LaSalle
INVESTMENT MANAGEMENT®

ISA 2020
INVESTMENT STRATEGY ANNUAL

Managing Editors

Jacques Gordon
Global Strategist

Richard Kleinman
Head of U.S. Research and Strategy

William Maher
Head of Americas Research and Strategy

Daniel Mahoney
Investment Strategist

Simon Marx
Investment Strategist, United Kingdom

Petra Blazkova
Investment Strategist, Continental Europe

Elysia Tse
Head of Asia Pacific Research and Strategy

Contributors: Research and Sustainability Staff

Mary Burke
Zuhaib Butt
Sophie Carruth
Simone Caschili
Jade Cheong
Ryan Daily
Eric Duchon
Jake Fansler
Eduardo Gorab
Heidi Hannah
Kayley Knight
Yasuo Kono
Chris Langstaff
Tobias Lindqvist
Mahdi Mokrane
Frances OseiBonsu
Chris Psaras
Makoto Sakuma
Kevin Scroggin
Dominic Silman
Sophia Sul
Katie Taylor
Kyle Terry
Dennis Wong
Hera Xiahou
Sabrina Zimmermann

LaSalle Investment Management

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Chief Executive Officer

Julian Agnew
Chief Investment Officer, United Kingdom

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Chief Executive Officer, Europe

Ed Casal
Chief Executive Officer, Global Partner Solutions

Mark Gabbay
Chief Executive Officer, Asia Pacific

Alok Gaur
Global Co-Head, Client Capital Group

Wade Judge
President, LaSalle Property Fund, and Chief Investment Officer, Americas

Lisa Kaufman
Chief Executive Officer, Global Securities

Jason Kern
Chief Executive Officer, North America

Philip La Pierre
Head of Continental Europe and Chief Investment Officer, Continental Europe

Simon Marrison
Chairman, Europe

Matt Sgrizzi
Chief Investment Officer, Global Securities

Alan Tripp
Head of United Kingdom

Jon Zehner
Global Co-Head, Client Capital Group

ISA 2020

In 2020, political turmoil and unrest in many countries will likely generate near-constant disruption. International trade agreements are in flux. Supranational organizations are challenged. Nationalism is on the rise. Yet, overarching all these troubles are powerful economic and demographic forces, which will have a larger influence than political headlines on the health and performance of most real estate markets.

Financial stress will become more evident in 2020, especially in epicenters of political discontent like Hong Kong and the United Kingdom. Yet, we do not see a systemic financial crisis looming. Instead, we see the powerful secular forces of demographics, technology, urbanization, and environmental factors working together to shape metropolitan economies and drive tenant demand. Capital market trends will also play a major part in real estate's performance over the next three years. These include the rise of "alternatives" in portfolios, the search for durable yields to meet future obligations, and lower point-forward returns across all asset classes.

For 2020–22, LaSalle foresees a slowing global economy, ongoing trade disagreements, high asset valuations, and disruptive technology as headwinds to favorable real estate performance. However, many of these same forces are also linked to salutary tailwinds. Slow growth is linked to low interest rates, which elevates values. High valuations are linked to momentum in capital markets, when investors increase allocations to real estate as a result of strong prior performance. Technology disruption is linked to innovation hubs, which create value for real estate just as they do for entrepreneurs and other investors.

Investors will need to steer through many headwinds and tailwinds over the next three years. After nearly a decade when tailwinds predominated, replicating past performance will be a harder goal to achieve. At this mature phase of the cycle, we caution investors to remember the lessons of past cycles when considering how this cycle might be different. One of the best ways to do this will be to adopt the ideas described by Daniel Kahneman in *Thinking, Fast and Slow*—distinguish between instinctive biases and deliberate, fact-based evidence when assessing the risks and opportunities in 2020–22.

CHAPTER 1

The Global Outlook for 2020

The Global Outlook for 2020

The beginning of a new decade[1] is a fitting time to reflect on where we have been and to anticipate where we might be going. In nearly all developed countries, a full and steady recovery from the Global Financial Crisis (GFC) has been accomplished. Low inflation and accommodative monetary policies have created the lowest interest rate environment ever seen. Real estate investment performance has been strong, and a gradual expansion of "core" markets and property types has taken place.

In 2020, investors should look for opportunities in a wider variety of specialized property types and take advantage of a broad range of financial structures, including senior and mezzanine loans, and indirect strategies to access highly-focused operating expertise. Allocations to real estate continue to grow from deep sources of capital: pension funds, insurance companies, sovereign wealth funds, foundations, endowments, target date funds, family offices, financial advisors, and self-managed retirement funds.

In sum, there have been more tailwinds than headwinds for investors since the GFC. Slow, steady economic growth, low inflation, and falling interest rates create ideal conditions for real estate to thrive. This positive environment is unlikely to vanish quickly in 2020, but its contribution to future positive performance will lessen. Even if the potential for a sharp global reversal is highly unlikely, fund managers will need to pay close attention to the macro forces driving each country and each specific metro market in their portfolios.

Headwinds, Tailwinds, and Secular Trends

The next few years will likely bring more headwinds into LaSalle's outlook. Looking back over the past 50 years of real estate investing, a mix of headwinds and tailwinds has been the norm within each of the prior four decades, so the past ten years have been unusual. The sustainability of recent benign economic conditions is one of several macroeconomic issues facing real estate investors in 2020 and beyond. What are the others? Here is our list of the headwinds and tailwinds that investors should consider in 2020–22.

MACRO HEADWINDS

- Slowing global economic growth
- Ongoing trade and treaty disagreements
- Heightened domestic political and policy polarization
- High asset valuations
- Disruptive technology[2]

MACRO TAILWINDS

- Continuing low interest rates
- Rising allocations to real estate
- Balanced fundamentals in most markets
- Supply constrained by rising land values and higher construction costs
- Greater adoption of technology across all sectors of society—business, households, healthcare, leisure, and real estate[3]
- Rising transparency in more countries across more aspects of real estate investing[4]

In 2019, we delved more deeply into our four "meta-macro" trends that are likely to influence real estate over the long term.[5] We refer to these as DTU+E secular trends because they are based on demographics, technology, urbanization, and environmental conditions. These factors are especially important when looking through and beyond economic or property cycles to the underlying forces that are more powerful over the long term. Secular trends can act as either headwinds or tailwinds for real estate portfolios. The insights from our careful examination of each trend are given in this 2020 edition of the *Investment Strategy Annual* and in white papers posted to LaSalle's

123 N. Wacker Drive, Chicago, IL, USA

1 A new decade does not technically begin until 2021, but economic history will likely treat the year 2020 as part of the "2020s," just as 1990 is considered part of the "1990s."

2 Technology can act as a headwind when it speeds up obsolescence, especially for retail properties.

3 Technology can also act as a tailwind in markets where human capital creates high value-add activities, and by making fixed assets like real estate more efficient through proptech innovations.

4 Rising transparency across ESG (environmental, social, and governance) factors, market data, and proptech-enabled data sources is documented in the JLL 2018 Global Real Estate Transparency Index. The next edition of this report is due out in 2020, which may or may not show further progress in transparency for specialized property types, sustainability factors, and resiliency.

5 Long term is defined as a decade or longer; in other words, longer than the typical economic or real estate cycle.

website. Here are the secular trends investors should consider in the 2020s, with references to LaSalle's most recent research on each topic.

SECULAR TRENDS FOR REAL ESTATE DRIVE LASALLE'S RESEARCH

- **Demographics:** Impacts of aging,[6] shortages of highly-skilled labor, and migration
- **Technology:** The adoption of proptech, changes in how tenants use space, and data analytics that track these changes[7]
- **Urbanization:** The interplay of regulatory controls, supply barriers, demand, density, mixed-use zoning,[8] and city resilience
- **Environment:** Climate risk[9] and sustainability efforts

Implications for Investment Strategy

Over the 2020–22 period, all of these macroeconomic forces should shape real estate investment strategy, portfolio construction, and investment performance. However, just identifying these long-term secular trends is not sufficient for building a top-performing real estate portfolio. The implications of each trend are rarely intuitive and must be understood in combination, not in isolation. These trends are also not immune from cyclical factors. Pricing and timing still matter, and taken together, these trends raise complex execution issues.

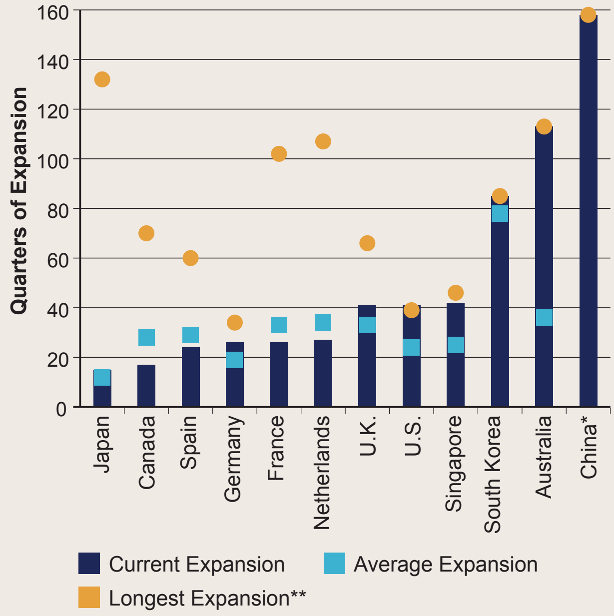
For example, the global economy will be slowing, which means that rent growth, leasing, and other drivers of real estate income are likely to downshift to a lower gear. Yet, slow growth means that interest rates will also remain low and contribute to elevated asset valuations. Meanwhile, the pace of structural or secular change could escalate, as technology acts as both a disruptor and an accelerator to both economic and social trends. These tech shifts are ultimately expressed through fast-changing tenant requirements and landlord decisions in real estate markets.

Macroeconomic themes contribute to portfolio construction and top-down investment strategies, especially for large assemblages of properties. However, micro-locations and specific assets each have their own "resilience" factor to consider. Some assets and strategies amplify the macroeconomic trends and will deliver "high beta." For example, hotels are a high-beta contributor to property portfolios as they rise and fall quickly in response to economic activity. Long-leased properties, like medical office buildings or top-tier grocery-anchored retail, are more insulated from all the noise and are typically "low beta."

High performance "alpha" strategies, by contrast, are achieved by getting the offense-defense mix and timing right, as well as by focusing on stock selection and execution. Some real estate strategies generate nearly all their alpha when they put money to work or withdraw it (e.g., securities, multi-manager mandates, and debt). Other real estate strategies continue to add alpha after the

Major Economies Ranked by the Length of Their Current Expansion

Current Expansion vs. Average Expansion in Each Market



A recession is defined as two consecutive quarters of negative growth, with double-dip recessions counted as a single recession.

*Data for China goes to 1980. The country has not had a recession by our definition in that period, so the quarterly length shown is for the full 1980–current period.

**Longest expansion figures are based on data available, which varies by country. All markets have data back to at least 1980, and the majority of markets have data back to 1960.

Source: LaSalle Investment Management analysis of data from Oxford Economics, Organisation for Economic Co-operation and Development (OECD), and Bloomberg.

Includes GDP estimates through 2019:Q3.

"buy" through active management (leasing, cap-ex, and repositioning). In all of these situations, a fast/slow dichotomy arises because real estate is a durable, long-lived asset, subject to fast-changing headwinds and tailwinds that can affect the ride.

Real Estate: A Durable Asset

Real estate bridges the past, present, and future, more so than any other asset class. The useful economic life of the typical building is two to five times longer than other "blue chip" investments. Land can represent 30% or more of the total investment value in some markets and effectively retains its economic value over time. Buildings frequently

6 See the LaSalle Macro Indicators Deck, November 2019.

7 See the sidebar Proptech and Data Science for Real Estate Investment on page 47.

8 See *The Journal of Portfolio Management*, Real Estate Issue, Fall 2019.

9 See the sidebar Climate Change: Implications for Investment Strategy on page 14.

4 Hutton Center, Santa Ana, CA, USA

have proven flexible and adaptable over long periods.[10] The income streams generated by the buildings, operating companies, and REITs in an investor's portfolio are generally more stable and longer-lived than the financial health of the tenants that are the source of that income (see Durability and Duration on page 57). Tenants come and go whenever their financial circumstances or location preferences change. Yet, the enduring reuse value of the real estate remains intact, provided that economic conditions provide sufficient back-up demand for the vacated space. It is this proviso that will weigh heavily on the market when the global economy slows in 2020, or if it stalls further in 2021 or 2022.

Real estate's longevity creates both opportunities and challenges for real estate investors. If high stability is a positive, lower adaptability can be a negative. When local economies move quickly up or down, rent levels eventually reset, depending on the prevailing lease structure in the market or for a particular asset. In an economic slowdown, this lag effect will insulate many portfolios from declining tenant demand or a hesitation to commit during a period of high economic uncertainty. Nevertheless, just as tenants face new business, political or social pressures at a faster speed, real estate needs to adapt more quickly too.

10 According to CoStar, 89% of New York City's large office buildings built before 1940 are still in use today. Similar, or even older longevity estimates can be found in many European cities, whereas Asian cities typically have newer stock.

Responsiveness to tenants as well as tenant creditworthiness becomes even more important in a slowing economy, when tenants are likely to be under pressure to cut costs and raise efficiency.

SLOWING ECONOMY, FAST-MOVING TENANTS

Even in a slow-moving economy, tenant needs can change at breakneck speed. In many countries, tenants are demanding more services and amenities, both from building owners and from the neighborhoods where they live and work. They are also demanding more economic flexibility by seeking to shift the risks in their operating environment to the landlord via flex space, coworking, turnover rent, and shorter break options in leases. Building owners and their capital partners must respond by using value-engineering and cost-benefit analysis instead of simply chasing the most recent, expensive fads. At the submarket level, investors should pay closer attention to neighborhood amenities and the surrounding infrastructure. Building owners are sometimes able to improve a neighborhood through the delivery of services like security or routine maintenance of public areas. They also occasionally sponsor or co-sponsor off-site improvements required or enabled by local planning authorities, such as signage, community events like farmers markets, affordable housing, or recreational facilities. The long duration of real estate means that modest outlays to improve a local streetscape or public area can contribute to a longer payback period that has a net positive financial effect on a property.

Fast and Slow Insights

The faster pace of occupier behavior change, as well as the rapid accumulation of tenant data on how users experience buildings in real time, are in sharp contrast to the durable longevity of buildings and the slowing global economy. This fast/slow contrast can be useful for real estate investors who consider human behavior when constructing their investment strategies.

In his landmark book, *Thinking, Fast and Slow*, Nobel laureate Daniel Kahneman distinguishes between System 1 thinking (fast, automatic, instinctive, frequent, and unconscious) and a more deliberate System 2 approach (slow, logical, calculating, and conscious). An understanding of these two approaches to how people process information will be helpful to real estate investors and portfolio managers in the years ahead.

Understanding how a System 1 mindset works is especially useful for an investor employing an opportunistic strategy designed to take advantage of the stresses that build up in late-cycle economies. As an economy slows and banks get more discriminating in how they lend and to whom, highly leveraged sectors are put at risk. The recapitalization of credit-starved assets, discounted properties with deferred maintenance, and property types like shopping centers and automated warehouses that are rapidly experiencing technology shifts are all likely targets for opportunistic investing in 2020–22.

Investors taking an opportunistic or non-core approach must be nimble and reactive. Their strategies should include preparation for market breakdowns, financial distress, and discounted pricing, but they will not be able to precisely predict when and where compelling buying opportunities will arise. One of the insights from Kahneman's work is that System 1 thinking relies on recent experience,[11] media coverage,[12] and/or deeply rooted biases[13] in order to move quickly. However, some of these mental habits may not be reliable guides to long-run outcomes. An opportunist can take advantage of these systemic biases that often occur when volatility intensifies and snap decisions must be made by market participants. In terms of property examples, a wholesale discounting of all retail properties is likely to miss the positive micro attributes of specific shopping centers that have excellent long-term fundamentals due to strong trade area demographics, barriers to new supply, or the opportunity to add residential, offices, or other specialized uses. In another example, when loan portfolios start to default, banks tend to make rapid decisions based on regulatory requirements. The speed of resolution can be more important than taking the time to understand the quality of the loan's collateral. In past periods of financial distress, banks sometimes sold higher quality loans first, just to create liquidity and meet regulatory requirements quickly. Similar dynamics occur when there is a "run" on an open-ended fund and investment managers have to meet redemption requests or gate the fund from further redemptions.

System 2 thinking, on the other hand, works better for a careful investor who takes a deliberate approach to investing. This method typically includes peer-group performance benchmarks, longer hold periods, and an emphasis on income stability. The real estate investment management industry calls this a "core" approach to investing. A more accurate description would include risk-return attributes, such as an income-orientation, value stability, or assets well-protected from new competition and capable of maintaining market dominance over a long time horizon. Asset selection is supported by careful micro research, while portfolio construction is guided by longer-term secular themes and benchmark comparisons. A System 2 approach can also take advantage of insights that other investors' biases suggest. For example, a System 1 approach to core investing is prevalent in many countries. In other words, some investors tend to focus on the newest, tallest buildings in the trendiest neighborhoods with the most expensive amenities in the largest cities. Sometimes these assets represent excellent long-term value, but not always. An investor employing a careful System 2 approach can typically separate the "ego-driven" deals from the "value-oriented" investments.

Over the next three years, the real estate investment markets will reward a deeper understanding of both System 1 and System 2 thinking in the capital markets. Even though major economies will be slowing and the aggregate pace of leasing and growth rates are likely to moderate, the accelerating speed of volatile events may interrupt the smooth functioning of some real estate markets. An example of how quickly markets can shift was provided in the third quarter of 2019 when the We Company (parent of WeWork and WeLive) delayed and ultimately withdrew its plans for an IPO. In the world's largest office markets, WeWork was the fastest growing individual tenant in 2018 and the first half of 2019. Their demand for new space came to an abrupt halt in early October when their valuation plummeted. The media coverage of this situation has been so intense that investors will likely lose perspective, in much the same way that psychology studies show how intuitive judgments on health statistics are shaped by misleading media reports.[14] Investors may shy away from all coworking or flexible office tenants based on the decline of WeWork. Yet, the secular trend for open-plan offices and coworking may not be interrupted at all and may thrive even without WeWork as the market leader.

Macro Trends, Micro-Markets, and Stock Selection

Real estate typically follows, rather than leads, local economies. These local economies, in turn, are linked to national and international growth drivers. Slow growth at

Logiport West Anseong, Seoul, South Korea

11 The recent past creates an anchoring or framing effect that can be misleading.

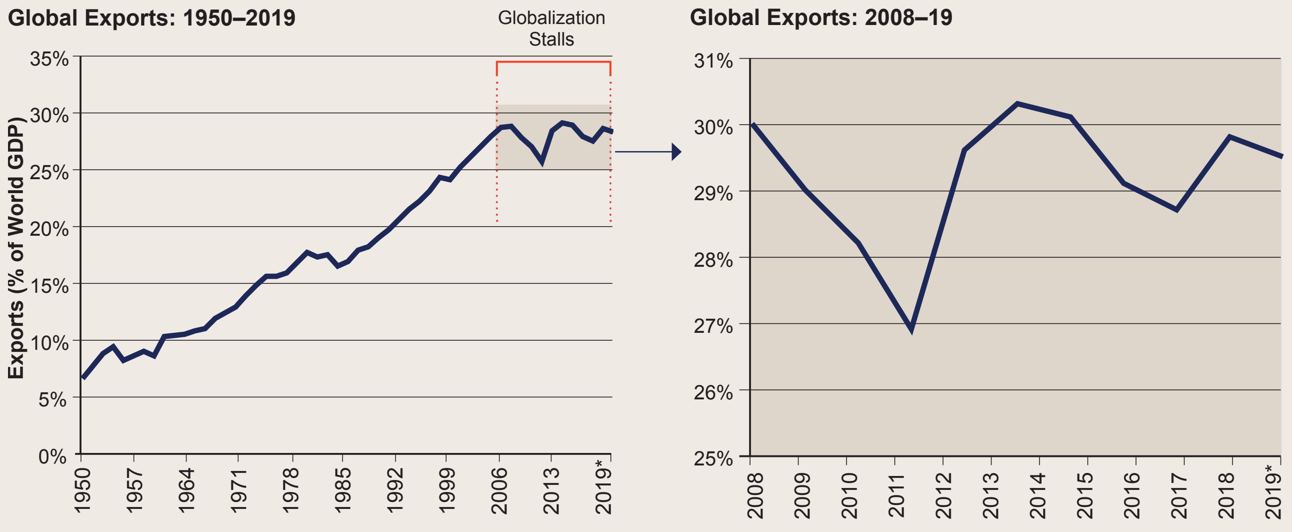
12 The availability heuristic refers to wide media coverage that crowds out harder-to-obtain information.

13 Overconfidence, "expert intuition," and misdirected attention can all create blind spots.

14 Kahneman, D. *Thinking, Fast and Slow,* 2011. Availability and Affect, p. 138. Accidental and violent deaths make headlines; death by disease does not. The Slovic-Fischhoff studies show how this distorted the judgement of study participants.

International Trade Growth Has Stalled

A SIXTY-YEAR TREND IS AT RISK



*LaSalle estimate of 2019 based on World Trade Organization October 2019 forecast of world trade volumes and global GDP growth in 2019.

Sources: Peterson Institute for International Economics, Capital Economics, World Bank, and Coatsworth & Williamson. Latest available data as of December 2019.

the macroeconomic level can mask much faster demand growth in subsectors and districts that serve the fastest-growing industries.

Examples of fast-growth sectors that are already well-understood by real estate investors include e-commerce, healthcare, logistics, and web-based services. Other emerging industries that are less well-recognized include cyber security, data centers, fitness/nutrition, gaming, gerontology, life sciences, sustainable energy, and temperature-controlled storage. All of these industries, and the specialized real estate that serves them, have the potential to drive higher real estate performance, even in a slow-growth economy.

By the same logic, slow-growing countries or metros may have pockets of fast-growing industries that cluster in districts that punch above their size in driving tech innovation, real estate demand, and high investment performance. The analysis of micro-markets has come a long way since real estate investors used to rely on "driving the neighborhood" to figure out where high-growth demand drivers were located. New data-gathering technology like amenity-mapping, geo-fencing, and tenant UI/UX[15] sensors provide investors and property managers with more information than ever before. While a strong macroeconomic headwind can exert stiff resistance, a micro-market tailwind can counteract a macro trend. At the asset level, micro data analysis also helps reveal the local amenity networks that innovation districts rely on. A single building in a fast-growing, mixed-use district is not an isolated island.

Stock selection for portfolio managers relies on matching what tenants in a high-growth micro-district are looking for with what an asset has to offer. The pricing of this match involves the forecasting of income streams, repositioning costs, future demand relative to competing supply, and how the capital markets will price the match in five or ten years. Stock selection, by definition, is a highly micro exercise, and should be consistent with the market dynamics of both the local neighborhood and the macro environment.

Global Trade Growth Stalls

The global growth outlook for 2020 is mixed. The world's three largest economies—the United States, China, and Japan—are all expected to slow. The OECD and the IMF both expect global growth to pick up slightly in 2020, although the Bloomberg consensus (see 2020–21 Growth Outlook is Mixed on page 9) does not. Our analysis of the potential macroeconomic headwinds and tailwinds suggests that there is more downside than upside to all these forecasts. Our take is that the biggest macroeconomic issue is how national economies, capital markets, and property markets will react to all the geopolitical noise in the system.

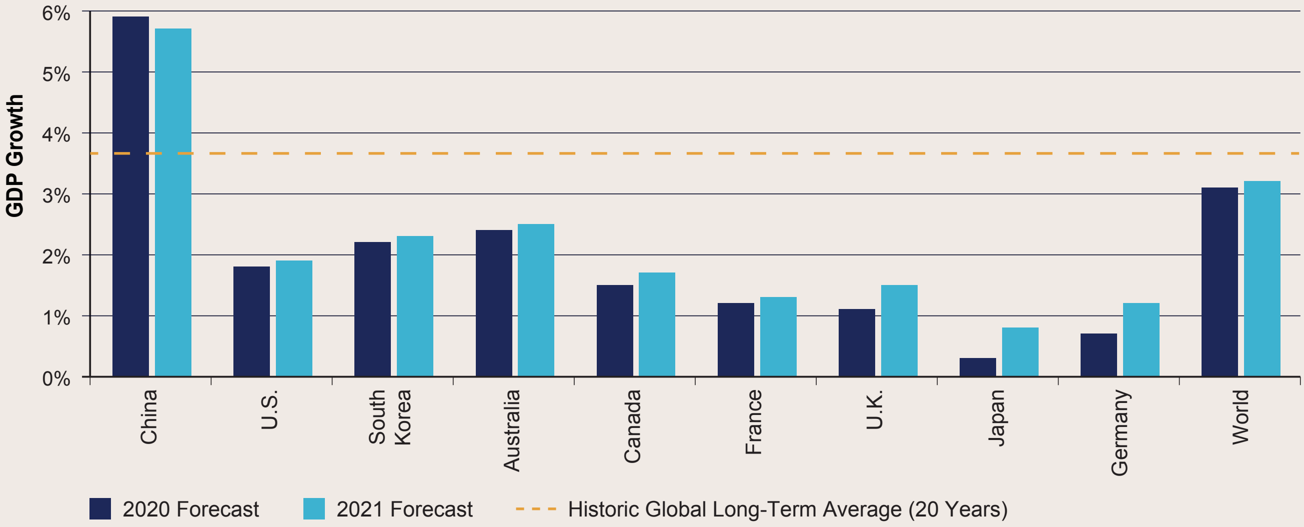
Over the past several years, economic growth has been surprisingly unperturbed by highly disturbing geopolitical headlines. Who would have predicted that the U.K. economy would grow twice as fast as Germany's in 2019, the year that Brexit was scheduled to launch? Or that China's reported growth would slow by just a half of one percentage point (from 6.25% to 5.75%) in the year when

15 UI: user interface; UX: user experience.

2020–21 Growth Outlook is Mixed

SOUTH KOREA, AUSTRALIA, AND GERMANY ARE EXPECTED TO ACCELERATE SLIGHTLY IN 2020–21. THE WORLD'S THREE LARGEST ECONOMIES (U.S., CHINA, AND JAPAN) ARE EXPECTED TO SLOW.

