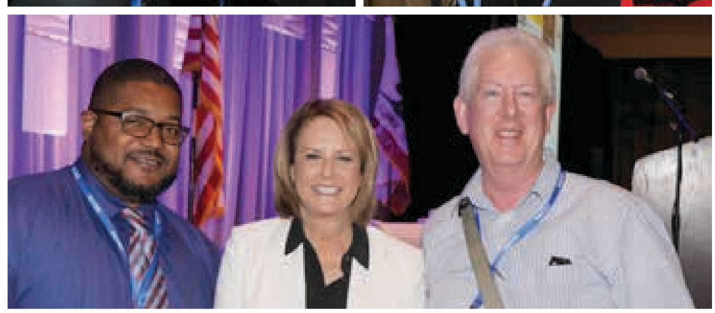


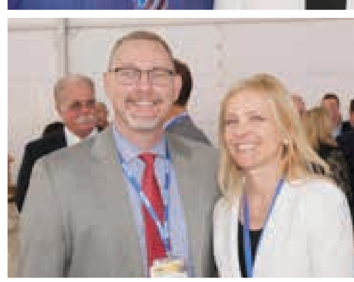


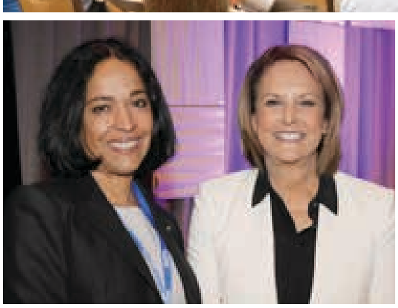










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UPCOMING CONFERENCE SCHEDULE

FALL 2019

November 12-15
Hyatt Regency Monterey
Hotel & Spa
Monterey, CA

SPRING 2020

May 12-15
Paradise Point Resort & Spa
San Diego, CA

FALL 2020

November 10-13
Renaissance Indian Wells
Resort & Spa
Indian Wells, CA

SPRING 2021

May 11-14
Hyatt Regency Long Beach
Long Beach, CA

FALL 2021

November 9-12
Loews Hollywood Hotel
Hollywood, CA

SPRING 2022

May 10-13
Omni Rancho Las Palmas Resort & Spa
Rancho Mirage, CA

FALL 2022

November 8-11
Hyatt Regency Long Beach
Long Beach, CA

SPRING 2023

May 9-12
Paradise Point Resort & Spa
San Diego, CA

FALL 2023

November 7-10
Omni Rancho Las Palmas Resort & Spa
Rancho Mirage, CA