Bloomberg Consensus GDP Growth Forecasts



Source: Bloomberg Survey of Forecasters.
Latest forecasts as of December 3, 2019.

trade tariffs on Chinese exports to the U.S. went into effect? Such a small decrease in China's growth rate is consistent with slowing demographics and the difficulty of maintaining an emerging market growth rate when the size of the Chinese economy has grown from $2 trillion in 1990 to $14 trillion in 2018. Even with the tariffs, China's GDP grew by the size of the entire economy of the Netherlands in 2019.

The gradual slowing of global growth is driven by three factors: (1) trade/treaty disputes, (2) a slowdown in global trade, and (3) aging populations. Trade and treaty disputes remain unresolved and are creating uncertainty for business investment. In addition, slowing global trade is already demonstrable (see International Trade Growth Has Stalled on page 8). This decreases the rate at which the economies of comparative advantage accrue to trade partners. Finally, population aging and falling population growth are impacting economies across the globe (see The Elderly Share of World Population Will Increase on page 10). None of these factors are likely to have catastrophic consequences in 2020–22, but they do imply that global growth will be a full percentage point lower in the 2020s (hovering around 3%) versus 4% in the previous decade (with the GFC taken into account).

Polarized electorates and strengthening nationalism create conditions that lead to trade barriers and the erosion of global trade activities. Divisive politics are also consistent with the rise of both far-right (anti-immigrant) and far-left (socialist) agendas, which could weigh more heavily on the growth outlook for some capitalist economies in 2020. The unequal distribution of wealth and income is a serious problem in many countries, but many businesses fear that the "medicine" may be more toxic than the "disease." This debate will occur in more countries in the decade ahead, as massive wealth creation for a tiny minority transpires alongside stagnant earnings for a much larger majority.

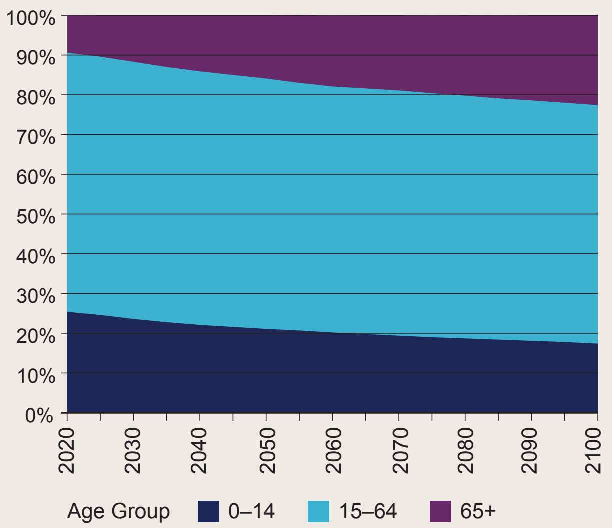
In Chapter 2, we discuss the economic prospects of the major economies where we are most active. The headwinds we identified earlier are not necessarily crippling. The past ten years taught us that real estate does not need high GDP growth at the national level to achieve strong financial performance. Real estate does, however, need pockets of economic expansion to sustain rent growth, leasing, and repositioning strategies. It also thrives on falling interest rates, inexpensive debt, and

Rienzi at Turtle Creek, Dallas, TX, USA

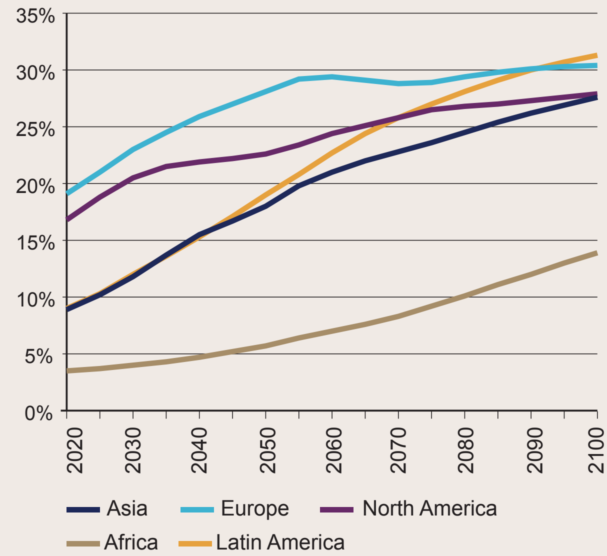
The Elderly Share of World Population Will Increase

FASTEST-GROWING RETIREE POPULATION IS CONCENTRATED IN ASIA AND THE DEVELOPING WORLD

World Population Projections by Age (%)



Population Over Age 65 by Region (%)



In projecting future levels of fertility and mortality, probabilistic methods were used to reflect the uncertainty of the projections based on the historical variability of changes in each variable.

Source: United Nations World Population Prospects 2019, Median Projection.

loose monetary policy. Of all the tailwinds, the most powerful boost to real estate performance has been from the capital markets, which in real estate terms, has bestowed the twin gifts of capitalization rate compression and low-cost debt.

High Asset Valuations/ Low Interest Rates

Perhaps the biggest surprise over this ten-year, post-GFC cycle has been persistently low interest rates. In particular, long-dated sovereign bonds have behaved very differently than in past expansion cycles. Extreme monetary measures—setting overnight repo rates close to zero, the introduction of quantitative easing, and the deployment of detailed forward guidance and inflation targets—were expected by many to lead to a return of pre-GFC levels of short- and long-term interest rates. The consensus view was that eventually we would return to a "normalized" interest rate environment. Much to the surprise of economists and bond gurus, this never materialized.

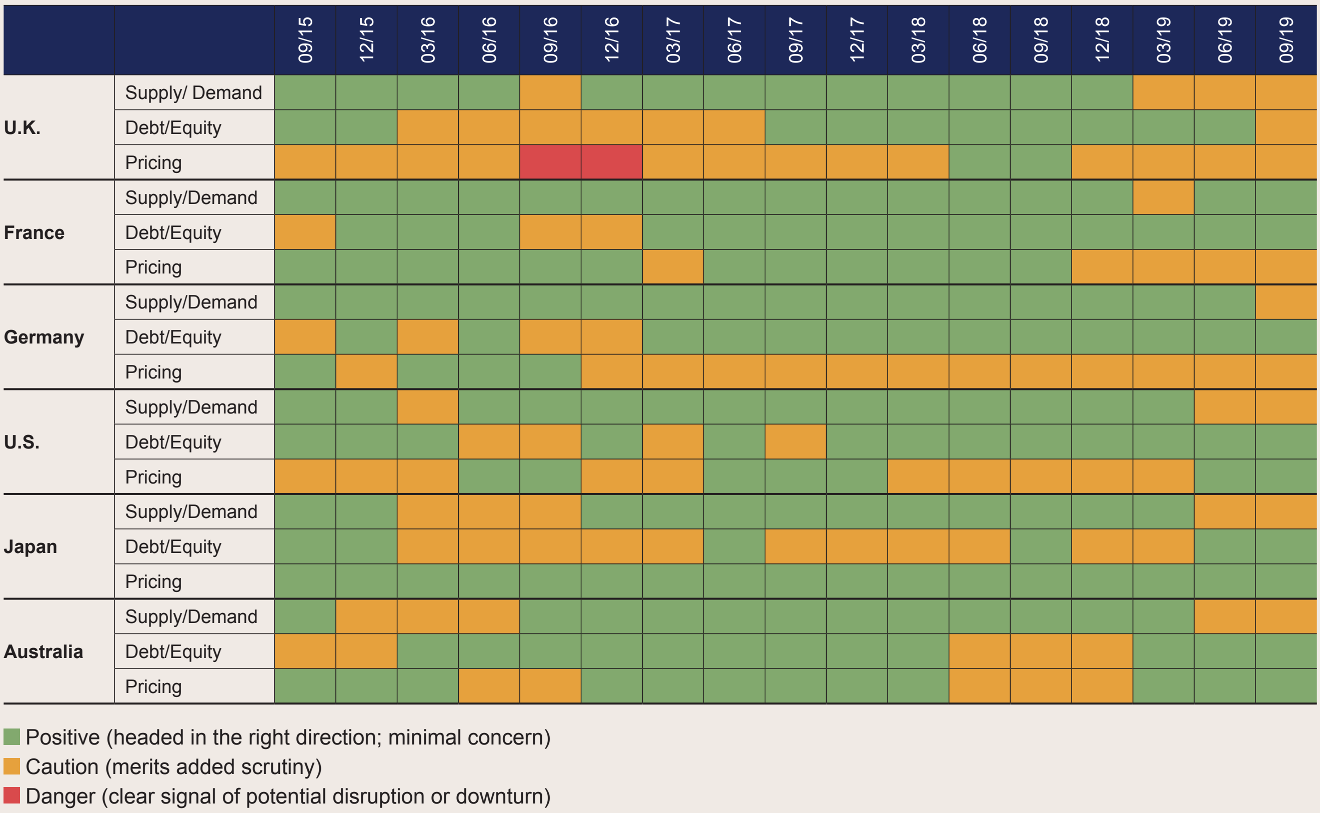
The ripple effects in the real estate markets are still being felt. Upward price pressure on core real estate is palpable whenever interest rates hit new lows in any country. As a result, quarterly reports to investors regularly include a comment like this: "Real estate yield spreads look healthy from the perspective of ultra-low sovereign and corporate bond yields, even though in absolute terms real estate cap rates are at, or close to, record low levels." This statement suggests that a positive income stream is welcomed by many investors when $15 trillion worth of bonds carry a negative interest rate and another $10 trillion pay investors less than 1% (see Bond Yields Have Fallen Together Over the Past Year on page 12.)

In this environment, investors should keep in mind two related issues: 1) real estate investment managers cannot control these interest rates, and 2) the value created by falling interest rates has little to do with real estate investment skills. The implication for investment strategy is that these powerful macro forces do not impact all parts of a real estate portfolio equally. Long duration leases, like long duration bonds, can be more sensitive to interest rate movements, especially if they do not have rent escalations. Placing long duration debt at a fixed rate on a property hedges some of this interest rate sensitivity, but not all of it. Our advice to investors is to review the weighted average lease terms and debt duration in all portfolios and make sure that they are consistent with a balanced view of both lower-for-longer and other, more volatile, interest rate scenarios that might be present in each country.

Capital Market Volatility

The issue with high asset valuations is that it is hard to see how future capital markets can look anything near as favorable as in the past. True, the zero lower bound for interest rates has been breached, but further drops in interest rates and runaway deflation seem an unlikely scenario in 2020-22, especially when central banks can flood the banking system with credit. A spike in interest rates or inflation has been the fear of bond vigilantes for nearly eight years. However, high inflation never

Capital Market Dashboards Show a Mix of Positive and Caution Indicators



Each country has nine indicators; three in each macro indicator group. The metrics are specific to each country, although common methodologies are employed.

Source: LaSalle Investment Management.

happened, and inflation targets were not achieved by most central banks, so real estate has remained a safe haven for investors.

Looking forward, even when the interest rate playbook is thrown out, it is impossible to imagine real estate running the same capitalization rate compression route in 2020–22. With pricing close to peak levels across all asset classes, the end of both strong fundamentals and falling cap rates logically implies that the outlook for returns over the next five years will be much lower than the previous five years. These conditions also suggest that investors should expect the capital markets to endure waves of volatility. In the current environment, investors should follow a System 2 (deliberate and slow) approach to real estate investment, as it has an important stabilizing influence on financial performance during periods of choppiness. An investor who adopts a non-core style of investing thrives on volatility and takes advantage of periods when knee-jerk System 1 thinking (fast and instinctive) prevails, credit dries up, risk aversion is extreme, and equity is scarce. That environment is not yet here, but the odds are shortening every year and eventually it could show up.[16]

16 A recent note on November 5, 2019 from Ray Dalio to his Bridgewater clients warned: "The world has gone mad and the system is broken." The reference was to the growth of central bank balance sheets and government deficits.

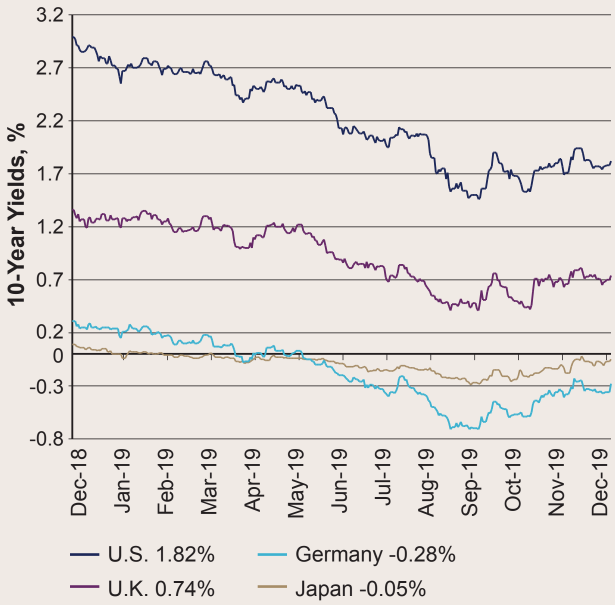
Technology Drivers

Technological innovation affects all phases of the real estate investment cycle—from acquisition, to asset management and operations, through selling and harvesting the gains. In many cases, an active management approach will rely on technology to attain outperformance. For instance, tenant satisfaction—and renewal conversion—in residential buildings can be improved through online communication channels that provide property managers with more points of contact with their tenants. Package delivery, booking clubhouse rooms for private parties, and other concierge-like services are all made more efficient through web-enabled communications. This well-known example, however, is not as advanced in other property types, but it certainly could be. Tenants in offices, shopping centers, and logistics buildings are finding that more frequent communication with their property manager helps them build networks that save them money and generate hiring and/or sales leads.

We believe technology will continue to be both a potential headwind and a tailwind, not just in the next three years, but in the decade ahead. Already, the range of outcomes in recent years has followed a recurring pattern of incumbent disruption, emerging winners, and efficiency

Bond Yields Have Fallen Together Over the Past Year

10-Year Government Bonds
December 2018–December 2019



One-Year Change

U.S.	-117 bps	Germany	-59
U.K.	-63	Japan	-14

Sources: Bloomberg and LaSalle Investment Management. Data as of December 3, 2019.

gains. In the real estate industry, the people on the front lines for proptech adoption and disruption are asset managers and on-site property managers. They cope with new expectations from tenants as well as new sources of intelligence about what they want (see Proptech and Data Science for Real Estate Investment on page 47).

Asia Pacific

Inter- and intra-regional trade—both merchandise and services—are important drivers for growth in Asia Pacific. Multilateral and bilateral trade agreements between Asia Pacific economies have supported the growth of intra-regional trade flows, particularly after the Global Financial Crisis. However, all Asia Pacific economies must change their supply chains—a result of the various trade disputes around the world. The ability of the largest Asia Pacific economies to adapt to new terms of trade will be a major factor in their prospects for future growth.

As the region contends with the trade war/tensions and other geopolitical headwinds, there are many reasons for optimism. India and China are the two fastest-growing large economies in the world, and both are creating more demand for trade and travel within the region than ever before. This growing self-reliance of Asia Pacific countries is not without its own set of trade tensions, of course, but it does help insulate the region from an over-reliance on trade with the U.S. or the EU. Moreover, natural resources and agricultural products from Africa and Latin America can substitute for traditional trading partners, if the U.S., for example, turns out to be an unreliable trading partner.

Our research team believes that over the next three years, decelerating economic conditions are inevitable in Asia Pacific, but it will remain the fastest growing region. Property markets will not be immune, but as the analysis in Chapter 2 shows, each property type and major metro market in Asia Pacific will experience this slowdown differently. Hong Kong is clearly the most exposed to the slowdown, for political reasons, but other countries like Australia and South Korea are also closely tied to China. Japan is less exposed to a slowdown in China than other Asia Pacific countries primarily due to its safe haven status, the ongoing shortage of labor that supports steady household income, and the recently announced stimulus package offsetting the impact of the October 2019 consumption tax hike.

Europe

The macro outlook for Continental Europe is filled with contradictions, uncertainty, and the “wind of change.”[17] When the Berlin Wall came down thirty years ago and the formation of the European Union soon followed in 1993, there was great optimism in Continental Europe, accompanied by high levels of uncertainty. Today, optimism and uncertainty have declined to levels last seen in the 1990s. President Christine Lagarde of the European Central Bank (ECB) says that the bank stands ready to continue Mario Draghi’s “whatever it takes” policies. The national governments of Europe do not always see eye to eye on the details of autonomy versus central control, but they mostly agree that a common currency and a coherent set of trade and labor policies within the EU is well worth maintaining. Despite anti-Brussels critics on both sides of the Channel, the great experiment of the EU has been a force for more economic and social benefits than costs over the past 25 years. As the EU continues to evolve, its bureaucracy must constantly adjust to new political leadership and take a pragmatic view on sensitive issues like migration, defense treaties, and fiscal support for weaker economies.

Despite all the political tensions and headlines in France, Germany, Spain, and Italy (to name just the largest sharply divided countries), the general economic growth prospects for the Continent remain stable, though not robust. Structural issues include aging populations and weaker exports, due to falling trade with both the U.S. and China. The hot spots of Continental Europe have shown great resiliency over time, as LaSalle’s 20th Anniversary of the E-REGI report shows. Paris, Munich, Stockholm, Berlin,

17 The iconic song by the Scorpions released in January 1991 and composed during the band’s visit to the USSR, just before the collapse of the Soviet Union.

Madrid, Copenhagen, and Amsterdam are among the cities that continually attract educated workers from all over Europe, and the property markets in these cities remain very healthy.

Over the next few years, the U.K. will be the least predictable country in Europe; it is also one of the most sharply divided, both economically and politically. London remains the top-ranked city in Europe to attract creative tech and financial talent. The post-referendum resilience of London has been a positive surprise, and our base case scenario suggests that this will continue. Yet, the north of England lags behind in making the transition from regions based on manufacturing and commodities to conurbations with economies based on high tech and services. The U.K. economy could get dragged down, as the restructuring of trade relations and immigration policies with the EU will likely take several years to be put in place. While this is going on, many smaller property markets could suffer from weak tenant demand, even as London and stronger regional cities, such as Manchester and Birmingham, continue to thrive. British shopping centers are already suffering more financial stress than those of other countries, while other property sectors continue to show much healthier fundamentals. Despite all the uncertainty, the national economic outlook for the U.K. shows remarkable resilience and could grow faster than the euro area in 2020-21, just as it did in 2019.

North America

Our base case for the macro-economic outlook in North America suggests that a record-long period of slow, steady growth can be sustained in the U.S. and Canada in 2020. Both of these economies are in reasonably strong shape and should be able to continue to grow due to a combination of corporate momentum, strong employment, positive consumer sentiment, and fiscal stimulus. Should the need arise, monetary policies can also inject liquidity into their banking systems to stimulate demand. The risks to a three-year growth forecast for the U.S. include the unforeseen consequences of protracted trade wars, a rapid loss of confidence in capital markets, and/or a geopolitical conflict. Canada is more vulnerable to volatility in commodity markets and natural resources. Both countries are struggling to deal with stagnant income growth in the middle class, and sharply divided electorates. Both are fairly open economies with labor, capital, and real estate markets able to adapt to economic and social change.

The big unanswered questions for the U.S. and Canada lie toward the end of the 2020s and into the 2030s, as entitlement payments rise and both countries come to terms with their status as net debtor countries. The U.S. has greater imbalances in both the size of its federal deficit relative to GDP and in its balance of trade. Yet it also has the more fortunate position of being considered a safe haven for investors and a reserve currency for many other countries who hold U.S. debt. Canada has healthier immigration numbers than the U.S., which insulates its economy from labor shortages. In contrast to the U.S., Canada uses a point system to encourage highly trained people to apply for work visas and to boost output while also increasing innovation.

Wronia 31, Warsaw, Poland

Climate Change: Implications for Investment Strategy

"We declare, with more than 11,000 scientist signatories from around the world, clearly and unequivocally that planet Earth is facing a climate emergency."

– World Scientists' Warning of a Climate Emergency, *Bioscience*, November 5, 2019

On the 40th anniversary of the First World Climate Conference, the Alliance of World Scientists[1] issued the declaration above as a reminder of their global consensus on climate change. With building construction and operations accounting for approximately 40% of greenhouse gas emissions[2] globally, LaSalle recognizes that the real estate investment management industry has a critical role to play in reducing or reversing global warming and CO^2 emissions. We also recognize that climate change will play a larger role in the performance of real estate portfolios in the years to come.

In 2017, after many years of study and experience implementing successful sustainability initiatives, we added environmental factors ("E-factors") to our secular investment trends of demographics, technology, and urbanization (DTU+E). Our view is that the pricing of E-factors and the return on investment (ROI) for improving the environmental performance of an asset will increase over time, taking local market conditions into account. We also introduced economic and financial frameworks for analyzing the risk-return characteristics of E-factors. These analytical tools ensure that sustainability features are appropriately priced in a disciplined way to improve both financial and environmental performance.

Our DTU+E investment strategy for 2020 includes broader environmental, social, and governance (ESG) concepts like resilience (adaptation strategies for climate change in contrast to mitigation strategies for greenhouse gas emissions), social sustainability (economic and social justice issues), and health and welfare (the well-being and safety of individuals who build, occupy, and travel to buildings). Furthermore, the interplay between the four DTU+E factors and climate change has implications beyond what each trend may have in isolation (see Take the Long View on Secular Trends—DTU+E on page 15). The research to support the thesis that these DTU+E factors matter for investment performance and specifically that climate risks deserve more of our attention is well underway at LaSalle. Our sustainability, risk management, and research teams are working together to identify how these DTU+E factors get priced in different markets, both by tenants and by investors. As this analysis progresses, it will help form the foundation for investment strategies that anticipate future interactions between market-driven and regulatory-driven change.

In the past five years, investment professionals have become more aware of the linkages between the climate change movement (political and regulatory factors), climate risks (measurable increases in global warming and weather volatility), and metrics that allow correlation between financial performance and sustainability.[3] Most of the analysis of climate change falls into two risk categories: physical risks and transition risks. There are two types of physical risks: acute and chronic. Acute physical risks refer to those that are event-driven, including increased severity of extreme weather events, such as cyclones, hurricanes, or floods. These risks have financial implications for organizations, such as direct damage to assets and indirect impacts from supply chain disruption. Chronic physical risks refer to longer-term shifts in climate patterns (e.g., sustained higher temperatures) that may cause sea level rise or chronic heat waves.

Transition risks involve broader societal, economic, and political implications. Transitioning to a lower carbon emission economy will likely entail extensive policy, legal, technology, and market changes to address requirements related to climate change. Depending on the speed of these changes, transition risks may impose immediate or distant future financial liability and reputational risk to investment managers. Efforts to mitigate and adapt to climate change can produce opportunities for organizations to improve resource efficiency, reap cost savings, adopt low-emission energy sources, and develop new products and services for tenants and investors.

LaSalle's approach acknowledges that no sustainability initiative can quickly reverse ever-higher levels of CO^2 and other greenhouse gases in the atmosphere. As fiduciaries to our clients, we have an obligation to identify

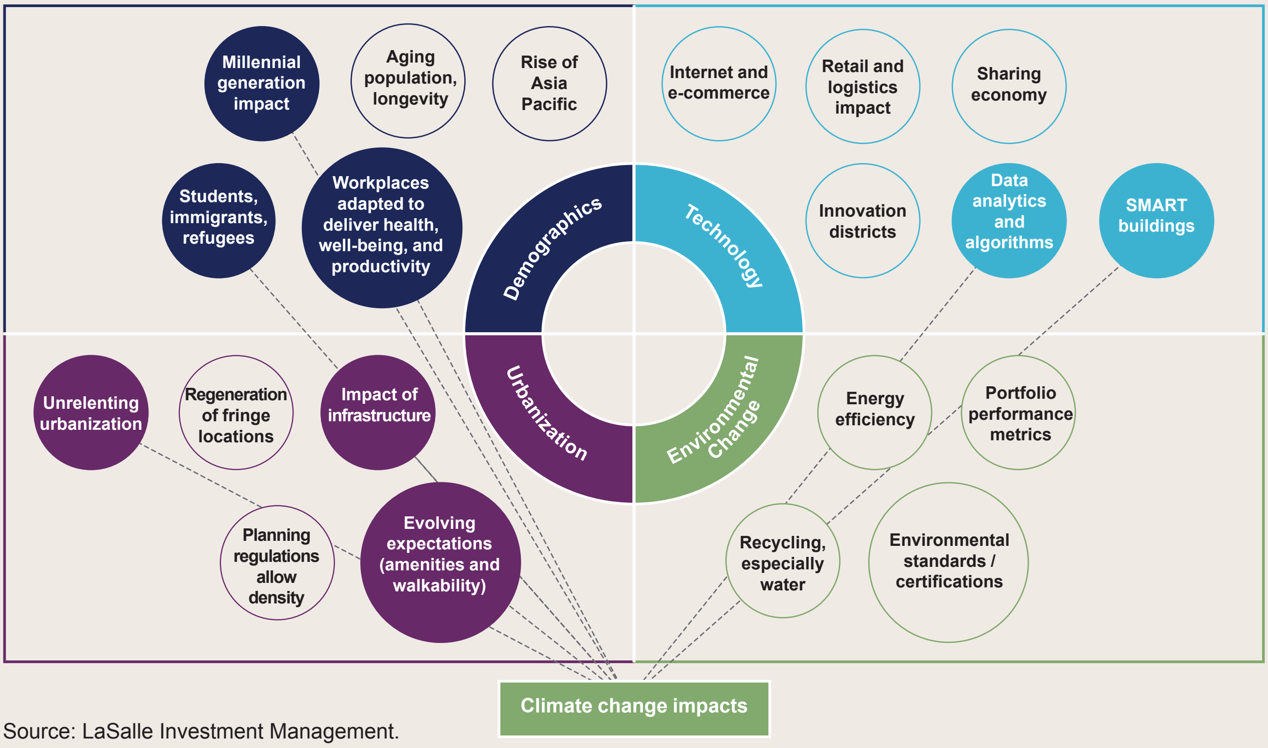
1 The Alliance of World Scientists (AWS) is a new international assembly of scientists, which is independent of both governmental and non-governmental organizations and corporations. It asserts that in order to prevent widespread misery caused by catastrophic damage to the biosphere, humanity must practice more environmentally sustainable alternatives to business-as-usual. See: scientistswarning.org.

2 Buildings play a dominant role in the clean energy transition. Building construction and operations accounted for 36% of global final energy use and nearly 40% of energy-related carbon dioxide (CO^2) emissions in 2017. See: unenvironment.org/resources/report/global-status-report-2018.

3 The release of the Taskforce on Climate-Related Financial Disclosures (TCFD) recommendations in June 2017 and the more recent launch of the Net-Zero Asset Owner Alliance at the United Nations Climate Change Summit in September 2019 show how international organizations are acting, sometimes without the support of national governments.

Take the Long View on Secular Trends—DTU+E

CLIMATE CHANGE IS RISING IN IMPORTANCE AND IS LINKED TO MANY SECULAR TRENDS



Source: LaSalle Investment Management.

and mitigate the physical and transition risks to our assets and portfolios. As we assess current and future climate change risks, we find highly variable impacts across geographies, property types, and investment styles. For example, climate-related risks will differ for a core long-term hold office asset in San Francisco, a value-add short-term office asset in Shanghai or a core-plus office asset in Amsterdam. The changing insurance environment is also a major factor in mitigation strategies; the economics of disaster coverage are already changing and will continue to change drastically in the years ahead.

A broader approach also acknowledges that human factors—how people interact with buildings—also deserves attention. Real estate investors have a role to play in how buildings contribute to a healthy and just society, as well as in better stewardship of natural resources. The concept of "resilience" suggests that property investors need to anticipate that severe weather is inevitable despite any interventions.

We are continuing to refine our approach to incorporating climate change in our investment process by conducting and reviewing rigorous research, implementing business practices, and participating in industry initiatives. For example, we have insurance coverage focused primarily on the physical risks for our assets. Considerable effort is spent ensuring our insurance coverage is well matched with our asset portfolio and reflects the best available insurance market terms and conditions. Regional approaches have been developed for coverage of natural catastrophes. For example, every U.S. acquisition receives a "Cat Score"[4] based on its location and risk attributes applicable to four catastrophe categories: earthquake, flood, wind, and acts of terrorism. We are working with specialists who project future risks based on the rate of rising sea levels and climate warming. Using today's insurance costs to estimate future costs presents a "temporal mismatch" challenge. The industry cannot rely on one-year policies (essentially an insurance "spot" market) when calibrating the decades-long risk profile that climate change presents.

Analyzing, identifying, and valuing the risks and opportunities climate change presents requires significant time, patience, and investment. The benefits can be immediate (e.g., cost saving from efficient energy usage) or far-reaching (anticipating future transition costs). In our view, investment strategies need to take climate risks into account, just as our asset and portfolio operations already do for sustainability initiatives.

4 The "Cat Score" is a proprietary numeric score developed by LaSalle and its risk management advisor.

This chapter contains our outlook for 2020–22 in specific countries and across property types, as well as our best investment ideas. We review the markets across Asia Pacific, Europe, and North America where we are most active in terms of fundamentals, opportunities, risks, and challenges. Finally, we note the contributions that data science and proptech are making toward improving real estate predictive data analytics.

In the Asia Pacific (AP) region, China-U.S. trade relations and protests in Hong Kong dominate the headlines. Trade is a major risk factor in AP economies. Each country and metro market possess a different set of trade-risk exposures, relating both to trade within the region (growing importance) and trade with U.S. and Europe (falling importance). Our 2020 market/sector recommendations for AP are more targeted than in prior years. They focus on the logistics sector, where growth is being driven by the need for better designed and equipped facilities to handle the rapid expansion of e-commerce, distribution to major population centers, and cold storage to enable more efficient food processing and delivery to consumers.

Structural changes relating to Brexit and European Union politics continue to dominate our views for European real estate in 2020. Real estate markets in Continental Europe may continue to post positive surprises for investors, despite all the political turmoil. Fears of large-scale job losses have been unfounded thus far in the U.K. and we expect London will continue to attract high-value human capital workers in the years to come. Shopping centers in the U.K. are one of the weakest sectors anywhere, due to tenant-friendly insolvency practices and the rapid rise of e-commerce. In Continental Europe, we like the rent growth momentum in the office and logistics markets, as well as strategies that can deliver “beds” in an environment where housing affordability is a growing problem and the short-stay transient market is booming. Even though the outlook for economic growth is the lowest it has been in five years for the region, the property markets are healthy and growing, as technology and tourism continue to be stronger drivers of economic activity than financial services.

North America will benefit from a healthy economy that is growing sufficiently fast to keep up with an active supply pipeline, especially in the logistics and apartment sectors. In 2020, the U.S. and Canadian economies are poised to grow at rates a notch below the healthy levels of 2018–19. Policy uncertainty will be the greatest drag on growth in the U.S., while in Canada, there is trade uncertainty with its largest trading partners, the U.S. and China. This uncertainty could be removed through a warming in trade relations, so there is upside to consider if policies change. Residential apartments are targeted for growth in both countries as housing affordability issues and labor market changes are keeping more people in the rental market longer. In sum, the younger demographics and open economies of Canada and the U.S. create favorable conditions for economic growth, relative to other countries in AP and Europe.

CHAPTER 2

Regional Investment Outlook

Asia Pacific

The earliest trade of goods that involved three continents—Asia Pacific, Europe, and the Americas—can be traced back to the silver trade in the 16th century. This global trading activity was sparked by a surge in demand for silver during China's Ming Dynasty when the government reformed the tax code and required citizens to pay taxes in silver. The Spanish empire was the first to seize the business opportunity and brought silver from Potosi, Bolivia in South America to China.[1]

Today, China again is at the center of global trade. Only this time, it is entwined in a trade dispute with the U.S. that risks decelerating the tailwinds of globalization. The geopolitical tensions between the U.S. and China, beyond trade of goods, could become the new norm. The U.S.-China trade war is a byproduct of an emerging power challenging an increasingly isolationist U.S. for global leadership. Alongside this tariff duel, current downside risks to economies in Asia Pacific include the social unrest in Hong Kong, the political and trade tensions between Japan and South Korea, and the yet-to-be-finalized tariffs on Japanese automobile exports to the U.S. These tensions could lead to some temporary fixes, as permanent resolutions take time. Under these uncertain economic conditions, volatility is rising.

Although the U.S. and China announced the "phase-one" trade agreement, uncertainty will remain. From President Donald Trump's standpoint, a protracted trade war with China would undermine the U.S. economy and dampen his re-election prospects. In contrast, President Xi Jinping will remain president indefinitely. Although it is not in China's best interest to escalate the trade war, President Xi is in no rush to make a deal that will not be viewed as favorable by Chinese citizens. The structural changes in the trading and economic systems that the U.S. is demanding in China will take time to resolve. At the same time, China remains a key driver of economic growth in the region. The pernicious effect of the rise of protectionism could lead to a global slowdown or recession.

China has been on intercontinental trade routes since the 16th century.

MACROECONOMIC OUTLOOK

The Asia Pacific region is experiencing decelerating economic conditions as it contends with political and geopolitical headwinds, although it remains the fastest growing region. Leasing volumes in select markets (e.g., Shanghai CBD office, Hong Kong office, and Australian sub-regional malls) softened in the first three quarters of 2019 as weakening economic fundamentals reduced occupier demand. Conversely, tight vacancy conditions in select markets (e.g., Tokyo and Osaka office and Greater Beijing and Shanghai industrial) limited tenant options, maintaining healthy supply-demand dynamics. Despite the economic slowdown, many real estate markets remain healthy. Vacancy rates in 24 out of the 39 Asia Pacific markets/sectors[2] that LaSalle tracks are still below their historical averages. Rents[3] in 16 out of the 39 markets/sectors are still growing, and growth is accelerating.

There could be a wide range of outcomes from the U.S.-China trade talks, despite the fact that recent market sentiment is tilting to the upside. LaSalle developed a framework to analyze the impact of the trade war/tensions on major Asia Pacific economies. Even if this trade war dispute does not further escalate,[4] we expect a much weaker macro environment in 2020. Major economies in the region are forecasted to deliver below historical average growth,[5] due in part to the maturing global economic cycle. Most of the countries in Asia Pacific are implementing either monetary or fiscal stimuli or both, as well as employing regulatory or geopolitical approaches to offset the negative trade impacts. The aggregated impact of the trade debacle across the region is as follows:

- **China:** China is forecast to experience short-term weaknesses, but the outlook remains positive over the medium-to-long term as the country implements additional monetary and fiscal stimuli.
- **Hong Kong:** Carrie Lam, Chief Executive of Hong Kong, declared that the city-state is in a "technical recession." The indirect impact from the U.S.-China

1 Flynn, D.O. and A. Giraldez. "Born with a 'Silver Spoon:' The Origin of World Trade in 1571," *Journal of World History*, 1995.

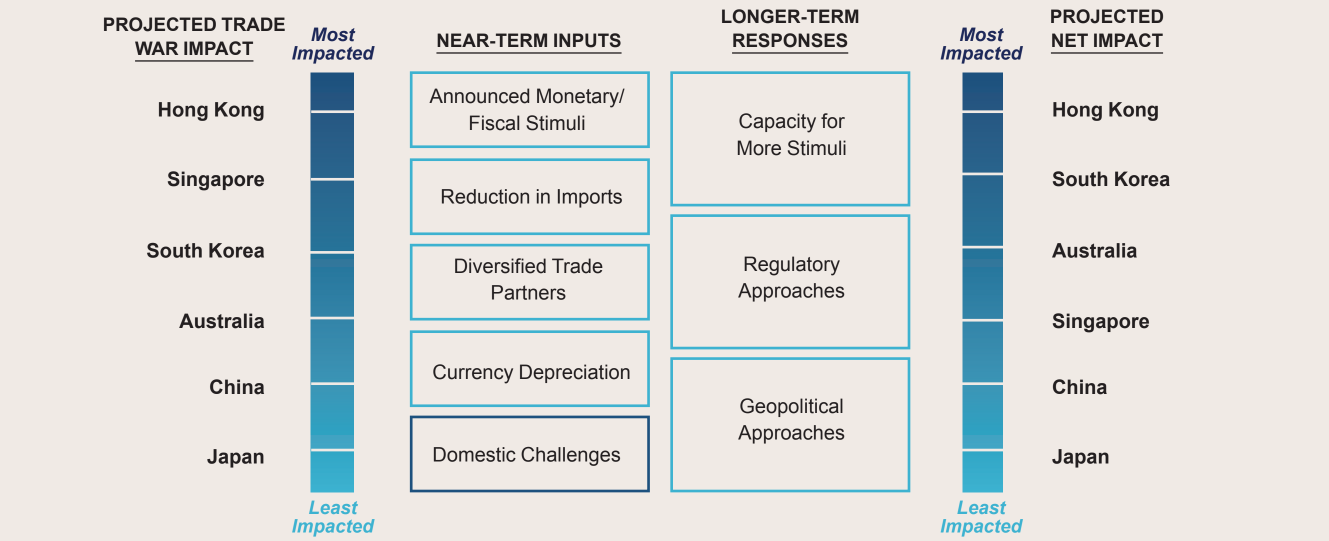
2 The 39 markets/sectors include: 1) Office: Sydney CBD, North Sydney, Melbourne CBD, Brisbane CBD, Perth CBD, Paramatta, Macquarie Park, Brisbane Fringe, Beijing CBD, Shanghai CBD, Shanghai Fringe, Hong Kong Central, Hong Kong Kowloon East, Tokyo 5-Ku Grades A and B, Osaka, Singapore CBD, Seoul CBD, Yeouido, and Gangnam; 2) Retail: regional malls in Brisbane, Sydney, Perth, and Melbourne; prime retail in Beijing, Shanghai, and Hong Kong; shopping centers in Tokyo and Osaka; suburban malls and Orchard Road malls in Singapore; 3) Logistics: Beijing, Hong Kong, Shanghai, Tokyo, Osaka, and Singapore; and 4) Rental apartments: Tokyo and Osaka.

3 Net effective rents, as of 2019:Q3.

4 As of December 16, 2019, 20% weighted average tariffs on Chinese goods exports to the U.S., taking into consideration the recent "phase-one" agreement and some tariffs rolling back.

5 Twenty-year historical averages.

Estimated Cumulative Impact of Tariffs on Asia Pacific GDP Growth: 2020–22



In the chart, we assume a direct and indirect impact of 21%–24% weighted average tariffs on Chinese goods exports to the U.S. on China's, Australia's, Hong Kong's, Japan's, Singapore's, and South Korea's GDP growth from 2020 to 2022. We also assume that Japan's exports to South Korea are delayed in 2019:Q3 due to Japan's removal of its preferential trade treatment with South Korea and that Japan's automobile exports to the U.S. decline by 7.5% year-on-year in 2021 and 2022 due to production shifts. The impact is calculated based on China's, Australia's, Hong Kong's, Japan's, Singapore's, and South Korea's estimated 2019 GDP.

Source: LaSalle Investment Management as of December 16, 2019.

trade war on Hong Kong is projected to be severe when combined with its high re-export exposure from China and the ongoing protests.

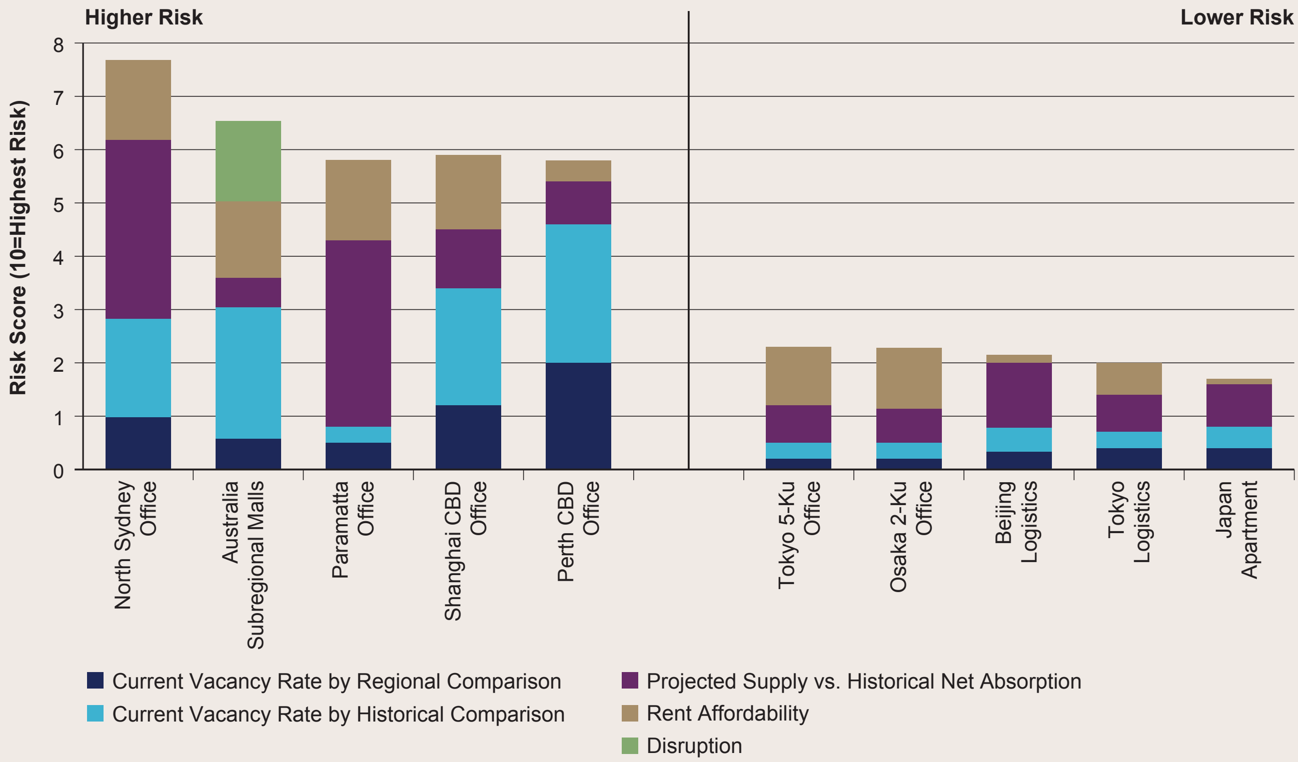
- **Singapore:** Singapore's economy is projected to be severely impacted in the near term but rebound much faster than other major Asia Pacific countries due to its adaptability in the global supply chain.
- **South Korea:** South Korea is expected to be impacted more severely than other major Asia Pacific countries outside of Greater China due to its multiple domestic and external challenges.
- **Australia:** While the Australian economy is highly reliant on China, its capital markets are healthier than those of Singapore and South Korea.
- **Japan:** Japan is more resilient than other major Asia Pacific countries due to its safe haven status, the ongoing shortage of labor backing household income, and the recently announced larger-than-expected stimulus package offsetting the impact of the consumption tax hike in October.

If there is an escalation in the U.S.-China trade war, a recession is expected, although it should be milder than that of the Global Financial Crisis (see Estimated Cumulative Impact of Tariffs on Asia Pacific GDP Growth: 2020–22).

In 2019, most central banks in the region shifted from a path of measured interest rate increases to a monetary easing approach. Central banks in Australia and South Korea have been following the U.S. Federal Reserve in cutting interest rates. Both central banks are expected to maintain their easing policies, although Australia is likely to have more room to cut rates further than South Korea in the near term. Singapore's central bank recently eased

Tekka Place, Singapore

Asia Pacific Occupier Market Risk Scores Among 39 Markets/Sectors: 2020–22



The occupier market risk scores are based on a factor model that takes into account the respective market's/sector's current vacancy rate by region (comparing to all Asia Pacific markets/sectors included in this analysis), the respective market's/sector's current vacancy rate by historical comparison (comparing to the respective market's/sector's historical high and low), projected supply as a percentage of the respective market's/sector's historical net absorption, current gross face rent in comparison to the respective market's/sector's historical high and low, and disruption in the market/sector (e.g., e-commerce or geopolitical events). A total of 39 markets/sectors are included: 1) Office: Sydney CBD, North Sydney, Melbourne CBD, Brisbane CBD, Perth CBD, Parramatta, Macquarie Park, Brisbane Fringe, Beijing CBD, Shanghai CBD, Shanghai Fringe, Hong Kong Central, Hong Kong Kowloon East, Tokyo 5-Ku Grade A and Grade B, Osaka, Singapore CBD, Seoul CBD, Yeouido, and Gangnam; 2) Retail: regional malls in Brisbane, Sydney, Perth, and Melbourne; Prime retail in Beijing, Shanghai, and Hong Kong; shopping centers in Tokyo and Osaka; and suburban malls and Orchard Road malls in Singapore; 3) Logistics: Beijing, Hong Kong, Shanghai, Tokyo, Osaka, and Singapore; and 4) Rental apartments: Tokyo and Osaka.

Sources: CBRE and ARES (for Japan retail, logistics, and rental apartment) as of 2019:Q2; Jones Lang LaSalle REIS and LaSalle Investment Management (for the rest of the markets/sectors) as of 2019:Q3.

monetary policy[6] for the first time in three years, and further easing is likely. The Bank of Japan (BoJ) is expected to maintain the yield curve, although the recently announced fiscal stimulus package gives the BoJ room to keep its monetary easing policy on hold. The People's Bank of China (PBOC) conducted multiple liquidity injections[7] and reserve requirement ratio cuts in 2019, and is expected to continue these tactics in 2020. The PBOC, being mindful of the debt problem, only cut prime loan rates slightly in 2019. However, if the economy declines significantly, more prime loan rate cuts are likely. Low interest rates have reduced the cost of debt and equity capital that finance real estate and widen real estate yield spreads, and brought Asia Pacific real estate back to fair value or attractive from "richly priced."

In China, Japan, South Korea, and Australia, fiscal stimuli and/or tax reforms are currently underway or being proposed. If the U.S.-China trade war does not dissipate, the fiscal policies in these countries are expected to ramp up significantly. Most of the policies are expected to mitigate some of the negative impact of the trade conflict and provide support for private consumption in 2020–21, which would spur real estate demand in the region.

REAL ESTATE MARKET OUTLOOK AND INVESTMENT STRATEGIES

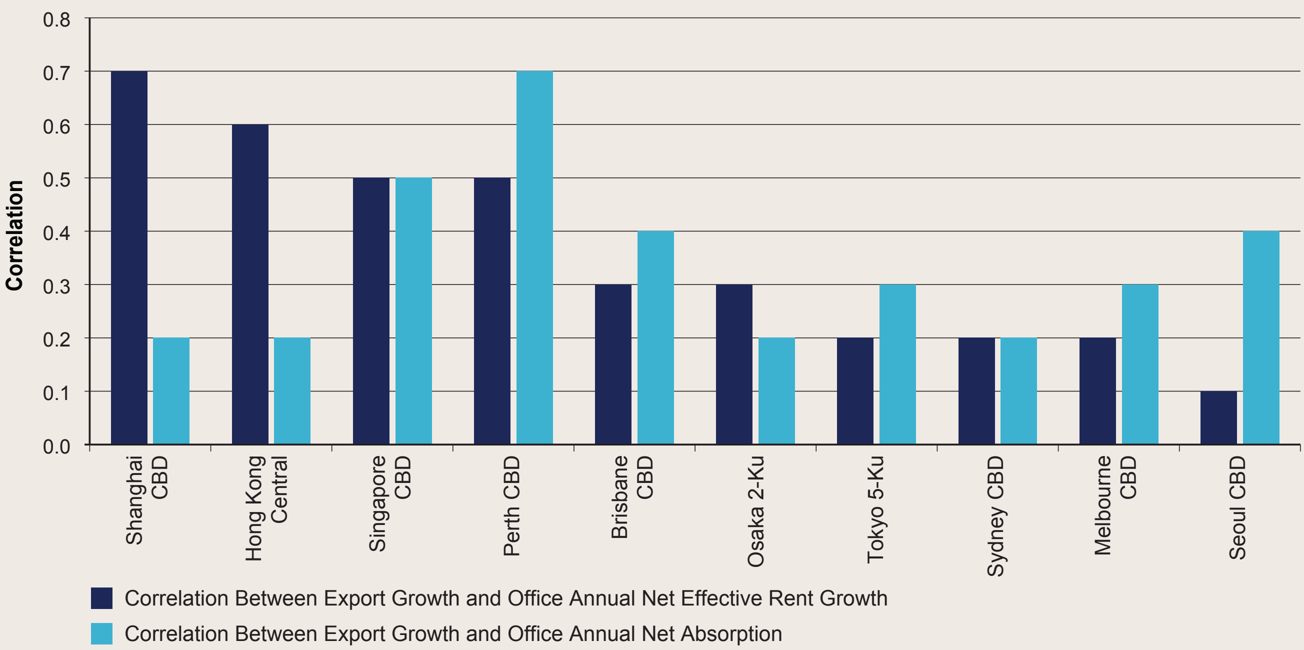
In 2020, investors in the Asia Pacific region will encounter an environment of low economic growth, inflation, and interest rates, along with increasing volatility and abundant liquidity. Barring any unexpected shocks, liquidity and low-to-zero interest rates will drive the attractiveness of real estate yields in multi-asset portfolios. Real estate, particularly income-generating properties, often viewed as a safer asset class than stocks with bond-like characteristics, has been favored by investors taking a

6 The Monetary Authority of Singapore allows the Singapore dollar to rise or fall against the currencies of its main trading partners within an undisclosed policy band.

7 Liquidity injections in China include medium-term lending facilities (MLFs), reverse repurchases, debt-to-equity swap programs, etc.

Potential Trade Impact on Major Asia Pacific Office Markets Varies

THE CORRELATION BETWEEN EXPORT GROWTH AND OFFICE DEMAND VARIES GREATLY ACROSS THE REGION



The correlation analysis is based on annual data for the following: Australia CBDs (1992–2018), Sydney Fringe (2009–18), Brisbane Fringe (1999–2018), Shanghai CBD (2004–18), Shanghai Decentralized (2008–18), Hong Kong Central (1997–2018), Hong Kong Decentralized (Kowloon East: 2006–18), Osaka (2004–2018), Tokyo Central 5 Wards—Grade A (1991–2018), Tokyo Central 5 Wards—Grade B (2003–18), Singapore CBD (1995–2018), and Seoul (2002–18).

Sources: Jones Lang LaSalle REIS (net absorption for all submarkets, data for net effective rent growth for all submarkets except Shanghai, and chain-linked net effective rent index for Shanghai) as of 2019:Q2; Oxford Economics (data for nominal goods export growth in U.S. dollar terms) as of September 2019.

defensive position. The attractiveness of real estate is expected to keep prices high in the near term. However, as the economic slowdown weighs on real estate income growth, real estate prices are unlikely to experience substantial run-ups in the near term. In 2020, total returns are expected to decline and be primarily driven by occupier markets rather than capital markets.

REGIONAL OCCUPIER MARKET STRENGTHS AND WEAKNESSES

We updated the LaSalle Asia Pacific Occupier Market Risk Score in 2019 to better understand which occupier markets/sectors could have more (or less) room to cushion shocks or weaknesses in 2020–22 (see Asia Pacific Occupier Market Risk Scores Among 39 Markets/Sectors: 2020–22 on page 20). In addition to the four factors used in evaluating the occupier market risk (i.e., regional and historical vacancy comparisons, projected supply/historical demand ratio, and rent affordability[8]), we added a secular factor to take into consideration the e-commerce disruption in the regional retail sector and the geopolitical disruption of protests in Hong Kong. Among the 39 Asia Pacific markets/sectors LaSalle tracks, Australia sub-regional malls, Sydney decentralized offices, and Shanghai and Perth CBD offices are the key markets with the highest occupier market risks. Japan apartments, Tokyo logistics, Tokyo and Osaka offices, and Beijing logistics are among the markets with the lowest occupier market risks. Risk-averse investors are not advised to move up the risk curve and search for higher yields by investing in markets/sectors with high potential occupier market risks. Low-risk investors should focus on markets/sectors with low occupier market risks.

INVESTMENT RECOMMENDATIONS

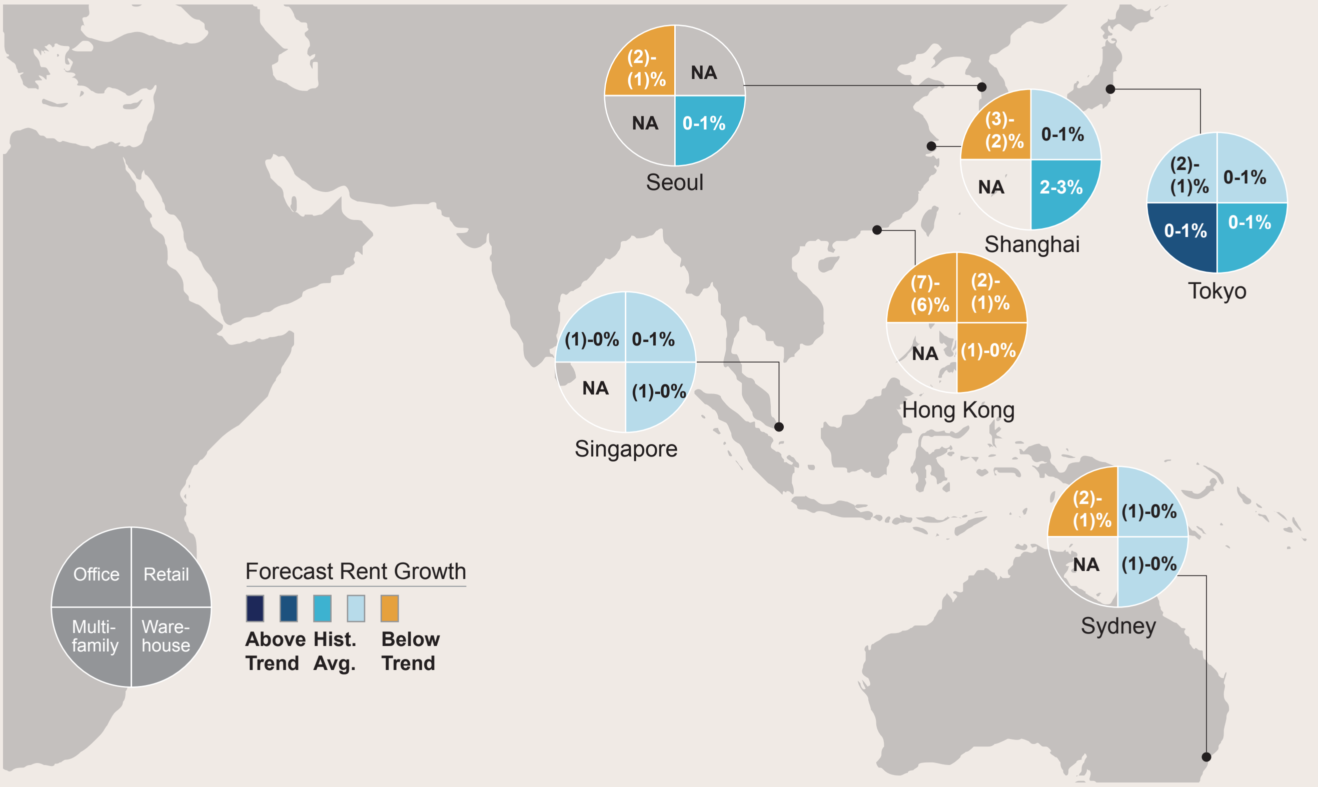
Our market/sector recommendations for Asia Pacific are more targeted than those for 2019. We also highlight markets and sectors to avoid or underweight at the late stage of the cycle.

Office: Office market performance is expected to continue to diverge in Asia Pacific. Submarket and location selection, as well as asset quality are increasingly important. In a slow-growth environment, we favor Sydney CBD, Tokyo central 5-Ku Grade B, and Osaka central 2-Ku offices where occupier market risks are relatively low, there is a constrained supply pipeline, and the trade slowdown has historically had less impact on their tenant demand than other major office markets in the region.

8 Please refer to page 34 of *ISA* 2019 for details.

Real Estate Fundamentals—Asia Pacific

FORECAST ANNUAL AVERAGE NET EFFECTIVE RENT GROWTH: 2020–22



Note: The color coding for each market is based on each respective market's/sector's historical net effective rent growth performance. Light blue indicates that the forecasted net effective rental growth is in line with the historical long-term average, while above/below trend ratings represent substantial exceeding/trailing of the respective historical averages.

Source: LaSalle Investment Management as of 2019:Q3.

The volatility arising from the U.S.-China trade war poses a risk to occupier demand across the region, particularly the office sector. Despite the recent optimism concerning a "mini" trade deal, a global and regional economic slowdown is becoming apparent in almost all countries in Asia Pacific. As a result, some occupiers are putting their expansion plans or their space commitments on hold. This trend is likely to continue in 2020, unless all trade tensions can be quickly resolved.

To better understand the impact of the slowdown in trade, we performed a submarket level correlation analysis between export growth and net effective rent growth, and between export growth and net absorption. The results confirm that the office submarkets with substantial exposure to trade-related industries are vulnerable to a trade slowdown. In particular, net effective rent growth in Shanghai CBD and Hong Kong Central office submarkets has a highly positive correlation with export growth, suggesting that as export growth decelerates or exports decline in China and Hong Kong, so does the net effective rental growth (see Potential Trade Impact on Major Asia Pacific Office Markets Varies on page 21). Surprisingly, office submarkets with a low exposure to a trade-related tenant base, such as the Singapore CBD, also exhibit a highly positive correlation with export growth. This correlation is primarily driven by finance and business services supporting Singapore's large export and re-export sector, which mostly occupies CBD office space. These results reinforce the fact that investors need to look beyond the trade-related tenant base when evaluating how a decline in exports could impact office demand. Other office submarkets vulnerable to trade declines include the Perth, Brisbane, and Seoul CBDs, which investors should consider underweighting as long as the U.S.-China trade war continues.

Our analysis also reveals that in certain submarkets (e.g., Shanghai CBD and Hong Kong Central office), export growth is more highly correlated with net effective rent growth than with net absorption. In other words, office landlords use different asset management strategies to achieve better performance in different markets and submarkets. Our analysis suggests that office landlords could be more successful in achieving a stable income stream by reducing rents to maintain building occupancies during the trade slowdown in submarkets such as Shanghai CBD and Hong Kong Central. In the meantime, office landlords in Singapore and Perth CBDs most likely will struggle to maintain stable income streams either by reducing rents to maintain occupancies or allowing higher vacancies to hold up rents during the trade slowdown (see Real Estate Fundamentals—Asia Pacific).

Industrial: We continue to favor the logistics sector in the region as rental growth is generally less volatile than for offices. The logistics demand is supported by domestic consumption and the growth of e-commerce. We view low rental volatility to be favorable when economic volatility rises. Despite the slowing GDP growth in China, domestic consumption is expected to remain one of the highest globally over the near-to-medium term, primarily due to demographic trends and the rise of the middle class. Our analysis indicates that logistics demand has a high correlation with retail sales (inclusive of online retail sales) in most Asia Pacific countries, particularly in China, Japan, and South Korea. In China, net absorption in the logistics sector is likely to soften in 2020, but is expected to remain positive as long as retail sales are increasing, albeit at a slower pace. Our projected worst-case scenario (which is a low-probability event) shows that, over the next three to four years, average vacancy rates in the 21 logistics markets in China we track could increase but would still be below the peak level seen in 2009.

For core strategies, we continue to favor logistics markets in Seoul and Tier 1 cities and their satellites in China as they exhibit relatively high yields by regional standards. For core strategies, we also favor logistics markets in the Eastern Seaboard of Australia (primarily the Melbourne, Sydney, and Brisbane metro areas) due to their population base and limited supply pipelines over the next five years. Despite the fact that logistics pricing in Australia is relatively high by historical standards, the Reserve Bank of Australia's recent rate cuts (which brought interest rates to an all-time low) now make logistics yield spreads on stable logistics assets much more attractive than a year ago.

Logistics development yields on average are generally 100-250 bps above those of market yields in the region, with China and South Korea at the higher end of the range. For high-return strategies, we continue to favor build-to-core strategies in Tier I and highly selective Tier II cities in China and the Greater Seoul area.

Demand for cold storage in Asia Pacific has been growing rapidly, driven by the rising consumption of perishables and demand for pharmaceuticals that require cold storage. In China, 90% of the products stockpiled in cold storage facilities are food.[9] Online grocery sales increased by over 1500% from 2014 to 2018 in China, while the income of cold chain third-party logistics increased by 170%.[10] On the supply side, cold storage space in most Asian countries remains low by global standards. For instance, the cold storage space per urban resident in Australia and China only accounts for 17% and 27%, respectively, of that in the U.S.[11]

9 Sources: China Federation of Logistics and Purchasing, the Ministry of Commerce of the People's Republic of China, and China Merchants Securities Co., Ltd, as of 2018.

10 Sources: The National Bureau of Statistics of China and China Federation of Logistics and Purchasing, as of 2018.

11 Source: The Global Cold Chain Alliance (GCCA), as of July 2018.

222 Exhibition, Melbourne, Australia

The lease terms of cold warehouses are usually longer than for dry warehouses, which is favorable for investors with long-term investment objectives. While the fundamentals for cold storage are strong across the region, investors need to be mindful of the risks associated with investing in this sector. The rents, construction, and operating costs of cold warehouses are usually higher than for dry warehouses. In addition, depreciation of refrigeration equipment usually reduces the total return over a long holding period.

Cold warehousing is still at an early stage of institutionalization in the region. Capital market liquidity and exit strategies have not been fully tested either. Investors need to keep in mind that the location of cold warehouses is more important than for dry warehouses. We favor deep-freeze warehouses near ports, and low-temperature warehouses close to urban areas. Investors with a higher risk tolerance should consider developing cold warehouses or renovating old warehouses to cold warehouses in appropriate locations.

2020 Asia Pacific Investment Recommendations

<table>
<tr><th></th><th>Core</th><th>Higher Return</th></tr>
<tr><td rowspan="4">LaSalle's Best Opportunities</td><td colspan="2">Modern warehouses in well-located and supply-constrained submarkets</td></tr>
<tr><td>(China Tier 1 and satellites cities, Seoul,
highly selective in Australia Eastern Seaboard)</td><td>(China Tier 1 and satellites cities,
select China Tier 2 cities, Seoul)</td></tr>
<tr><td>Office
(Melbourne CBD, Sydney CBD)</td><td rowspan="2">Highly selective office submarkets
with flexible exit timing
(Tokyo 5-Ku Grade B, Osaka 2-Ku, Sydney CBD)</td></tr>
<tr><td>Multifamily in DTU-rich locations
(Japan)</td></tr>
<tr><td rowspan="4">Other Opportunities</td><td colspan="2">Modern warehouses</td></tr>
<tr><td>(Highly selective in Singapore and Tokyo)</td><td>(Highly selective in Singapore, Tokyo, and Osaka)</td></tr>
<tr><td>Office in DTU-rich locations
(Tokyo 5-Ku Grade B, Osaka 2-Ku) office</td><td>Distressed/repricing opportunities, if real estate prices are adjusted
(Hong Kong and Singapore)</td></tr>
<tr><td>Selective nondiscretionary retail in strong catchment areas
(Singapore)</td><td>Selective urban retail in strong catchment areas
(Shanghai and Beijing)</td></tr>
</table>

Source: LaSalle Investment Management as of November 2019.

In these instances, investors should have a well-defined exit strategy, as well as experienced leasing and asset management teams.

Retail: The rise of e-commerce presents threats to the retail sector across the region. Investors should be cautious when evaluating real estate investments in retail markets. Select retail properties in Japan and Singapore are expected to be the least impacted by e-commerce; for example, online grocery e-commerce penetration rates remain low by regional standards. In addition, the percentages of service tenants are generally high in and adjacent to retail centers. The close proximity of shopping centers encourages consumers to purchase daily necessities nearby. Nonetheless, negative investor sentiment globally has reduced liquidity for the retail sector in the region, including Singapore and Japan. Tenant mix, location selection, and entry pricing are increasingly important when considering retail investments in the region.

The Australian retail sector is still in an earlier stage of digital disruption than other countries in the region such as China and South Korea. In particular, sub-regional malls in Australia are not usually the dominant malls in their respective catchment areas. They are struggling to adjust their tenant mix. Among Australian sub-regional malls, on average 20% of retailers' revenues are generated by discount department stores, which have been highly impacted by online retailers. In comparison, only 10% of retailers' revenues are generated by department stores at regional malls, and none at neighborhood centers.[12] In 2020–21, revenues are expected to remain muted due to the weak growth outlook for household income and consumer spending in Australia. These factors are exerting downward pressure on its retail sector, particularly sub-regional malls. It is too early to enter the market even for contrarian investment strategies.

Residential: We continue to favor the multifamily sector in Japan for core investors. Japan's labor market is expected to be more resilient to export declines in this cycle than in past cycles, which supports wages and household income, and ultimately demand for multifamily properties. Furthermore, in-migration is expected to continue to drive occupier demand for multifamily properties in DTU-rich locations in Tokyo, Osaka, Nagoya, and Fukuoka. Our stress test shows that multifamily properties are expected to be the most resilient among major property types in Japan during a recession.

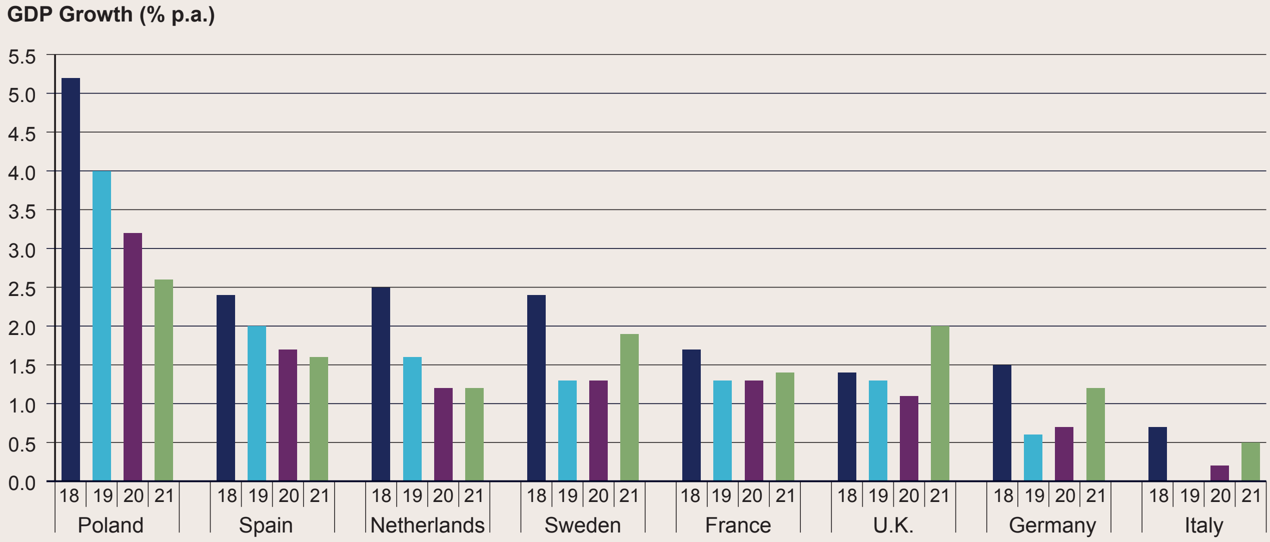
For-sale residential property and land prices in markets such as Australia and Hong Kong have not fallen enough to justify development strategies. For investors with a higher return and risk appetite, we recommend monitoring the for-sale residential sectors in Australia and Hong Kong for potential entry opportunities if residential property and land prices are adjusted. In China and Singapore, government regulations and monetary cooling measures have discouraged investment activities in the for-sale residential sector.

Hotel: Asian tourism is an area of strength in the region. In particular, we favor near-to-medium-term tourism in Singapore. The Singapore hotel sector is expected to benefit from investments in infrastructure and new tourist attractions, the rising number of Southeast Asian tourists

12 Source: CBRE, as of 2019:Q2.

European Economies Are Expected to Stabilize at Lower Rates of Growth: 2020–21

EXTERNAL FACTORS WEIGHING ON THE ECONOMIC OUTLOOK



Sources: LaSalle Investment Management (as of November 2019) and Oxford Economics (as of October 2019).

to Singapore, and the weak Singapore dollar. Additionally, some tourist diversion from Hong Kong to Singapore is taking place due to the ongoing protests in Hong Kong. However, strong investor demand has driven Singapore hotel capital values to cyclical highs. Higher return seeking investors should look for value-add opportunities if prices are adjusted in Singapore to capitalize on the positive tourism trend.

While demand tailwinds are supportive of the Asia Pacific hotel sector, hotel room supply in 2020 is expected to be high, especially in Japan. However, there is a mismatch between demand and supply in Japan: 73% of tourists traveling to Japan are families, partners, or groups of friends. In the meantime, only 55% of the current hotel stock in Tokyo, Osaka, and Kyoto are rooms with double and twin beds, and the rest are single beds. Overall, location selection is critical, as is identifying the hotel segment that matches the tourist profile (see 2020 Asia Pacific Investment Recommendations on page 24).

United Kingdom and Continental Europe

UNITED KINGDOM

Brexit woes in the United Kingdom and a broader global economic slowdown mean that economic growth has slowed and will likely be muted in 2020. Historically-low unemployment levels, resurgent real wage growth, and temporary stockpiling by manufacturers ahead of the original Brexit deadline of March 2019 all contribute to benign-appearing national economic conditions, yet other specific indicators—falling consumer sentiment and currency—point to a weakening economy. Evidence of the decline is particularly apparent in the retail sector, where thousands of jobs have been eliminated due to operator failures and resulting store closures.

The monochromatic No Deal approach of Prime Minister Boris Johnson and strong opposition by the outgoing Parliament have generated additional Brexit uncertainty. The overwhelming win of the Conservative Party on December 12, has meant that the most likely outcome will be a Hard Brexit approved by Parliament. In this scenario, the U.K.'s future relationship with the European Union will eventually be a distant free trade agreement along the lines of the EU-Canada trade agreement. A closer relationship such as a Switzerland- or Norway-style arrangement is unlikely. Should the U.K. and EU sign the current withdrawal agreement, a transition period until the end of 2020 will smooth the U.K.'s departure from the EU. However, a further delay or even the threat of No Deal Brexit could re-emerge at the end of this transition if the parties have not signed a binding future trade agreement. As a result, we expect GDP growth for 2020 to be muted at best, with intermittent upgrades and downgrades to forecasts as political milestones are met or missed.

Should the U.K. avoid a No Deal Brexit, the interest rate outlook favors a gradual rise. There is talk, however, of cutting rates to stimulate the economy even in a Deal scenario. Further economic stimulus will come from the government, with the returning Conservative Party in favor of substituting austerity for spending, particularly on infrastructure and healthcare. The forward-looking term structure of interest rates is expected to remain well below past averages in 2020. This reflects global economic uncertainty and a muted inflation outlook of 1.4%-2.0% over the next five years. All this suggests that there is upside potential to the base-case economic forecasts. Brexit clarity and low interest rates both in the U.K. and around the world will reignite real estate capital flows into the U.K. that paused in 2019. Outside of the retail sector, short-term downward pressure on real estate yields is highly plausible for quality assets in 2020. Despite the short-term boost in 2019, GDP growth is forecast to remain lower than past norms, running at just 1.5% p.a. between 2020 and 2023. This means occupier market conditions will remain subdued compared to the past (see European Economies are Expected to Stabilize at Lower Rates of Growth: 2020–21 on page 25).

In the medium-to-long term, London remains strong in all of our scenarios. Its position as a major financial center and thriving global city will remain largely unaffected by the Brexit outcome. Major investment banks have so far relocated fewer than 1,000 jobs out of Britain due to Brexit, according to research by EY. Over the next ten years, the population of Greater London is forecast to grow by almost one million. This will lead to demand for space to live, work, shop, and play. The Crossrail transport infrastructure project will provide improved connectivity for commuters, particularly those in more peripheral locations, while also increasing London's access to a wider pool of talent and consumers.

OPPORTUNITIES & RECOMMENDATIONS

Office

Fears of large-scale job losses in the financial sector have been unfounded thus far in the U.K. Instead, London's diverse tenant base and tight job market mean that office occupier demand has held up well for the last six years. Developers' and lenders' fears of Brexit have curtailed speculative supply to the point that vacancy rates for new or modern space are exceptionally low. We predict a growing favorable imbalance between supply and demand in 2020, leading to strong rental growth.

The same concerns have also held back pricing in London, which now looks like good value in a European or even global context. Prime yields in many other gateway cities are at all-time lows and therefore cross-border demand for prime assets in London is expected to resume when there is some clarity around Brexit. We prefer assets in a few select transformational submarkets (e.g., Southbank and Tottenham Court Road) that can be refurbished or repositioned for modern office tenants. Landlords will need to offer fit-for-purpose amenities in these buildings, as well as flexible lease options.

There is also a paucity of modern office space in the large regional office markets of Birmingham, Bristol, Edinburgh, and Manchester. Occupier demand in these areas is more stable and thriving due to improvements in amenities and transport infrastructures. Long-term prospects are further supported by a steady inflow of young professionals and families moving away from the South East where housing affordability is at a historic low. Given the relative sizes of the cities, the regions' gains will be far more significant to them than London's losses.

Logistics

On average, industrial rents are on track to rise by ~3% in 2019. More rapid growth has been held back by some Brexit-related delays in decision making. This increase is being driven by manufacturer stockpiling and the unchecked ascendancy of e-commerce. About 20% of all retail sales in the U.K. are online and growth is expected to continue in 2020 and beyond. Online sales are expanding from electronics and fashion to other household goods. Growing requirements for faster deliveries are fueling the growth of smaller, strategically positioned assets that can provide "last mile" deliveries. The constrained supply of these urban logistics assets is fueling the strong performance of this sector far in excess of other industrial locations, which will continue in 2020 as the supply of vacant urban land is tight.

In 2020 and beyond, logistics development sites in large cities like London, Manchester, and Birmingham will compete with residential uses for the attention of planning authorities, as both are undersupplied and in great demand. Rental growth rates may be slightly lower in 2020 compared to the exceptional recent growth in sought-after urban locations as some of the momentum slows. We expect investor and tenant competition for urban locations to remain fierce in 2020 and 2021.

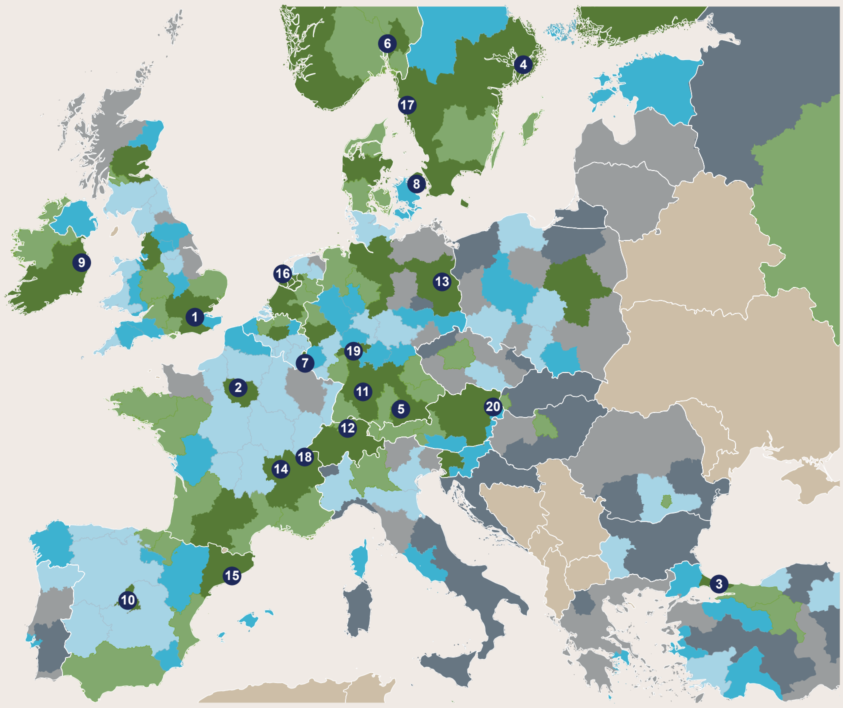
Retail

The growth of e-commerce combined with other structural issues in the U.K., such as insolvency practices and unplanned-for cost pressures linked to Brexit, have negatively impacted retailers. Hundreds of store closures and mid-lease rent reductions mean that valuation

Warsaw West Logistics, Warsaw, Poland

London Still Tops Europe in Terms of Economic Prospects

LASALLE'S EUROPEAN REGIONAL ECONOMIC GROWTH INDEX IS A PROXY FOR MEDIUM-TERM OCCUPIER DEMAND



2019 Ranking

1	London	11	Stuttgart
2	Paris	12	Zurich
3	Istanbul	13	Berlin
4	Stockholm	14	Lyon
5	Munich	15	Barcelona
6	Oslo	16	Amsterdam
7	Luxembourg	17	Gothenburg
8	Copenhagen-Malmo	18	Geneva
9	Dublin	19	Frankfurt
10	Madrid	20	Vienna

- Very Strong
- Strong
- Good Medium
- Poor Medium
- Weak
- Very Weak
- No Data

Source: LaSalle Investment Management as of September, 2019.

write-downs are struggling to keep pace with investors' lack of interest in the entire sector. Average retail yields have increased by almost 30 bps since the fourth quarter of 2017, and those of shopping centers by more than twice this level (MSCI). Retail REITs in the U.K. are trading at heavy discounts to net asset values (NAV). Even high-quality dominant centers in strong locations are being revalued, which means opportunities may arise in 2020 for contrarian investors seeking higher returns.

It is likely that prime yields will plateau in 2020–21 as investors selectively target prime retail assets at attractive prices after recording 25%-35% declines in value since early 2018. For some the focus will be the residual value of the land, and so will favor the South East and affluent locations. Others will believe in the long-term resilience of the retail location or format post-rental adjustments, setting aside the capital necessary to maintain the asset in its existing use. An example of the latter would be top urban retail parks that lend themselves to click-and-collect sales.

Niche Alternatives

Our DTU+E secular trends are an integral part of our real estate strategies, and niche alternatives benefit from many of these trends. The structural undersupply in U.K. housing means that many residential-based strategies are supported by a long-term supply/demand imbalance. This is most evident in the build-to-rent residential sector, such as senior housing, and in residential healthcare, such as assisted living and high-acuity care facilities.

The development pipeline for budget hotels is also relatively large, and this property type offers long, inflation-linked cash flows for liability-matching investors. Should Brexit uncertainty continue or worsen in 2020, there may be opportunities to acquire residential-for-sale units from de-risking housebuilders. These assets could then be suitable for a buy-and-flip strategy or redesigned with build-to-rent in mind.

Income

As fixed income yields move lower and to a large extent into negative territory, and both domestic and global uncertainty prevail, investors' focus on income-producing real estate is growing more intense. To generate additional income return, modern portfolios are expanding the traditional view of diversification away from simply sectors or geographies to encompass covenant strength, lease lengths, and capital requirements. We recommend that investors focus on asset quality, covenant strength, and residual value in 2020. Liability-matching investors who see inflation-linked leases more as a substitute for negative-yielding bonds than as physical real estate are willing to pay a hefty premium over traditional leases. We believe that these assets are still priced attractively compared to their bond equivalents, even with a risk premium.

Debt & Special Situations

The U.K. real estate debt universe is emerging as a large and mature market, yet we believe that opportunities still

2020 U.K. Investment Recommendations

<table>
<tr><th rowspan="2"></th><th colspan="2">Core</th><th rowspan="2">Value-Add</th><th rowspan="2">Opportunistic</th></tr>
<tr><th>Defensive</th><th>Income</th></tr>
<tr><td rowspan="5">LaSalle's Best Opportunities</td><td colspan="3">Mezzanine debt and whole loans</td><td rowspan="2">Urban regeneration (Includes development or planning risk)</td></tr>
<tr><td>U.K. residential*</td><td>London and key regional city offices (core+ only)</td><td>London and key regional city offices refurbishment/ build-to-core (Includes discounted pooled funds and REITs)</td></tr>
<tr><td>Inflation-linked with high site value (Includes ground leases and income strips)</td><td colspan="3">Income-producing assets with high site value (Includes urban retail parks and distressed retail)</td></tr>
<tr><td>Long hold irreplaceable assets</td><td>Retail parks in urban locations</td><td>Urban logistics/multi-let industrial developments</td><td rowspan="2">Special situations (Includes preferred equity, development finance, and recaps)</td></tr>
<tr><td colspan="3">Affordable housing, retirement housing, healthcare, and educational facilities (Includes for social impact)</td></tr>
</table>

*Predominantly but not exclusively build-to-rent (BTR).

Source: LaSalle Investment Management as of November 2019.

abound for alternative lenders. From almost zero in 2012, the share of origination of "non-bank" lenders (pension funds, debt funds, and investment managers) reached 11% in 2018. Loan origination reached £49.6 billion in 2018 (38.2 billion USD), a 12% year-on-year increase. Given the increasing regulation and Brexit uncertainty, loan-to-value (LTV) ratios settled at 55%-60% for senior lenders across all sectors in 2019. There has been untapped demand for mezzanine finance for LTVs ranging from ~60% to 80% in recent years. Going forward, these could generate gross internal rates of return (IRRs) of 7%-11%. When combined with a senior lender, this offers attractive whole-loan blended margins to borrowers and could generate gross IRRs of 3%-7% depending on asset risk levels and LTVs. Higher up the risk curve, there is still some reticence amongst traditional lenders (mainly banks) to fund developments or transitional assets. In 2020, ongoing uncertainty in the U.K. is expected to result in fleeting special situations, where bridge loans and preferred equity could offer attractive outsized gross IRRs in the 12%-15% range.

Impact Investing

The definition of sustainability has expanded beyond environmental factors to include societal issues, such as diversity, inclusion, and social justice, to bring the benefits of sustainability and economic opportunities to broader segments of society. In the U.K., impact investing is the natural progression from ESG factor adoption and mirrors the traction it is experiencing in other asset classes. This specifically refers to investments made to generate a measurable beneficial social and/or environmental impact alongside a reasonable financial return. Early investors to impact investing within real estate tended to focus on acquiring or lending to either affordable or social housing. These are the largest and most liquid sectors, although there are other markets that warrant consideration. In our view, adopting a broad sector approach allows for efficient capital deployment and diversification, as we see opportunities in subsectors as diverse as assisted living, healthcare, and net-zero carbon buildings (see 2020 U.K. Investment Recommendations).

Milburngate Durham City Centre, United Kingdom

CHALLENGES & RISKS

Office

The single largest threat to the office sector's Indian summer in the U.K. is the reliance on lettings from coworking operators. We have long believed that coworking and flexible working will become an integral part of an office building. It is viewed as an essential amenity by an increasing proportion of tenants. Alongside New York City, London is the largest coworking market in the world. This carries with it a potential risk of surplus grey space in smaller floorspaces during economic downturns. Investors should mitigate this risk by limiting their exposure to flexible workspace to a manageable level and be prepared to assume a more active role should specialist operators struggle or fail. In 2020, larger buildings will be more resilient than smaller ones should this downside scenario play out. Investors should take a cautionary approach to smaller or inflexible offices.

Logistics

Some of the tailwinds that are leading to outperformance for urban logistics do not necessarily apply to large motorway logistics units. In the U.K., speculative development in this sector is on the rise. While this development has focused on traditionally strong markets, such as the Golden Triangle,[13] there are micro-locations that offer low land values and assets whose operations often rely on a thinly-spread workforce. These buildings have significantly weaker rental prospects than urban logistics. They are also more exposed to the long-term threat of autonomous vehicles. In urban logistics markets, however, as environmental concerns increase, we may see pushback from the government. There is anecdotal evidence that socially-conscious shoppers may ultimately conspire to limit the number of delivery trucks on the roads by opting for fewer deliveries and longer delivery times.

Retail

Secondary retail will remain under stress in 2020. Some of these assets are unlikely to ever recover much value. On average, retail property is unlikely to see a return to positive rental growth before up to an estimated 30% of the U.K.'s stock is repurposed, or laws around business rates and online sales taxation are changed. For investors holding these assets, the challenge is to prudently manage the downswing. Knowing when to sell, even below current valuation, when to cure a loan covenant breach, or when to commit additional capital expenditure for asset initiatives will be key to mitigating losses.

13 The Golden Triangle refers to an area of the East Midlands that is renowned for its high density of distribution facilities and being home to the biggest names in retail and logistics. It spans the area between the M1, M6, and M42 motorways, extending from Birmingham in the west and Nottingham to the north. This vast area is considered prime real estate for logistics in the U.K. as it enables deliveries to reach over 90% of the U.K. population within four hours.

Kontor, Berlin, Germany

Niche Alternatives

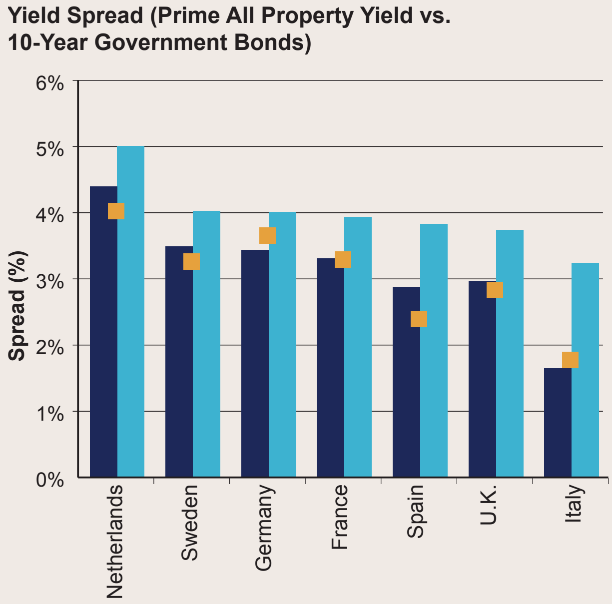
We advise some caution in the direct-let student sector despite strong investment flows recently. The attraction until now has been based on the lack of purpose-built accommodations, which has largely been redressed in our preferred markets. What's more, the sector faces challenges from a declining absolute number of 18-to-20-year-olds, high tuition fees, the introduction of fast-track courses, and competition from English language courses elsewhere in Europe. Despite recent positive changes to their visa status, EU students may also find themselves the victims of tighter migration targets when the U.K. leaves the EU. The recent lack of clarity around fire safety for all residential towers, including student housing, is also deterring some investors.

CONTINENTAL EUROPE

From a geopolitical standpoint, Europe is in a better position than a few years ago. Even if the structural wave of support for populism continues to grow across the continent, populism at the national level in Europe is in no way mirrored at the supranational level. In fact, the opposite is the case, with the new leaders of the European Commission (EC) the strongest in recent history. These leaders are ideologically aligned, centrist and integrationist, and setting an agenda to build a more relevant and impactful Europe on the global stage. Germany's Ursula von der Leyen, now leading the EC, previously served as Germany's defense minister, although is not currently taken as seriously outside the

Real Estate to Bond Yield Spreads Increasing

RELATIVE PRICING OF PRIME PROPERTY COMPARED TO 10-YEAR GOVERNMENT BONDS



Sources: LaSalle Investment Management (as of November 2019), JLL (as of September 2019), and Thomson Reuters (as of August 2019).

Christian Democratic Union party. Christine Lagarde, President of the European Central Bank (ECB), has a stronger global profile than most European leaders and a good working relationship with U.S. President Donald Trump and his administration. This is likely to mean a broad continuity of current policies, particularly an even lower for longer interest rate environment that will fuel investment into the real estate sector. Margrethe Vestager, Executive Vice-President of the EC, has responsibility for a "Europe fit for the Digital Age." She has been a tough regulator on technology issues. Finally, Paolo Gentiloni, former Italian Prime Minister and Europe's New Economy Commissioner, is a highly respected technocrat who also brings both a strong relationship with Brussels and more support from the new Italian government than he would have had before its Salvini-triggered collapse.

The macroeconomic outlook for Continental Europe is for lower growth in 2020, with a small recovery expected thereafter. The ECB recently cut its deposit rate to -0.50% to encourage lending and reactivated its €2.6 trillion (2.9 trillion USD) quantitative easing program, which had been on hold since the end of 2018, with €20 billion of bond purchases each month from November onwards. In addition, the ECB launched a new round of targeted longer-term refinancing operations (TLTROs) in September 2019, which are intended to keep credit conditions at a favorable level. In June 2019, the ECB changed its forward guidance to indicate that rates would remain at present levels until at least H2 2020. Central bank communications turned very dovish afterwards, leading to healthier property versus bond yield spreads (see Real Estate to Bond Yield Spreads Increasing).

Supported by fiscal stimulus, in 2020 domestic and service sector activities are expected to remain resilient in the region. Solid employment growth is expected to continue to sustain office demand. Robust wage growth will drive consumer spending, supporting demand for logistics and select retail. Indeed, the unemployment rate in the eurozone fell to a decade-low 7.5% in September 2019. This is impelling an escalation in wages, which are rising at their strongest pace in a decade. Wages are forecast to rise solidly in 2020, and when combined with lower inflation, should provide a boost to real income and support consumer spending. Private consumption growth is forecast to reach 1.3% in 2020. Overall, forecast GDP growth for the eurozone will be broadly stable at just over 1.0% in 2020.

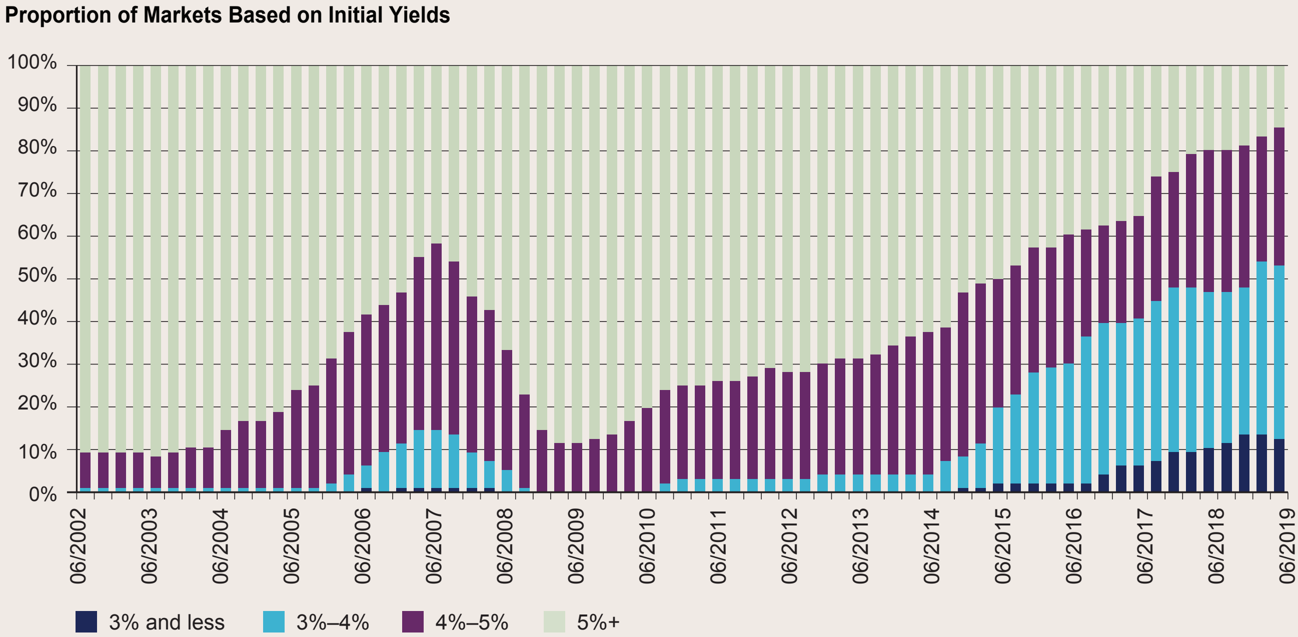
Low vacancy rates and relatively active demand are propelling the robust increase in property rent across Continental Europe. This is primarily being driven by the office sector. However, given the economic slowdown and the weak outlook for the retail sector, we expect rental growth in 2020–23 to reach a more modest 1.3% each year. This is just below Oxford Economics' eurozone inflation forecasts. Market segments for stronger-than-average forecast rental growth include offices in Munich, Berlin, Paris CBD, Madrid, and Amsterdam, as well as logistics in major population centers (e.g., Germany and France), specifically in supply-constrained urban locations.

Investment appetite for real estate in Continental Europe will remain robust in 2020 given the weight of capital, strong occupier fundamentals, and an above-average spread of real estate yields over risk-free yields. However,

Heppenheim Logistics, Frankfurt, Germany

Yield Drought in European Property Markets: 2002–19

PROPERTY MARKETS INCREASINGLY LOW YIELDING, WITH ALL KEY MARKETS SUB 4%



Net initial yields for 96 European office, retail, and logistics markets.

Sources: LaSalle Investment Management (as of November 2019) and PMA (as of October 2019).

investment volumes seem to have peaked in 2017–18. A lack of core assets, global uncertainty, and caution over retail weighed on activity. Southern European countries and France are experiencing stronger investor appetites, while German investment volumes are lagging slightly but are at a high level. This is in part due to a lack of stock, as bidding on acquisitions remains fiercely competitive.

Real estate yields for offices and industrial continue to compress, while those for all retail formats are expanding modestly. In 2020, we expect greater yield divergence between property types. The repricing of retail is forecast to continue in the short-to-medium term, although this will be less dramatic than what we have seen in the U.K. Yields for prime office, logistics (especially urban logistics), as well as bed-based property types (i.e., student housing, aparthotels, and retirement facilities) will probably experience further compression (see Yield Drought in European Property Markets: 2002–19).

GERMANY

Germany is particularly exposed to global trade pressures and a large domestic car manufacturing industry. Increasing recession risk has sparked a debate in and outside the country regarding its self-imposed pledge to refrain from taking on fresh government debt. Many want the country to employ fiscal easing. Proponents argue that Germany has a budget surplus and can afford to take on debt or ease fiscal pressure to support growth. So far, the government has opposed the idea of more borrowing. However, recent reports suggest that it is considering setting up independent public agencies that could take on new debt to invest in the economy, without falling afoul of strict national spending rules. German politics will remain aligned with stronger European institutions and further integration. Germany's government debt (bunds) is generally considered a safe haven investment and is seeing increased investor demand in response to trade tensions between the U.S. and China. In 2019, government bond yields fell sharply and into negative territory in Germany, as well as across parts of the Continent.

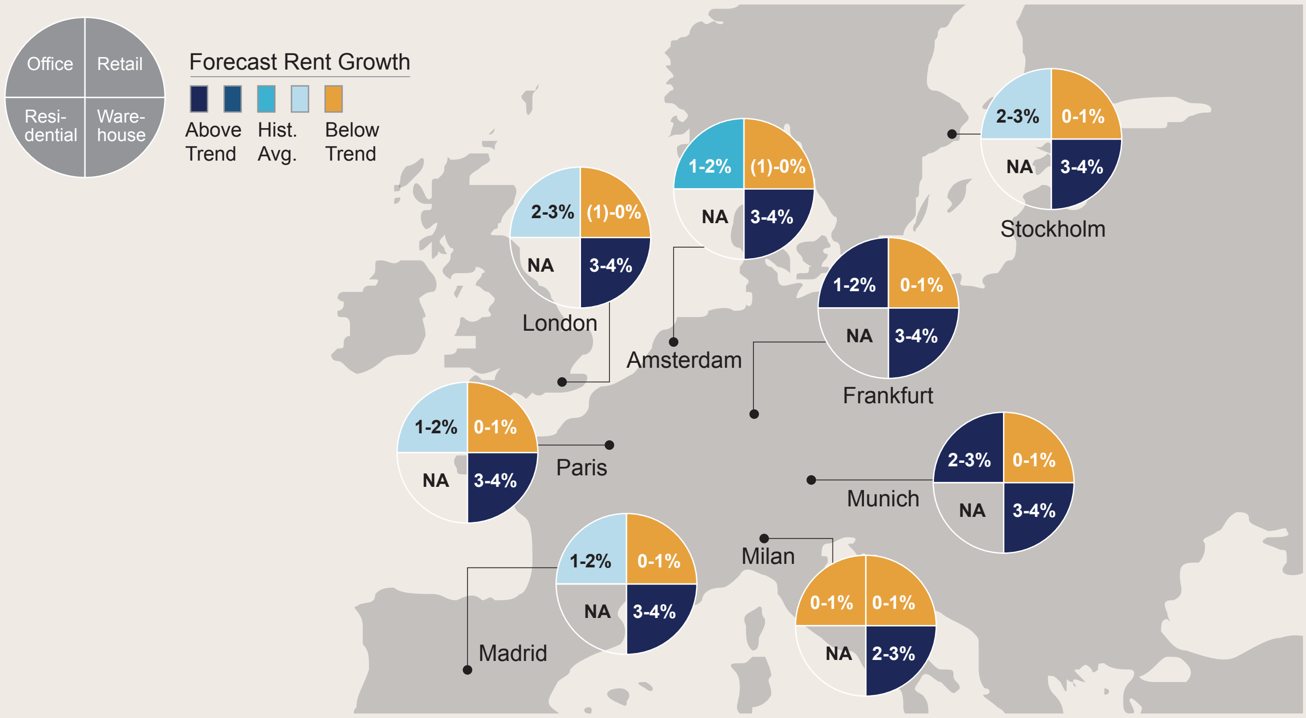
Demand-side real estate fundamentals improved in 2019. The main German markets continue to strengthen, and domestic fundamentals look solid. Despite the sluggish economy, consumer spending growth will remain strong in 2020, driven by the healthy position of household balance sheets and nominal wage growth resulting from historically-low unemployment rates. Strong immigration growth (reversing internal population declines) improved Germany's long-term growth potential, even if the political costs of this unpopular policy outweigh the short-term benefits.

FRANCE

In France, consumer confidence continues to recover from the "gilets jaunes" protest movement and reached a 20-month high in October (the tension has since abated with protest numbers declining). We remain optimistic about household spending as consumer confidence keeps rising. However, it is unlikely that the export outlook will brighten in the short term as U.S. trade relations

Real Estate Fundamentals—Europe

PRIME RENTAL GROWTH, 2020–22 (THREE-YEAR AVERAGE)



Note: The color coding for each market is based on each market's/sector's historical net effective rent growth performance. Light blue indicates that the forecasted net effective rental growth is in line with the historical long-term average, while above/below trend ratings substantially exceed/trail their historical averages.

Retail is high street retail shops; warehouse is urban logistics (forecast only; history is all logistics).

Sources: LaSalle Investment Management, PMA, and Jones Lang LaSalle as of November 2019.

deteriorate, which is weighing on business sentiment. To dampen the effect of the protests and to support economic growth, the government provided a ~€20 billion (22 billion USD) fiscal spending stimulus targeted at households with the intent to boost disposable income. In 2020, this fiscal support in conjunction with lower inflation and rising wages is expected to drive consumption. Overall, GDP growth in France is forecast to average 1.4% p.a. over the next five years, in line with the last five years.

The next round of reforms in France will focus on a complete overhaul of the state pension system. This will likely spark a reaction, but there is nonetheless a reasonable chance that the reforms will go through. If President Emmanuel Macron's reforms succeed, this will bode well for an eventual re-election bid in 2022. This stability and return to growth in France will provide tailwinds for the real estate occupier and investment climate in 2020–22. Paris still has a dearth of modern office supply in sought-after locations. A very low level of logistics vacancy and speculative construction also points to opportunities for investors in 2020.

THE NETHERLANDS

The economic climate in the Netherlands is expected to be similar to the one in France: a strong domestic background despite manufacturing facing headwinds from trade tensions. Retail sales and new car registrations point to healthy private consumption in 2019. Sentiment in the more domestically-oriented services sector strengthened further from an already elevated level. Investment is on track in 2019 to exceed last year's strong growth. Government expenditures should rise markedly in 2020 as the coalition's promises are implemented.

The escalating U.S.-China trade war means that GDP growth forecasts for 2020 for this export-oriented country have been watered down to 1.2%. We also expect that the Dutch government will embrace the end to an era of debt reduction with plans for a fund to spur long-term growth. What's more, the government is to take advantage of low interest rates to establish a national investment fund, which should benefit real estate markets. Investors should look for pockets of low leasing or refurbishment risk in offices in undersupplied Amsterdam submarkets. However, they will need to monitor the recent influx of coworking space, which will heighten risks in some locations.

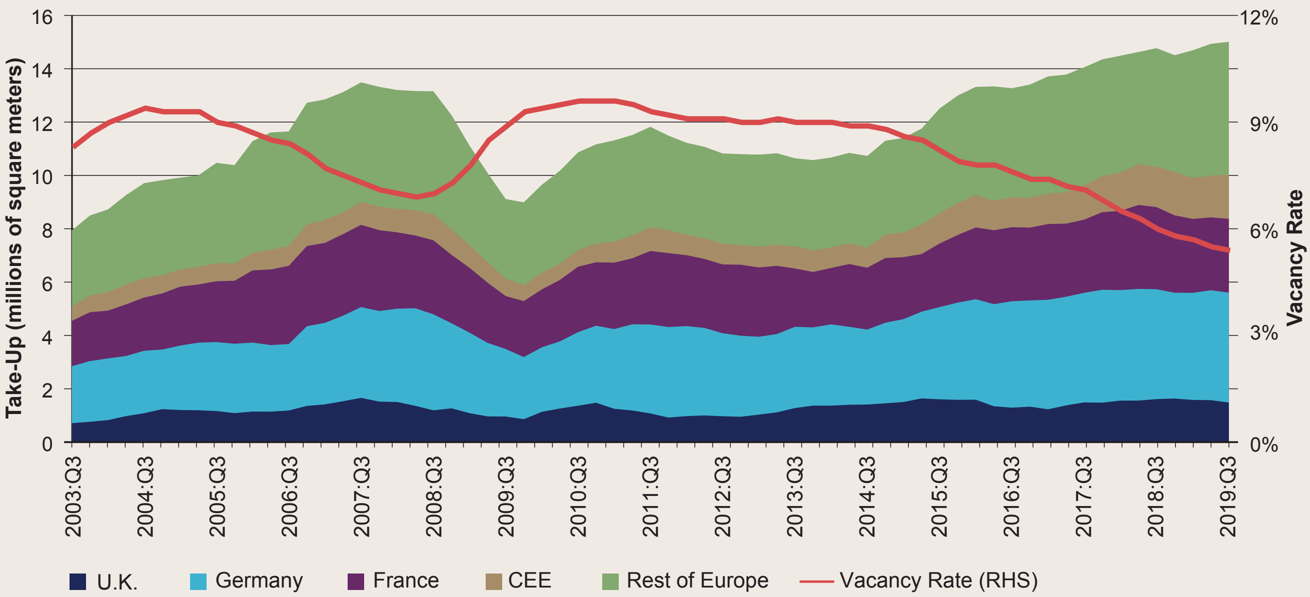
SPAIN

The economy in Spain continues to grow well above the eurozone average (0.4% vs. 0.2% in 2019:Q3). In contrast to other large European economies, exports grew more than expected in 2019, leading to a positive contribution from net trade. However, cooling domestic demand and an adverse external environment in 2020 mean that growth is

Robust European Employment Growth Filtering Through to Strong Office Demand

VACANCY HAS FALLEN TO ITS LOWEST LEVEL SINCE 2002, DRIVING STRONG RENTAL GROWTH

Europe Office Demand/Vacancy (Rolling Annual)



CEE includes Czech Republic, Poland, and Hungary. Rest of Europe includes Benelux, Spain, and Italy.

Sources: LaSalle Investment Management as of November 2019 and JLL as of September 2019.

unlikely to increase much from current levels. Our GDP forecast for 2020 is 1.6%. The latest wave of protests in Catalonia will have only limited economic repercussions in the fourth quarter of 2019. Absent a significant escalation, the impact is likely to be marginal, and limited to the region. A fresh push for unilateral secession similar to that seen in 2017 or a new referendum is unlikely in 2020, as is the reinstatement of direct rule over the region. Overall, real estate fundamentals remain buoyant in Spain and are a top destination for higher return investment in Europe.

ITALY

Italy is struggling to emerge from an economic climate of stagnation and even recession. The government collapsed in August 2019, forcing Prime Minister Giuseppe Conte to resign. He has since received a mandate to lead a new coalition government backed by the populist Five Star Movement and the Democratic Party. Snap elections that would have likely produced a League-led, far-right government have been avoided. A modest improvement in the outlook for economic policy is therefore likely in 2020, defusing the risk of a disruptive confrontation with the EU over its budget. However, fiscal policy will remain heavily constrained and the prospects for meaningful structural reforms are poor. Moreover, while early elections are now unlikely in 2020, the new coalition government may not remain stable in the long run. In this environment, real estate occupier markets will be subdued and dependent on local drivers. Many foreign investors will remain wary, except perhaps for trophy assets in prime locations.

SWEDEN

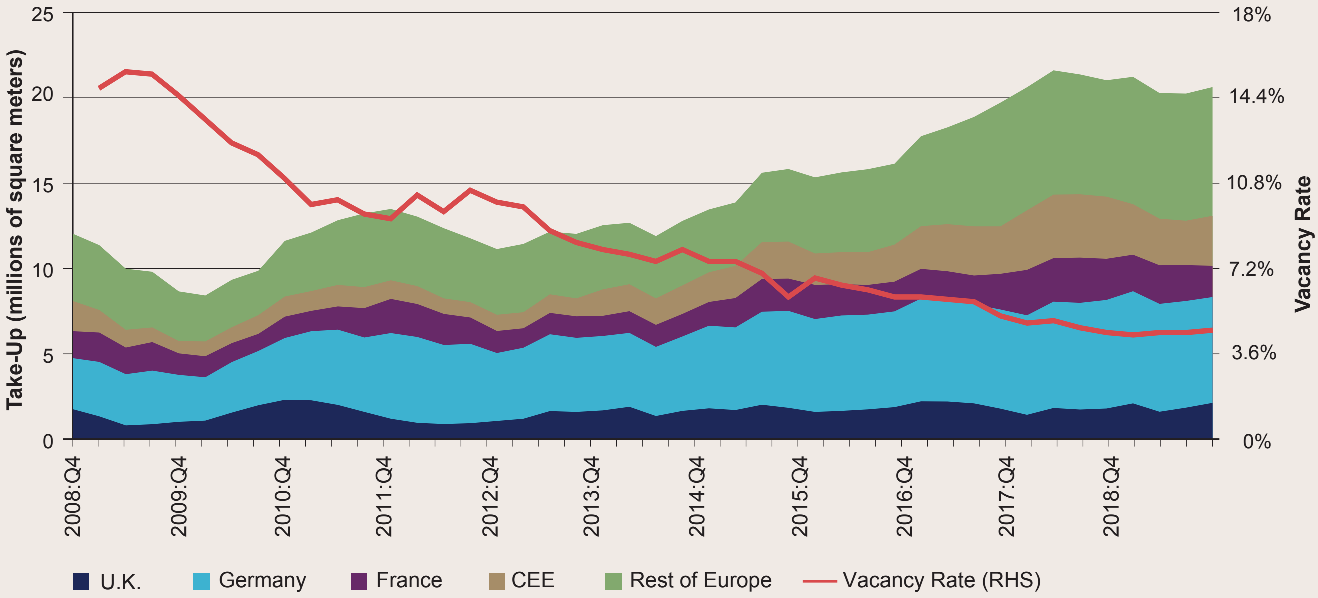
In Sweden, uncertainty about the health of the housing market weighed on consumer activity in 2019. While consumer confidence has recovered somewhat from its seven-year low in May 2019, it remains well below its long-term average. Despite a strong labor market, the uncertain outlook induced a rise in household savings in 2019, weighing on consumption, which is projected at only 0.9% in 2019. The good news is that new pay agreements for the majority of workers should incentivize a rise in consumption to a relatively robust 1.7% in 2020. Forward-looking purchasing managers' index (PMI) readings indicate continued output expansion, albeit at a more modest pace than in recent years. Our 2020 GDP forecast for Sweden is modest at 1.2% (see Real Estate Fundamentals—Europe on page 32).

Economic Quarter, Hamburg, Germany

European Structural Drivers Boosting Logistics Take-Up

GROWTH OF ONLINE RETAIL DRIVING SIGNIFICANT DEMAND—PARTICULARLY FOR URBAN LOGISTICS

Europe Logistics Demand/Vacancy (Rolling Annual)



CEE includes Czech Republic, Poland, and Hungary. Rest of Europe includes Benelux, Spain, and Italy.

Sources: LaSalle Investment Management (as of November 2019), JLL (as of June 2019), and PMA (as of December 2019).

OPPORTUNITIES & RECOMMENDATIONS

Office

Given both the robust employment and real estate climate across much of Continental Europe, the office sector is uniquely suited to a range of strategies from defensive to opportunistic. In 2020, low-risk investors should focus on well-connected downtown submarkets in cities such as Paris, Munich, Amsterdam, Madrid, Hamburg, Berlin, Frankfurt, and Warsaw. Well-connected suburbs with more affordable rents will also look attractive. These cities are also well-positioned for a short-lease or partially vacant office lease-up strategy that could deliver higher returns. The historically low cost of debt means that many investors will focus on leveraged core/income as a strong risk-adjusted strategy. Higher return strategies will favor creating core offices through refurbishment in those same key markets, although speculative development is only recommended in Paris and top German markets. The continued lack of modern floorspace despite rising supply pipelines means that there is still time to execute this type of strategy in 2020 (see Robust European Employment Growth Filtering Through to Strong Office Demand on page 33).

Logistics

Absent the influence of Brexit, to a great extent, the drivers of the logistics occupier markets in Continental Europe are similar to those in the U.K. Vacancy rates remain low across the region, and are exceptionally low in parts of Germany, southern France, Belgium, and Italy, as well as in Central and Eastern European countries (except Poland). In most countries construction is increasing and will dampen rental growth in 2020. By contrast, speculative development is so low in France and Germany that strong rental growth is expected to continue. Our preference is to focus on urban logistics opportunities over and above motorway locations, as they offer more land use options and some downside protection. The current pricing differential between the two is narrow, which strongly favors urban logistics opportunities (see European Structural Drivers Boosting Logistics Take-up).

DIA Logistics, Zaragoza, Spain

Upcoming Basel IV Regulation to Boost Non-bank Lending

MORE STRINGENT REGULATION OF BANKS TO CREATE GREATER OPPORTUNITY FOR ALTERNATIVE LENDERS

What is Basel IV?
- New banking standards to take effect 2022
- Revised methodologies for European bank capital requirements

Impact on European banks:
- Higher regulatory capital requirements*
- Different weighting of capital at different LTVs
- Bias toward loans with more efficient capital treatment

Impact on CRE lending:
- Downward pressure on leverage available from banks
- Some types of loans become unattractive to banks due to disproportionately increased capital charges

Basel IV will open up an even broader opportunity-set for alternative lenders in the higher return space in Europe.

*The European Banking Authority (EBA) estimated in July 2019 that under Basel IV, banks would need an additional €135 billion of capital to comply.

Source: LaSalle Investment Management as of November 2019.

Niche Alternatives

There is a range of modern living concepts that suit the demographic and urbanization trends in Europe. The region typically lacks high-quality lifestyle-related assets including micro apartments, aparthotels, and student housing. There is also a growing interest in both hotels and senior living properties. The major cities (e.g., Paris, Munich, Hamburg, Berlin, Amsterdam, Milan, and Madrid) are the natural markets for these opportunities. These types of assets can produce solid income returns, although for higher returns we recommend a refurbish-to-core or a pre-leased-build-to-core strategy.

Debt & Special Situations

Over the last two years the market for alternative lenders in Europe has been rapidly expanding from the U.K. to the Continent. Banks still represent the dominant lending entity, but non-bank lenders are gaining market share. Due to existing and upcoming regulations, banks are cautious, with typical senior LTV for prime capital city office investments limited at 60% in France and Germany and 60%-65% in the Netherlands and Spain (see Upcoming Basel IV Regulation to Boost Non-bank Lending). The same range of opportunities exists in Continental Europe as in the U.K.—from whole loans to mezzanine financing and even special situations. All-in borrowing rates are therefore particularly attractive for

2020 Continental Europe Investment Recommendations

<table>
<tr><th rowspan="2"></th><th colspan="2">Core</th><th rowspan="2">Value-Add</th><th rowspan="2">Opportunistic</th></tr>
<tr><th>Defensive</th><th>Income/Core+</th></tr>
<tr><td rowspan="4">LaSalle's Best Opportunities</td><td>Well-connected offices in DTU+E*-rich locations</td><td>Short-leased/light refurbishment offices (Well-connected locations in Germany, France, Netherlands, and Spain)</td><td>Significant office refurbishments (Well-connected locations in Spain, France, Netherlands, and Germany)</td><td>Office: Urban regeneration via build-to-core (Includes Grand Paris and German top 6)</td></tr>
<tr><td rowspan="2">Senior loans (France, Germany Iberia, and BeNeLux)</td><td colspan="2">Modern living concepts (Micro apartments, hotels, senior housing, aparthotels, and student housing)</td><td rowspan="3">Special situations (Includes preferred equity, development finance, and recaps)</td></tr>
<tr><td colspan="2">Mezzanine debt and whole loans</td></tr>
<tr><td>Urban logistics (Includes sites with potential future e-commerce use)</td><td>Modern logistics and urban income with optionality (No planning risk)</td><td>Modern logistics development (Urban locations or dominant hubs)</td></tr>
</table>

*DTU+E = Demographics, technology, urbanization, and environmental change.

Source: LaSalle Investment Management as of October 2019.

sponsors investing or holding core assets. Taking both the potential for lending and the legal protection offered in each country into account, the best risk-adjusted returns in 2020 are projected to be found in France, Germany, the Benelux, the Nordics, and Spain (see 2020 Continental Europe Investment Recommendations on page 35).

CHALLENGES & RISKS

Office

The risks that strong coworking demand poses to small, inflexible office space is much the same in Continental Europe as it is in the U.K. The same goes for the risks for the sector as a whole should a recession dampen the demand for office space. And although WeWork's footprint in continental European cities is not as high as it is in London, investors should be wary of the importance of the coworking stock in cities like Amsterdam and Berlin.

Logistics

Continental Europe has not experienced the same speculative supply response in the logistics sector as in the U.K., so vacancy rates are low. Two exceptions are Poland and the Netherlands, which are both important logistics markets. We recommend increased caution with purely speculative development, particularly in countries where land availability is abundant, such as in Central and Eastern Europe. As in the U.K., there is a longer-term potential disruption from autonomous vehicles, thus we favor urban logistics over those near motorways.

Retail

Most markets in Continental Europe have less retail stock per capita and online sales penetration than in the U.K., which is the hardest hit retail market by far in Europe. Shopping habits are also different, with a cultural element boosting physical retail in cash societies (Italy, Portugal, and Spain), and weather playing an important supporting role in both the very hot (Italy, Spain, and Portugal) and the very cold (Norway, Sweden, and Finland) countries. Retail overall is far less dependent than the U.K. on at-risk formats such as department stores. Nonetheless, the risk-off approach towards retail in the U.K. is expected to continue to spread to the rest of the region. We therefore recommend taking a cautionary approach to any non-dominant retail assets.

North America

U.S. MARKET OUTLOOK

The U.S. real estate market is expected to remain stable in 2020, despite the national and global geopolitical turmoil, including a presidential election in the U.S. For investors with a well-diversified real estate allocation within a multi-asset portfolio, current market conditions in the U.S. are benign relative to historical patterns. Returns are predominantly from income with some appreciation, which is expected to continue in 2020. Transaction volumes are stable. Rent growth is generally at or slightly above inflation and income is increasing steadily.

U.S. Real Estate Capital Sources and Trends

Capital Sector	2019 Capital Flow[1]	Outlook	Notes
ODCE Funds	Moderate	↓	• Rising stock market helps real estate allocations. • Investors moving among funds, also toward core-plus funds. • Under-stress funds are heavy in CBD office and mall retail, which could drive sales in those sectors.
Core Plus Funds	High	↑	• Investors moving to core-plus from core and higher leverage of core-plus increases gross real estate ownership.
Value-Add / Opportunistic	Moderate	←→	• Prequin reports high level of dry powder. • Concentration of capital in megafunds limits impact in some segments.
Cross-Border Capital	Moderate	←→	• Chinese capital restrictions remain a headwind. • Hedging costs could decline, and low interest rates overseas are tailwinds.
REITs	Low	↑	• Trading at NAV premium, a signal to place capital in the private market. • Mall retail and office REITs still at a discount, limiting capital flows to those property types.
Individual Investor Capital	High	↑	• New non-traded REIT offerings expected to raise ~$7 billion in 2019, with buying power close to $15 billion. Robust capital flow to continue. • New funds are more competitive for institutional quality properties than previous generation of non-traded REITs.
Defined Contribution Funds	Low	↑	• Capital flow up to $1.8 billion in 2019 from $1 billion in 2018. • Expected to continue steady pace of growth.

Source: LaSalle Investment Management.

North America Tilts and Rationale

Property Type	U.S. Core Tilt*	Canada Core Tilt*	Positives	Cautions
Apartment	↑	←→	Demand strong and asset-level cash flow stable.	Competition from new supply.
Industrial	←→	↑	Opportunities remain in secondary markets.	Bulk distribution in major markets often over-priced.
Office	↓	←→	Lack of investor interest and pricing declining.	Capital requirements for leasing and maintaining asset positioning.
Retail	←→	↓	Grocery-anchored demand durable, potential for mispricing.	Asset-level risk on tenancy and continued decline in investor interest.
Niche	↑	↑	Good risk-return balance and under-represented in index.	More attention needed on execution.

*Tilts are recommendations on acquisitions at current market pricing for delivering out-performance over the next three to five years. They are relative to index weights.

Comments: Applies to U.S. Only; Applies to Both Markets

Source: LaSalle Investment Management.

Closer to the surface, where those building diversified real estate portfolios operate, there is more nuance, which creates opportunities and the need for carefully-developed strategies to avoid pitfalls in 2020–21. The overall stable returns mask a wide spread between the industrial sector's outstanding performance and negative returns in the mall and power center segments of the retail market. Indeed, transaction activity in the industrial and apartment sectors is robust, while the sale of retail and even office properties is becoming challenging. Fundamentals are stable nationally, but some markets are soaring while others are waning in locations with a supply and demand imbalance.

Economic growth in the U.S. is expected to remain positive and move at a moderate pace in 2020. The tailwinds for this growth include a less adversarial U.S. trade position in an election year and the Federal Reserve's accommodative monetary policy. A slowing global economy and already in-place tariffs will be headwinds for growth. Policy uncertainty is arguably the greatest drag on U.S. economic growth right now and this is likely to increase with a presidential election that appears to be a stark contrast between President Trump's position towards limited government engagement in the economy and a more progressive platform from his opponent.

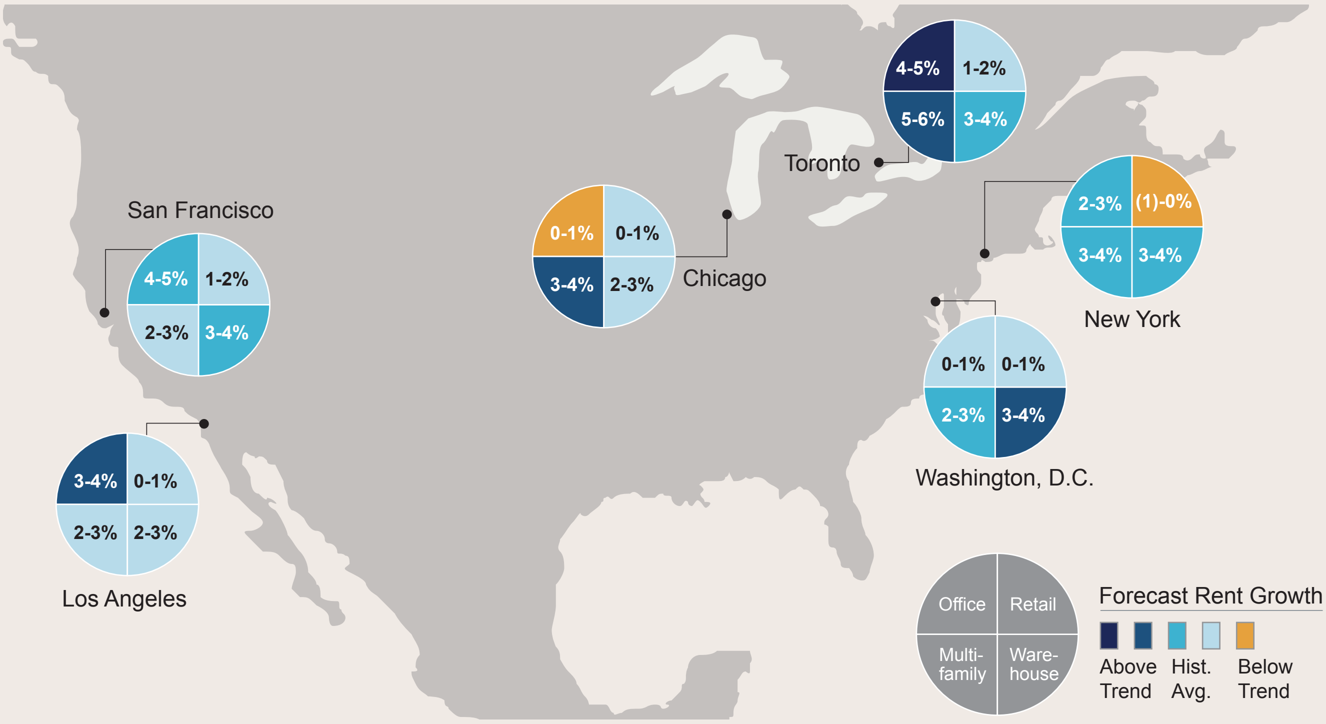
Demographics are becoming a headwind for the U.S. economy. The growth of the U.S. labor force is expected to slow from 0.82% over the past 10 years to 0.54% in the next 10 years. A clear factor in this is the baby boomer generation reaching retirement age, but immigration is also a factor. After a decade of trending higher, the foreign-born worker share of the U.S. labor force dipped to 17.1% from 17.5% a year ago. The assumption is that anti-immigration policies are contributing to this shift. But this headwind could turn into a tailwind depending on the election results in November. Restrictive immigration policy is exacerbating labor shortages in construction, which is one factor driving higher costs for new developments. For real estate that is closely linked to replacement costs (high-growth suburban apartment markets and major market warehouses), higher construction costs create upside to rent and value growth.

Additional interest rate cuts by the Federal Reserve in 2020 are still in question, but already the Fed has moved to being more accommodative, and is unlikely to raise rates unless there is a clear shift in economic sentiment. Ten-year Treasury note rates are expected to remain in the 1.5%-2.0% range, but anyone claiming clarity on future interest rates is only fooling themselves. This environment is supportive of current real estate values. Some capitalization rate compression is possible as short-term rates move lower. We see this as more likely in core-plus and value-add segments where buyer financing is based on short-term interest rates.

Fremont Distribution Center, San Francisco, CA, USA

Real Estate Fundamentals—North America

FORECAST ANNUAL RENT GROWTH (2020–22) AND COMPARISON TO LONG-TERM (2009–19) TREND



Note: The color coding for each market is based on each market's/sector's historical rental growth performance. Light blue indicates that forecasted rental growth is in-line with the historical long-term average, while above/below ratings substantially exceed/trail their historical averages.

Retail consists of community and neighborhood centers. San Francisco warehouse is Oakland market; New York warehouse is northern New Jersey market; and New York retail is Long Island market.

Sources: CBRE-EA, MPF Research, JLL, and LaSalle Market Tracking System as of 2019:Q3.

CAPITAL MARKETS

A variety of debt and equity sources remain active and pricing signals are neutral in the current low-interest rate environment. There are shifts in which investor groups are active and what sectors and markets they are targeting. In the near-term, capital market momentum is expected to be as important as fundamentals when identifying outperforming assets, markets, and property types.

Investors should also consider the sources of investment capital when evaluating market dynamics. In 2020, we expect more positives than negatives on net, but we anticipate risks in some sectors. These are summarized in the table entitled U.S. Real Estate Capital Sources and Trends on page 36.

Low interest rates will keep a variety of sources of debt capital active in the market. Insurance companies, banks, and buyers of senior CMBS bonds will continue to invest into debt funds offered by real estate loans. And as discussed in Chapter 3, in the mature phase of the cycle, traditional real estate investors continue to invest in debt funds that can deliver attractive returns with a different risk profile than equity real estate.

MARKET FUNDAMENTALS AND STRATEGIES

The gap between the performances of different property types has reached its widest in 25 years (see North American Tilts and Rationale on page 37). E-commerce and shifts in investor sentiment are driving the high level of out-performance from industrial and the below-trend performance of retail. Our expectation is that this disparity in performances will start to narrow in 2020–21, but continue in part because index performance is lagging market trends. For new investments, our tilts are based on a view of market pricing.

For apartment, industrial, and CBD office, trailing year returns favor secondary over primary markets. Investors are still looking in primary markets, but data shows primary markets are not necessarily lower risk and may not justify lower expected returns. For this analysis, our primary markets for office and apartments closely correspond to the seven gateway markets (New York City, Los Angeles, San Francisco, Boston, Chicago, Seattle, and Washington DC). For industrial, they encompass the ten most invested NCREIF hub markets. The difference between primary and secondary markets is based in part on hard data, like market size and NCREIF allocation, but it also rests in part on perception and history.

2020 North American Investment Recommendations

DTU+E THEMES AND CAPITAL MARKET TRENDS DRIVE RECOMMENDATIONS

LaSalle's Best Opportunities

Secondary Opportunities

	Core	Higher Return
Multifamily	U.S.: Suburban income strategy, off-price urban	U.S.: Select development strategies and specialty residential
	Canada: Major market urban	Canada: Suburban repositioning and build-to-core
Office	U.S.: Creative / edge-of-core urban	U.S.: High yield suburban
	Canada: Non-trophy CBD	U.S. and Canada: Renovation / lease-up
Retail	U.S.: Top STARS* centers with e-commerce resistant tenancy	U.S.: Deep discount power and community centers
	Canada: Urban grocery-anchored and best-in-class super regionals	Canada: Mispriced urban, repositioning (conversion, densifying, and adding mixed use)
Warehouse	U.S.: Secondary markets and shallow-bay	U.S. and Canada: Modern warehouse development
	Canada: Major markets	Canada: Market lease-up and Alberta and recovery plays
Niche	U.S.: Medical office, self-storage, and life sciences	
	Canada: Self-storage, student housing, and medical office	

*Supermarket Trade Area Ranking system is a proprietary LaSalle ranking of more than 40,000 U.S. supermarket-anchored shopping centers.

Source: LaSalle Investment Management.

Aggregating the portfolio beta analysis we introduced in the 2019 *ISA* shows that industrial and office secondary markets have lower betas, while primary and secondary apartment markets have equal betas over time. According to finance theory, investors should require less return, not more, in lower beta markets. Yet in practice, capital markets often do the opposite. While investor expected returns are not observable, Altus discount rates (the appraisal view of expected returns) show primary markets have lower discount rates, implying lower expected returns than secondary markets. The higher expected return for secondary markets is complemented by higher income yields, often by 50 to 100 bps in secondary markets. Investor bias towards primary markets will not disappear entirely in 2020, but we are shifting more focus to secondary markets.

This shift is not just an artifact of analysis of appraisal data, there are structural shifts underlying it. U.S. market selection involves complex trade-offs between yields and income growth, economic growth and supply constraints, and risk and return. Local tax increases, regulatory changes, declining immigration, climate change, and higher density development all contribute to a shift in the historic balance between these factors. New regulations and a higher tax burden are more likely in primary markets than in secondary markets. The decline in immigration has a greater impact on growth in primary markets. Climate change is most directly impacting locations in low-lying coastal locations, which includes several gateway markets. Finally, ambitious city planning programs have enabled high-density development in emerging locations in primary markets, which has eroded the historic limited new supply in these markets. Some primary markets are still performing very well, such as San Francisco and Boston, where strong tech sector growth is overwhelming other factors (see Real Estate Fundamentals—North America on page 38 for rent growth forecasts in select primary markets). Ultimately it is about finding the right balance between factors in any market. And diversification across a variety of markets will help insulate a portfolio against a variety of scenarios for the future.

Our recommended tilts for new investment activity by property within a diversified core portfolio in 2020 are shown in North American Tilts and Rationale on page 37. They are based on our view of market pricing, not a view of index performance. Additional detail on our outlook for each property type follows below.

Apartments

Apartments remain overweight because supply and demand are in balance and the cash flow profile is strong, offering both upside through net operating income (NOI)

Stonemeadow Farms, Seattle, WA, USA

growth as well as the prospect of resilient demand in a downturn. But we are not alone in this assessment, so the competition for investment opportunities combined with the breadth of opportunities means market and asset selection are critical. We rely on proprietary forecasting to identify markets we believe will outperform and where pricing is most attractive. We detect that new supply is still accelerating in markets already dealing with an abundant supply like Washington DC and Seattle, while some high-performing and historically high-supply markets such as Phoenix and Atlanta are seeing flat or declining construction.

Investors should be looking for pricing anomalies and opportunities to take advantage of persistent biases in investor forecasting of revenue growth. Suburban apartments continue to generate higher initial yields than urban apartments despite limited differences in NOI growth. Some urban markets (e.g., Brooklyn/Queens, Denver, and Nashville) experienced a slowdown in rent growth due to elevated new supply but now may offer upside for future performance as investor interest is down and rents could rebound as construction tapers.

Investors also need to pay careful attention to changing rent regulations prompted by falling affordability and populist political sentiment. Rent control[14] policies surged in 2019, as Oregon, New York, and California passed new rent regulations. Investors should expect a risk premium for assets where new rent regulations are a risk, but it is important to differentiate between policies. The laws passed in California and Oregon should have a limited impact on investment returns while New York's complex web of rules will materially impact income and values. These rules will have unintended consequences for markets, and investors need to consider these in investment decisions.

Office

Office remains the largest property type of the U.S. institutional investment universe, but investor interest in this sector has declined. The capital requirements of offices have contributed to their long-term underperformance. The recent growth in capital investment is increasing investor focus on these capital requirements. Fundamentals are sound and new supply is still limited in many markets. There are metros where steady economic growth over the last 10 years has helped occupancy, but pricing remains low. In 2020, some non-traditional office markets (such as Orlando and Phoenix) could present opportunities for investors who can tolerate liquidity risk in exchange for greater returns. There are also potential capital gap opportunities for large office assets in gateway markets (e.g., New York City and Washington DC). Investors should underweight offices, but that is not a zero weight. The opportunities created by

14 We use rent control as a useful umbrella term to describe all laws that constrain private owners' ability to raise apartment rents, including "rent stabilization" and "rental brake" policies. Our focus here is on limits to rent change rather than rules governing eviction, transfer taxes, zoning, transaction regulations, or other tenants' rights policies.

lack of investor interest, but with a benchmark weight of 35%, it does not justify that level of allocation.

The other dynamic impacting office markets is WeWork. The company crashed from being a darling of private investors to unwelcome in public markets. U.S. markets most exposed to WeWork include gateway and high-growth markets (notably New York City and San Francisco). WeWork's offering of more flexible leasing options resonated most in larger markets with longer lease terms. Ultimately, WeWork was just an intermediary between building owners and occupiers. Thus, the stress on WeWork could lead to lease restructuring and tenant movement, but it should have the same impact a decline in underlying tenant demand would have on the market.

Industrial

The returns of the industrial property type have been so strong over the last five years that every other type has underperformed the NCREIF Property Index benchmark. The strong index performance is the result of extremely strong fundaments (strong demand, record low availability, and robust rent growth) and increasing capital market interest (leading to capitalization rate compression). Both drivers are expected to diminish in 2020–21. Nevertheless, performance will still be solid, although not as strong relative to the index. New acquisitions at current market pricing will be hard-pressed to deliver above-benchmark returns, which is why we have an equal weight recommendation for the property type.

The outlook for fundamentals is lower for 2020 due to the amount of new supply (nationally, there are market exceptions). Concurrently, the slowdown in economic growth and continuing trade tensions will slightly diminish demand. The growth of e-commerce will remain a tailwind for demand, which will be a positive for some industrial properties. The real challenge for industrial investment is pricing. In markets where initial yields are in the low 4% range, investors need relatively strong long-term rent growth to reach competitive returns. Development remains our preferred strategy for industrial. The strong demand and a need for modern space continue to enable the lease-up of new product. When that is complete, there is the option to sell at market pricing or hold.

Retail

Retail is the most challenging property type, both in terms of performance and complexity. Its weak index performance is expected to continue in 2020. We do not think the index values adequately reflect the actual changes in market pricing across segments. There are still some strong properties that have sustained value; however, others have declined in value and in some cases by a significant amount. Analysis shows that 15% of retail properties in the NPI universe have had market value declines of at least 10% in the last year, and we believe that could increase in the coming year.

While index performance is expected to be weak, some segments of retail provide attractive values at current market pricing. Far less income growth is required from a retail property acquired at an upper 5% yield to outperform a property with a low 4% yield, as is common in some other property types. There are also segments of retail (notably power and lifestyle centers) that have 7%-8% initial yields, where simply sustaining occupancy and cash flow can deliver benchmark-beating returns. This mispricing and a view on centers that will remain durable performers (generally in the open-air space) lead to an equal weight on retail overall. Investors would be wise to avoid malls except in truly exceptional situations with the best assets at very attractive pricing.

In 2020, the challenge for retail investment is identifying properties that will generate traffic and be appealing to tenants. New analytical tools, notably the ability to analyze center traffic patterns with mobile phone data, provide data to help with this judgement. Traditional demographic analysis of a trade area is still critical, but traffic patterns can show which centers generate the most traffic within a trade area.

505, Nashville, TN, USA

Niche Markets

There are opportunities in specialty property types to acquire core, or even superior to core, cash flow at equal or better pricing than core. This opportunity combined with the under-representation of these sectors in the index makes this an over-weight recommendation. Medical office and self-storage remain our top picks in this space for 2020 due to steady demand that enables stable cash flow that is often still priced at a discount to the major property types.

We remain on the outlook for opportunities and situations that fit with the "going mainstream" framework introduced in the 2016 *ISA*. Life sciences is high on this list as the positives of this sector include a strong demand outlook, tenant capital investment, and concentration in select locations, which we expect will continue in 2020. It fits with our other recommended sectors in having underlying secular demand drivers, core-like cash flows, and a limited operational component. Life sciences is part of a broader theme of innovation-focused real estate investments. These are real estate assets configured in alignment with a variety of innovation-oriented fields (life sciences, mechanical engineering, and medical development). They need to be in locations and have amenities that help attract the talent that is critical to innovation.

Core investors are also paying more attention to niche residential properties. Over the last 20+ years, investors in U.S. real estate came to value apartments as a core property type. Other residential modes are likely to follow apartments as being an accepted part of a core portfolio. This includes manufactured housing, single-family rentals, and active adult rental apartments.

Marina Park Business Center, Los Angeles, CA, USA

Risks and Avoids

The U.S. is in the mature phase of the cycle for the economy, real estate fundamentals, and capital markets. The implication for real estate investors in 2020 is that they should maintain a strategic balance of offensive and defensive positions.

In the 2019 *ISA*, we identified a potential over-supply risk from opportunity zone investment. This did not materialize in 2019 and we no longer expect it to impact the markets. We were surprised that capital flows to the opportunity zone-driven developments were not stronger. We believe that structural challenges to the program and investor and manager prudence were the leading causes.

New data tools and analytic techniques enable greater understanding of the asset-level risk inherent in real estate investing. Strategy recommendations are framed by market and property types with little insight into the distribution of performance within these segments. The lack of an investable index for private real estate means that asset-level risk is important to consider. Diversification is the best protection against this risk (see Chapter 3 on Core and Non-core Real Estate, page 62). But as the recent ODCE returns demonstrate, even the largest, most diversified funds carry risk of deviating from the average. It is the task of investment managers to seek out factors that drive assets toward the top-end of the distribution, creating an opportunity for sustained outperformance.

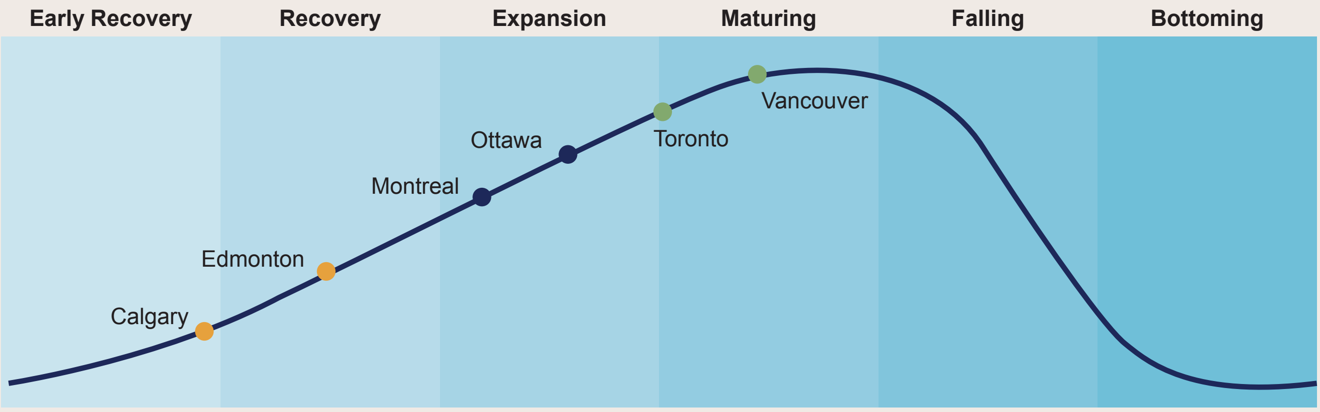
A companion to a discussion of risk is what investors should avoid because returns do not compensate for the risks. Elevated pricing in 2020 will mean that investors should avoid A-quality malls, big box warehouses in major markets, and apartments with the highest rents in high-supply markets. Other areas to avoid are a function of different risk assessments relative to the market. These include student housing, single tenant office, older CBD office trying to compete with new construction, and hotels.

Opportunities

Our view on North American investment opportunities is summarized in 2020 North American Investment Recommendations, shown on page 39. In an environment with capital gaps, the challenge is determining what others are avoiding for good reasons, and when it is due to excessive fear. Spots of limited interest include most suburban offices, almost all retail, some over-supplied locations for multifamily, and even some narrow slices of the industrial market. As investors narrow the definition of core, there will be more opportunities to consider that just miss that definition of core.

One challenge in identifying these opportunities in 2020 will be that limited trades lead to limited pricing visibility. Our focus for these opportunities is open-air retail and suburban offices. In retail, grocery-anchored centers at pricing that is off 50-150 bps from several years ago is attractive. Select big-box retail would need a much more

Canada's Major Markets in Three Cycle Positions



Calgary and Edmonton
EARLY CYCLE

- Historically strong markets
- Quality product
- Below replacement cost
- Vacancy past peak

Montreal and Ottawa
MID CYCLE

- Rising occupancy
- Tech demand
- Rent growth
- Limited quality supply

Toronto and Vancouver
LATE CYCLE

- Gateway, global cities
- Strong rental growth
- Lower cap rates
- Deep markets

The statements above are based on market assumptions, opinions, and research by LaSalle's Research and Strategy group. Any trends shown may not continue, and any forecasts may not materialize as expected.

Source: LaSalle Investment Management as of September 2019.

significant discount to become appealing. Deep-value opportunities in suburban offices could emerge but only when very conservative underwriting produces above-core returns. The combination of capital market dynamics and seller need might produce attractive value in major markets for large core office assets in 2020.

CANADIAN OUTLOOK

Despite weakening global growth prospects and ongoing trade uncertainly, Canada's economic and real estate market performance has been better than expected in 2019. Overall, the country is in a good position to withstand a potential slowdown in 2020. Canada is well known for its stability and strong financial sector, which have helped it weather previous downturns.

While an inverted yield curve in the second half of 2019 potentially signals an economic downturn, most markets and sectors are well-positioned due to strong fundamentals. For example, the industrial availability rate in Canada is at an all-time low of 2.9%, with the gateway markets of Toronto and Vancouver at 1.2% and 2.5%, respectively. Apartment vacancy is at a 10-year low of 2.4%, with rising immigration levels driving strong demand for both purpose-built and rental condominiums where new supply lags demand. CBD office vacancy in Toronto and Vancouver is at low levels of 2.3% and 2.4%, respectively, with meaningful new supply still two-to-four years away. Ottawa and Montreal have experienced office vacancy declines of 100-200 bps over the past 12 months, driven largely by demand in the tech sector. Calgary and Edmonton's elevated vacancy rates have stabilized, with gradual improvement expected in 2020.

Canada's real GDP growth is projected to slow to 1.1% in 2020 from 1.4% in 2019 and rebound to just 1.4% in 2021, according to Oxford Economics. Despite a slowing economy, job growth has been resilient, fueled by immigration and tech demand, with unemployment near 45-year lows.

The Liberal Party-led government was reduced to a minority position in the October 2019 federal election. This means the government will require support from rival parties to pass legislation. This creates a degree of uncertainty in the weaker Alberta markets, where energy investment has been sidelined. While the government has committed to building the Trans Mountain Expansion Project, which will double crude oil shipments to the Pacific coast, it is unclear which parties will support this project.

The Bank of Canada has held its policy rate at 1.75% since October of 2018, despite three rate cuts by the U.S. Federal Reserve in 2019. While it is uncommon for the

Bank of Canada to deviate from the Fed, Canada's economic fundamentals remain balanced and inflation is within the Bank's target range. Both five- and ten-year bond yields remain low by historical standards, dropping roughly 100 bps in the last 12 months. Thus, real estate debt costs remain low and lenders have maintained steady spreads. Capitalization rates remain low, largely holding flat in 2019 with downward moves only for the most coveted assets and markets. Transaction volumes remain strong and are expected to hit $45 billion in 2019, near the record $49 billion high reached in 2018. Capitalization rates are expected to remain stable in 2020, with likely modest upward moves for out-of-favor regional shopping centers.

The six major Canadian markets (Vancouver, Edmonton, Calgary, Toronto, Ottawa, and Montreal) will remain in three distinct cycle positions in 2020 (see Canada's Major Markets in Three Cycle Positions on page 43). Toronto and Vancouver remain in the mature cycle phase, with tight CBD office vacancy, record low industrial availability, strong rent growth, and low capitalization rates. Montreal and Ottawa remain at mid-cycle, with fundamentals improving but pricing less elevated than in Toronto and Vancouver. The Alberta markets are in slightly better shape than a year ago, but their recovery will be prolonged, and will remain in the early phase of the cycle.

In 2020, many of Canada's large pension plans will continue to sell partial, non-managing interests in core office and retail properties, creating opportunities for core buyers. This will continue the trend of strong transaction volumes established over the last few years.

Canadian REITs performed well in 2019, outpacing the overall equity index. REITs raised more than $6.2 billion in new capital in 2019, thus many will be active buyers and developers in 2020, adding to an increasingly competitive transaction environment.

Lenders remain highly competitive, with lending spreads holding steady despite bond yield volatility in 2019. Outstanding loan volumes continue to grow, while delinquency rates remain very low.

Investor demand is strongest for industrial and apartments and will continue in 2020, reflecting their attractive fundamentals. Both core and value-add office investment volumes have stabilized compared to a year ago. While retail is largely out-of-favor, there may be some opportunities in the best quality super-regionals and open-air grocery or pharmacy-anchored centers.

Values for offices and retail in Alberta, and in secondary markets, will continue to modestly correct in 2020, with a bottoming expected in 2021. Market recovery in Alberta is expected to be slow and gradual.

Core, unlevered total returns will remain at around 4.5% to 6.5% (10-year IRR) in 2020–21, with apartments at the lower end of the range and retail at the higher end. Capital appreciation will be strongest for industrial and apartments, average for offices, but slightly negative for retail.

The 18.0 million square feet of new office supply under construction in 2019 equates to 3.8% of stock and is up from 14.6 million square feet in 2018. Over 80% of this new construction is in Toronto and Vancouver and is due for delivery over the next three years. Vacancy in these markets is low and new supply is needed. Currently, 28.0 million square feet of warehouse property is under construction, compared to 18.5 million square feet in 2018, but the amount under construction is only 1.5% of stock and Canada's industrial availability rate is 2.9%, an all-time low. This new supply is unlikely to move industrial availability significantly higher in the coming years.

Opportunities

Canada's low volatility and relatively strong market fundamentals will act as a shock absorber through a period of slower global growth. While foreign acquisitions of Canadian real estate have slowed since Chinese capital

110 High Street, Boston, MA, USA

Pioneer Tower, Portland, OR, USA

flows retreated in 2017 and 2018, capital from the U.S., Europe, and other Asian countries has escalated in terms of direct deals, privatizations, and fund investments. This foreign capital often seeks an established local partner, creating opportunities for domestic investors with specializations or expertise in particular sectors or markets.

The low interest rate environment allows investors to be opportunistic buyers across asset classes. Investors have increasingly been looking at development, with new supply pipelines in office, industrial, and apartments showing upward momentum. The industrial and apartment sectors are gaining traction among investors given their exceptionally strong average annual unlevered returns of 11.8% and 10.4%, respectively, over the past three years, compared to 6.8% for the overall MSCI/REALPAC Canada Annual Property Index. Offices have also shown momentum given improving fundamentals and strong job growth, while retail generally remains out-of-favor.

The best core opportunities in Canada in 2020–21 include urban apartments and warehouses in major markets. Investors with higher return strategies should focus on renovation, repositioning, and development of industrial and offices to add value and grow NOI, given the rising pricing levels for most asset types. Mixed use as a stand-alone investment or as part of an existing development is also attractive (see North American Investment Recommendations on page 39).

Office

With strong job growth in both the technology and professional services sectors, office absorption that rose in 2019 over 2018 levels should continue in 2020. However, the likelihood of a slowdown will constrain job growth, while the paucity of large contiguous space blocks in most CBD markets may curb absorption levels in 2020. The Alberta markets are expected to generate moderately better demand in 2020 compared to the last two years, with minimal new supply in these markets expected.

As in other countries, coworking has increased in popularity in recent years due to the expansion of WeWork. Given their recent job eliminations, the sublet vacancy of existing WeWork space will likely rise. Canada's markets are not heavily exposed to WeWork, so any fallout from their retreat will be limited.

Alberta markets remain at high vacancy and are unlikely to change significantly in 2020–21. While the Trans Mountain Expansion Project is expected to proceed, new energy sector investments are unlikely to drive office demand, given persistently low oil prices. Expect office investments to continue to deliver total unlevered returns of 5% to 7% annually, in-line with the overall MSCI/REALPAC Canada Annual Property Index.

Retail

The retail sector remains out-of-favor with most investors given the growth of e-commerce, chain and store closures, industry-wide consolidations, and continued modest valuation declines for regional malls. However, not all retail is equal and there are differences in performance among retail subsectors.

Grocery- and drug store-anchored centers have lower vacancy rates and values have been steady. Regional malls in the MSCI/REALPAC Canada Annual Property Index have experienced vacancy increases and a 7.4%

capital value decline over the last three years. All but the most leading edge and best located malls are likely to see further value declines in 2020–21. However, best-in-class super regional malls have shown resilience due to their ability to remain relevant and attractive to customers and new retail entrants. Centers that focus on experience-oriented uses, growing foot traffic and rents, while taking advantage of value levers such as the addition of apartment and mixed-use development on-site will succeed.

Investors should continue to focus on resilient, defensive, stress-tested retail assets, such as those with grocery or drugstore anchors for core, and repositioning of urban, well-located centers with value levers (e.g., residential density) for higher return strategies. Despite the possibility of deep discounts, we do not recommend secondary market retail or fashion-oriented power centers.

Apartments

Growing immigration levels have helped push apartment vacancy in Canada to a five-year low of 2.4%, prompting a rise in purpose-built supply to an historic high of 2.3% of stock. In markets like Toronto and Ottawa, where the provincial government exempts newly-built apartments from rent control, the impetus to build is more attractive. The ability for apartment investors to secure attractive, government-insured financing at below-market rates also helps.

Despite the wave of new supply expected in the next two to three years, demand is keeping up with the rise in household formation through immigration, growing student demand, and downsizing "empty-nesters." Investors are also finding new construction a viable investment option as the pricing for existing properties remains highly competitive, particularly in Toronto and Vancouver, where capitalization rates for apartment offerings are routinely below 4%.

Industrial

With Canada's industrial availability rate at an all-time low, expect an increase in development and new supply in 2020, both on difficult-to-find greenfield sites and urban infill properties. Despite expectations of slower GDP growth, most Canadian industrial markets remain exceptionally tight and should withstand a slowdown. E-commerce distribution, third-party logistics, and consumer goods users remain the key sectors driving demand. Rents growing at double-digit levels in recent years and exceptionally strong investor demand have driven unlevered industrial returns to 15.7% over the past 12 months and 9.7% over the last five years, making it the strongest performer among the property types in the MSCI/REALPAC Canada Quarterly Property Index.

For core strategies, all industrial markets except Alberta remain attractive as rental growth is likely to continue in 2020, albeit at a lower than double-digit pace as seen in recent years. The weight of capital seeking industrial remains high, so downward pressure on capitalization rates is likely to remain. For higher return strategies, industrial product is difficult to acquire at value-add return levels. However, we expect infill development and turnaround strategies for buildings suitable for last-mile deliveries or modern logistics to remain attractive in 2020.

Risks

A weakening global growth outlook and ongoing trade uncertainty will prompt caution among investors in 2020, despite a low interest rate environment, relatively strong fundamentals in most markets, and domestic economic data showing few signs of a significant slowdown. Although it has been five years since global oil prices collapsed, oil prices remain low and Canada's energy sector remains challenged, suggesting that the recovery for Alberta may be prolonged and fundamentals in Calgary and Edmonton will remain weaker than the rest of the country in the near term.

Technology disruption presents opportunities for property investors, driving everything from greater efficiency in building operations to allowing retailers to measure footfall and traffic around their centers to aid leasing decisions. Many technologies for real estate are in the early phases of adoption in Canada with adoption rates likely to rise in 2020–21.

70 University, Toronto, ON, Canada

Proptech and Data Science for Real Estate Investment

DATA INTEGRATION IS THE FOUNDATION FOR SUCCESS

The proptech industry continues to hit record levels of investment from venture capital firms. An estimated $25 billion USD was allocated to a wide variety of firms that harness technology for real estate in the first three quarters of 2019 (a third of total investments since 2015).[1] One of the common denominators between proptech services and in-house analytics teams is that both leverage proprietary data and analytics to help property owners optimize real estate operations, retain tenants, increase revenue streams, and act on market intelligence.

Commercial real estate investment decisions are now data-driven, combining information from disparate sources and then integrated with investment managers' experience to execute top-performing strategies. To adapt to the rapid increase of data, LaSalle has developed proprietary databases that are managed on the cloud, which allows global collaboration in a secure environment. Information and data analytics are easily accessible and shared across business functions—helping to connect the silos of departments and different locations. Data integration is an essential prerequisite for deploying useful enterprise-scale predictive models—an approach that is now becoming feasible for real estate investment teams. We briefly review two examples of such models, from LaSalle Strategy teams in North America and Europe.

FROM MARKET TO PROPERTY LEVEL RETURNS ANALYSIS—NORTH AMERICA

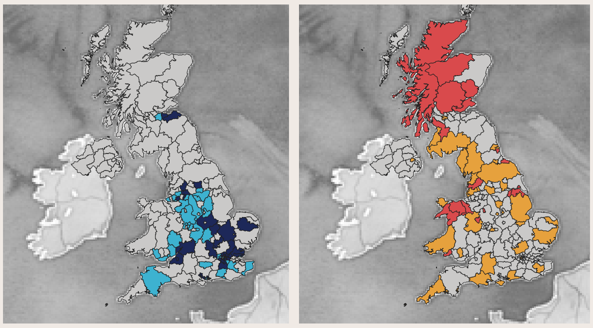
PRESTo (Property Real Estate Statistical Tool) is one of LaSalle's proprietary research tools that goes beyond traditional market analysis and incorporating property-level details, to allow descriptive, multivariate, and attribution analysis. Hedonic approaches have been commonplace in industry and academia for many years, but they depend upon access to granular, asset-level attribute data. Though real estate firms can access this information for their own portfolios, industry-wide data have been closely guarded, although both NCREIF and MSCI's Global Intel Plus allow for small-sample datasets, creating custom indices for as few as three assets.

Combining these data using coding to iterate dozens of models over the thousands of constructible indices provides new insights into how building characteristics and management strategies impact property returns at the granular level. Doing so gives us greater confidence in the level, growth, and possible dispersion of income earned from properties in the future.

MACHINE LEARNING FOR REAL ESTATE INVESTMENT STRATEGY—THE U.K.

Larger datasets also allow for the deployment of machine learning models. LaSalle tested a neural network structure to identify patterns in how a large number of factors influence future real estate market performance at the submarket level. The factors the model relies on are current market performance, regional economics, employment, demographics, as well as migration statistics. The results are depicted in Neural Networks Can Identify Outperforming Districts.

Neural Networks Can Identify Outperforming Districts



Top 40% (left) and bottom 40% (right) U.K. NUTS3 regions by predicted capital growth in 2019–20.

The neural network model can predict the majority of top and bottom performers in back-tests. These models also allow portfolio managers to understand the internal dynamics that drive changes in the market. The results are mostly in-line with our current expectations about the future; they also highlight a few regions that warrant further investigation. These methods open new avenues for quantitative forecasting and market analysis at a higher level of detail, giving us the opportunity to tailor more granular investment strategies.

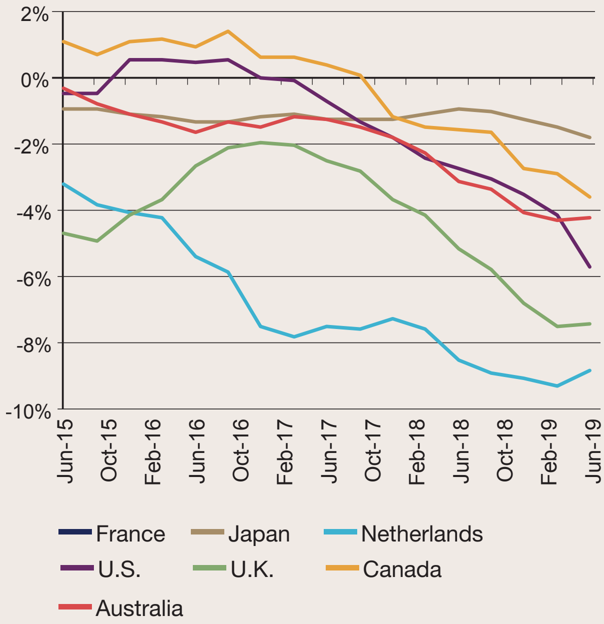
1 ey.com/en_gl/real-estate-hospitality-construction/can-real-estate-tech-return-more-than-just-investment. The Ernst and Young dataset includes $75.2 billion of investment since 2015, of which $24.6 billion was made in 2019. Figure includes firms in flexible space provision in addition to real estate finance, smart buildings, property management, construction, and tenant experience start-ups.

Global Retail Disruption—How Should Investors Respond?

- E-commerce adoption shows significant variation by country due to cultural and structural differences. Yet, the global trend toward a rising share of household consumption through online channels is likely to continue unabated for years to come. China, South Korea, and the U.K. have the most advanced e-commerce sectors, while Italy, Spain, Australia, and Japan lag far behind.
- Likewise, the stress on specific retailers and categories of shopping centers also varies greatly depending on the strength of online retailers, the amount of retail space per capita, and economic fundamentals. Shopping center rent growth will slow below inflation levels in most countries over the next five years; South Korea, Spain, and Canada should outperform. The U.K., with many retailers exercising their right to renegotiate leases, will experience rental declines over the next five years.
- Capital markets may have overreacted to these weak fundamentals in some markets, creating contrarian investment opportunities. Recommendations in Canada, China, Singapore, the U.K., and the U.S. are highlighted below.

Retail is Underperforming in All Major Investment Markets

RELATIVE CAPITAL VALUE PERFORMANCE: RETAIL VS. ALL PROPERTY



Sources: MSCI and NPI as of 2019:Q2.

RETAIL PROPERTIES ARE UNDER STRESS

Retail properties are underperforming their local property markets globally, with some retail markets under siege as e-commerce advances and shopping center values decline. In those markets, e-commerce is rapidly taking market share at the expense of traditional brick-and-mortar shopping centers, and mainstream retailers are attempting to respond. The disruption in the retail sector varies greatly by country and by format (mall, high street, open-air, etc.) within countries.

Index-based private retail returns have started to decline in almost all major countries, although there is generally a disconnect between appraised values and clearing market prices. Retail looks worst on a relative basis, as capital values have lagged overall real estate values in all countries tracked by MSCI since the third quarter of 2017 (see Retail is Underperforming in All Major Investment Markets). Recently, the Netherlands and the U.K. are showing the poorest relative performance, with retail trailing the all-property indices by 9% and 7%, respectively, over the past year. So far there are far fewer forced sellers in this cycle compared to the Global Financial Crisis, given the lower levels of debt amidst tighter regulation, so appraisals are likely lagging true market values. Investors are avoiding or under-weighting retail as future write-downs are still likely. The publicly traded real estate markets have generally been negative on retail companies, although in several countries listed non-mall companies recovered in value in 2019.

As we evaluate retail and shopping center conditions in major global investment markets, we note significant differences in key factors, such as the amount of retail space per capita, the penetration of e-commerce, and future rental growth.

GLOBAL LANDSCAPE

More than most property types, the retail environment varies significantly by country and our analysis of key success attributes contains as many micro as macro factors. The key macro attributes that we look at include space per person, Internet penetration rates, and the general location of existing retail facilities (CBD, urban, suburban, and widespread). We have also compiled forecasts of Internet and non-Internet sales growth. The Stages of E-commerce Impact table on page 49 paints a nuanced picture, with each country doing well on some measures and looking risky on others. For example, Japan and Italy are forecast to have low online penetration in five year's time, but also low retail sales growth due to sluggish economies and aging populations. The U.K. picture is mostly negative—the highest e-commerce penetration rate in 2024 coincides with the weakest rent growth of all countries evaluated.

As shown in Stages of E-Commerce Impact (below), we have grouped the 15 countries that we follow into the following categories:

- **Low Penetration/Low-to-Mid-Term Risk:** For cultural or economic reasons, these countries are adopting e-commerce at a slow pace, with limited impact on physical retail.
- **Medium Penetration/Low Near-Term Risk:** Include countries with a predominantly suburban residential and retail development pattern (creating challenges for e-commerce delivery).
- **High Penetration/ Low-to-Moderate Current Risk:** This category includes countries such as China and South Korea, which have high levels of e-commerce penetration but with low physical space and with retailers that have evolved to stay competitive.
- **Medium Penetration/High Mid-Term Risk:** E-commerce penetration is moderate to date but accelerating, creating high risk for retailers and shopping centers.
- **High Penetration/High Current Risk:** These are countries that are undergoing a rapid shift to e-commerce and also have a struggling traditional retail sector.

BEST CONTRARIAN RETAIL OPPORTUNITIES

While the restructuring of the retail and shopping center sector has many more years to play out, we are starting to see some attractive opportunities in select countries. There are few forced sellers so the volume of contrarian deals is still light. However, as values fall, some shopping center owners will see LTV levels rise, putting these centers into a breach of their loan covenants.

RETAIL PROPERTIES IN FLUX

E-commerce is a very popular retail delivery format that is growing rapidly in most major countries. Shopping center values are generally falling and are underperforming in all major countries. However, the level and growth rate of e-commerce varies significantly depending on the existing retail infrastructure, political constraints, and the economics of delivery. This is producing very different risks and threats to traditional shopping centers depending on the local country. It is also starting to generate contrarian opportunities that we describe in a forthcoming briefing note.

Stages of E-Commerce Impact

	Increasing Risk →				
Risk Level	Low mid term	Low near term	Low / moderate current	High mid term	High current
Current Online Penetration	Low	Medium	High	Medium	High
Contributing Factors	Weak economies, sales growth	High space per capita	Continued e-commerce growth	High vacancy rates	Onerous retailer rights
Offsetting Factors	Cultural / economic barriers to e-commerce	Strong trade areas, densification, experiential retail, and dispersed population	Some retailers have adapted onmi-channel. Low space per capita.	Redevelopment and densification	Distressed pricing redevelopment
Countries	Italy, Spain, and Japan	Australia, U.S., Canada, France, Poland, Singapore, and Sweden	China Tier 1 (Shanghai / Beijing), and South Korea	Germany and Netherlands	U.K.

Source: LaSalle Investment Management 2019.

The case for real estate in 2020 remains strong; the reasons for allocating part of an investment portfolio to real estate have strengthened over the last twenty years. A more diverse range of investment vehicles and risk-return approaches can be used to build a high-performing real estate portfolio in 2020–22, compared to twenty years ago. In this chapter, we review the relative attributes of different real estate financial structures and consider how they can be combined, depending on the size and risk tolerance of the investor.

Portfolio construction is now a more complex task, with so many options to review. However, it is also now possible to tailor a strategy that combines domestic, international, mainstream, and niche positions in a way that would have been inconceivable in 2000 or even in 2010. Indirect investments, niche strategies, and debt vehicles should all be assessed as part of the expanding universe of real estate options to consider in 2020. Core and non-core strategies should also be evaluated to make sure that portfolio-level risk-return attributes match an investor's tolerance level.

Finally, the annual update of our investable universe work shows how the composition of real estate now includes a very different mix of property types, depending on the lens used to observe the market. The results diverge by a significant margin when an investor focuses on the securities universe, the institutional universe of professionally-managed properties, or the total stock of income-earning properties (based on the broadest definition of non-institutional and institutional buildings together).

CHAPTER 3

The Case for Real Estate in 2020

The Case for Real Estate in 2020

National and metropolitan economies, international capital markets, and local property markets are all continually shifting, as the headwinds and tailwinds discussed in Chapter 1 set forth. Yet, the core principles underpinning an allocation to real estate remain constant. The five fundamental reasons for including real estate in a mixed-asset portfolio in the next decade are very similar to the ones we have summarized for the first two decades of this millennium. They have been proven out in real estate's performance over this period, building a stronger body of supporting statistical evidence:

- **Strong Risk-Adjusted Returns with Diversification:** Real estate raises the risk-adjusted return of a multi-asset class portfolio in two ways. First, by maintaining competitive performance over many different cycles (see Real Estate's Relative Performance on page 53). Second, by not moving in lock-step with other major asset classes, it acts as a shock absorber when stocks, bonds, or other alternatives are volatile (see The Diversication Power of Real Estate on page 53).
- **Unique Financial Characteristics with Inflation Hedging:** Leased property has a different mix of contractual income and capital value than all other asset classes. Buildings generate rental income with varying degrees of inflation/deflation protection built-in, along with an equity-like residual payment that is anchored by replacement cost and by market dynamics at the time of sale. This anchoring provides a hedge against price index (CPI or PPI) volatility and shares the characteristics of other "real" assets by trading in a narrower range than manufacturing, services or technology companies, provided that leverage levels are modest.

Westend Yards, Munich, Germany

- **Large Asset Class:** After stocks and bonds, real estate represents the third largest repository of the world's wealth. Our most recent investable universe indicates that income-earing real estate represents approximately one-sixth of the world's assets. As investment grade corporate and sovereign bond yields fall closer to zero—$15 trillion or 20% of all bonds are negative yielding[1]—real estate's positive yield looks more attractive to pension funds and retirees who live on fixed incomes.
- **Stability and Low Volatility:** Approximately two-thirds of the long-term returns from core real estate equity comes from the income component of returns, which typically exhibits bond-like stability. This ratio is even higher for real estate debt investments, where the investor is typically well-insulated from changes in the value of the collateral. Although the capital value component of income-earning properties delivers more volatility than the income component, both transaction-based and appraisal-based real estate returns exhibit a Sharpe ratio comparable to, or higher than, securitized asset classes like stocks, convertible debt, and investment-grade bonds.
- **An Accessible Asset Class:** Real estate investment vehicles have multiplied and offer both institutional and individual investors many more options than in the past. Whether held in a securitized vehicle, like a listed REIT, or in a private equity fund, real estate retains all of the characteristics over a medium- to long-term horizon.

A more diverse range of investment vehicles and risk-return approaches can be used to build a real estate portfolio, compared to 10 or 20 years ago. Higher risk strategies have included development, redevelopment, distressed assets, repositioning, and renovation for several decades. Value-add and opportunistic investments are structured to deliver different performance relative to core investments across the business, credit, and property cycles (see Core and Non-Core Real Estate sidebar on page 62).

Specialized property types that require operational expertise are growing faster than mainstream, core property types (see Niche Property Types Revisited sidebar on page 58). Investments in data centers, cell phone towers, healthcare facilities, hotels/resorts, social housing, senior housing, student accommodations, laboratories, single-family homes, and furnished apartments will alter the risk-return mix of a portfolio and increase the diversification of income streams. By analyzing each sub-sector relative to the five reasons in "the case for real estate" listed above, investors can avoid entering into operating businesses with risk profiles that behave more like venture capital or other forms of public/private equity.

1 Source: Barclays Global Aggregate Bond Index, November 2019.

Real Estate's Relative Performance

TRAILING PERIOD RETURNS BY ASSET CLASS AND COUNTRY*: TO 2019:Q3

Average Annual Total Return	Global Stocks[1]	Global RE Securities[2]	Global Corporate Bonds[3]	Global Govern-ment Bonds[4]	U.S. Direct Property (NCREIF)[5]	U.K. Direct Property (MSCI)[6]	Canada Direct Property (MSCI)[7]	Australia Direct Property (MSCI)[8]	Japan Direct Property (MSCI)[9]
1 Year	3.5%	16.8%	10.8%	10.0%	6.2%	2.0%	6.6%	7.8%	6.8%
3 Years	11.5%	6.8%	3.6%	2.3%	6.8%	6.6%	6.8%	10.2%	6.7%
5 Years	9.0%	8.9%	4.1%	3.4%	8.6%	7.6%	7.0%	11.1%	7.4%
10 Years	10.5%	11.1%	5.2%	3.6%	9.8%	9.7%	9.0%	10.3%	5.4%
20 Years	5.4%	10.6%	5.7%	4.1%	8.8%	7.8%	9.9%	10.4%	—

Stocks, REITs, bonds, and private real estate data updated to 2019:Q3, except in Japan, where 2019:Q3 returns are forecast.

The Diversification Power of Real Estate

TOTAL RETURN CORRELATIONS WITH OTHER ASSET CLASSES: 1999–2019

Correlations: 20-Year Quarterly	Global Stocks[1]	Global RE Secur-ities[2]	Global Cor-porate Bonds[3]	Global Govern-ment Bonds[4]	U.K. Direct Property (MSCI)[5]	U.S. Direct Property (NCREIF)[6]	Canada Direct Property (MSCI)[7]	Australia Direct Property (MSCI)[8]	Japan Direct Property (MSCI)[9]
Global Stocks[1]	1.00	0.64	0.12	(0.47)	0.38	0.18	0.14	0.15	0.02
Global REITs[2]		1.00	0.40	(0.07)	0.49	0.25	0.14	0.17	(0.09)
Global Corporate Bonds[3]			1.00	0.58	(0.04)	(0.24)	(0.21)	(0.24)	(0.16)
Global Government Bonds[4]				1.00	(0.25)	(0.12)	(0.16)	(0.17)	0.04
U.K. Direct Property (MSCI)[5]					1.00	0.57	0.25	0.56	(0.34)
U.S. Direct Property (NCREIF)[6]						1.00	0.64	0.86	0.15
Canada Direct Property (MSCI)[7]							1.00	0.57	(0.12)
Australia Direct Property (MSCI)[8]								1.00	0.50
Japan Direct Property (MSCI)[9]									1.00

Correlations between asset classes highlight the diversification benefits of property within a mixed-asset class portfolio.

20-Year Quarterly Annualized Correlations to 2019:Q3.

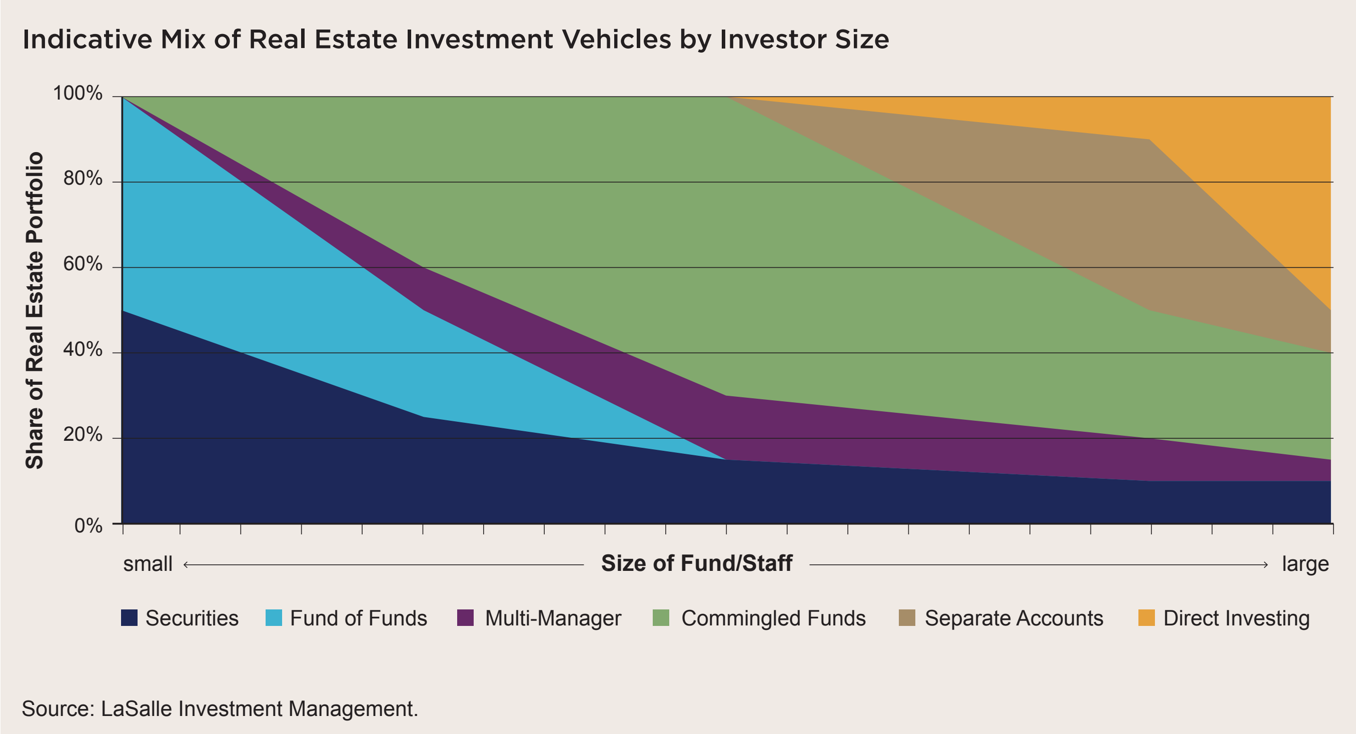
Notes on Sources:
1. MSCI All Country Gross World Total Return Index in local currency.
2. S&P Global Developed Index in U.S. dollars.
3. Citigroup World Corporate Bond Index Total Return in U.S. dollars (local currency history not available prior to 1999).
4. Citigroup World Government Bond Index All Maturities Total Returns in local currency.
5. U.S. NCREIF Property Index Total Returns in U.S. dollars.
6 U.K. MSCI Quarterly Standing Property Total Returns in British pounds, data prior to December 2001 is MSCI Annual. U.K. MSCI Quarterly Index used in all time periods available.
7. Canada MSCI Quarterly Standing Property Total Returns in Canada dollars.
8. Australia MSCI Quarterly Standing Property Total Returns in Australian dollars.
9. Japan MSCI Quarterly (based on 10 years of monthly data) Standing Property Total Returns in Japanese yen. Data to July 2019, with a LaSalle forecast for full quarter 2019:Q3 used.

A Portfolio-Level View

Real estate can be added to a portfolio in multiple ways: direct investing, commingled funds, listed REITs, whole loans, mezzanine debt, securitized debt, and multi-manager funds. The financial "wrapper" can change the risk-return attributes of real estate in significant ways. The backbone of any real estate-based core investment is a property (or a portfolio of properties) that derives its fundamental value from cash flows generated by leases and is more durable than most other asset types.

New strategies and funds are constantly being rolled out; investors need some way to put these products into a coherent portfolio framework. The two main factors to consider in constructing an institutional real estate portfolio are: 1) does the proposed investment meet the targeted risk/return objectives? and 2) does the institution have the appropriate resources to perform due diligence, make informed investment decisions, deploy funds, and keep track of performance? After these threshold questions are answered, many other factors should be considered when constructing a portfolio. These include operational features like fees, control, and liquidity provisions. They can also focus on attributes that matter more for beta-seeking strategies (diversification, ease of execution) or for alpha-seeking strategies (access to higher returns, development, international, and specialty sectors).

Each investor will place different weight and emphasis on these factors, depending on their risk-return targets and



their preference for domestic versus international investments. In Indicative Mix of Real Estate Investment Vehicles by Investor Size above, an illustrative scorecard shows how these factors might be scored for some of the most common investment vehicles that are currently available to investors. The scores could be quite different, depending on the range of vehicles being considered and the preferences of a specific investor.

Many of these strategies (e.g., debt, multi-manager, non-core, and separate accounts) are quite broad and can encompass diverse levels of fees and liquidity, depending on the target country, the focus of the sponsor, or the size of the program. The main point of the chart is that many of these structures and strategies should be evaluated and considered for inclusion or exclusion. All of them bring access to the fundamental attributes of the asset class, but each comes with different strengths and weaknesses. A portfolio-level approach can balance these strengths and weaknesses across the entire real estate allocation.

Practically speaking, the optimal real estate portfolio will vary by size and the level of resources available to investigate and manage various opportunities. It reflects a view of how to approach portfolio construction based on the potential size of the real estate portfolio and the staff resources available to do the evaluation. For example, a very small fund with few internal resources should consider an equal split between real estate securities and fund-of-funds investments; this should result in low costs, diversification, and liquidity while delegating decision making to managers with the resources to make informed investment decisions. This split could tilt to one structure or another depending on return targets, volatility tolerance, liquidity preferences, or other factors. Very large investors with a large internal staff with the ability to travel internationally and to closely monitor market trends and deal flow are capable of taking on separate accounts and direct investment programs, but as the chart implies, they may also keep commingled funds and securities in their portfolios for access to specialized skills or specialty property types.

In summary, selecting the best composition of a real estate allocation within a mixed-asset class portfolio is a complex task due to the increasing number of funds and strategies available in most markets. By thinking about the various attributes discussed here, institutional investors can develop an appropriate portfolio structure for their specific circumstances and objectives.

Genesee Plaza, San Diego, CA, USA

Indirect Real Estate Investment Strategies

An indirect real estate investment approach expands the opportunity set under consideration while employing high quality expertise for sourcing acquisitions and asset management. In the past, indirect investing in real estate was limited to the fund-of-funds model. While this is still popular amongst investors,[2] indirect investment has evolved and now includes a wider set of real estate strategies sometimes referred to as "multi-manager," including co-investments, club deals, and joint ventures (see Indirect Real Estate Definitions).

ACCESS TO MORE STRATEGIES WITH LOWER SEARCH COSTS

Unlisted property funds are a good alternative for investors seeking real estate private equity return attributes and who do not have the capability to undertake direct investment themselves. The fund-of-funds and multi-manager approaches can broaden the universe of possibilities beyond the underwriting capabilities of many institutional investors.

There are important knowledge and execution benefits of an indirect approach. By establishing a thoughtful portfolio construction plan, an investment manager can focus on allocation decisions that access expertise in terms of sectors, regions, and strategies.[3] An indirect manager can help investors implement transition and completion strategies that run concurrently with a direct strategy or to a previously established roster of commingled fund managers.

THE FULL SPECTRUM OF INDIRECT INVESTING

By deploying across the full spectrum of the indirect approach (e.g., investing in a mix of funds, joint ventures, and co-investments), investors can broaden their opportunity set in less familiar sectors and better manage risk exposures as a program evolves. For example, specialized funds might have greater access to the apartment and industrial sectors, which are chronically underweight in many investors' portfolios. By contrast, a more targeted approach might work well for the retail and office sectors, where investors may already have direct access and exposure. In each case, the expertise of the operator is matched to the geography, sector, and strategy. This multi-access point strategy reaches its highest level when the indirect manager invests across the four quadrants of real estate (debt, equity, public, and private) using a relative-value approach to exploit the pricing discrepancies between them.

2 Real estate funds cited as top preference for accessing real estate exposure by Asia Pacific, European, and North American investors. "Investment Intentions Roadshow 2019," INREV (2019).

3 Expert management skills noted amongst three most important drivers of investing into funds by European and North American investors. "Investor Intentions Roadshow 2019," INREV (2019).

Indirect Real Estate Definitions

Indirect Structure	Definition
Fund-of-Funds	A comingled fund established to acquire interests in a number of comingled funds
Joint Ventures (JV)	A partnership between a real estate operator and a *single* capital partner, typically to acquire a property or properties
Club Deals	A partnership between a real estate operator and *multiple* capital partners to acquire and manage property.
Co-investments	A partnership between a comingled property fund and a capital partner(s) whereby the capital partner provides a portion of the equity capital to acquire property, typically because the capital requirement is too large for the comingled fund.

Source: LaSalle Investment Management.

Alto Tower, Paris, France

REC Logos, Singapore

Debt Strategies

Increasingly real estate investors are making real estate debt investments alongside real estate equity allocations. Investors consider real estate debt investments for a variety of reasons including: a defensive stance when capital value downside seems as, or more, likely than upside, a preference for contractual income over subordinated operating income, or access to pools of collateral that would otherwise be difficult to assemble in an equity program. Like real estate equity, there are many styles of real estate debt investment that deliver different mixes of risk and return. Where a debt strategy fits on the risk-return spectrum will determine how various economic scenarios will affect investment performance. Regardless of this positioning, the overall risk/return trade-off of debt is different than equity, which can make real estate debt a useful complement in a diversified portfolio.

Real estate debt investment extends beyond traditionally low LTV senior mortgages and can also offer investments with both higher return and risk. Traditional mortgages behave more like fixed-income instruments and many institutions consider them as such. By contrast, the higher risk/higher return part of the market is driven by "non-traditional real estate lenders" (NTRELs).

NTRELs broadly use three methods to generate more return than a traditional mortgage. These include:

- Lending at higher LTV ratios on the underlying asset, either in a whole loan or a mezzanine loan form.
- Lending against assets undergoing renovation or being developed, increasing the risk around the underlying collateral.
- Leveraging the loan portfolio by borrowing a part of the capital used to make the loan.

Many NTRELs utilize a combination of all three options. There are also tweaks to other lending terms that can boost returns, such as recourse provisions, interest capitalization, and access to more future borrowing, if values or NOI improve.

With so many structuring options, it is difficult to characterize all NTREL performance in the same risk-return category since it is not possible to forecast exactly how each debt strategy will perform under different economic and market conditions. There is also limited historical return data and a lack of wide experience of some structures through downturns. However, previous experience in a downturn can be more important than a robust dataset. For example, these are some of the attributes that we find matter most: (1) close underwriting of the underlying collateral and a willingness to step in when business plans like an asset renovation go wrong, (2) retaining significant skin in the game even when leveraging underlying loan portfolios, and (3) careful project selection with borrowers that are local sharp-shooters with successful track records.

Our view is debt investment will be a solid return generator for investors in both stable and moderate downturn environments. Economic and real estate market conditions would need to deteriorate more to impact debt returns compared to equity investments. The trade-off for receiving more durable returns from debt is that the upside is limited and asset impairment can be rapid once value thresholds are breached.

The current economic outlook for slowing growth supports the inclusion of debt in an investors' overall real estate portfolio. Debt helps diversify the overall portfolio because it will perform differently than equity and smooth the overall performance across market cycles. The limited upside of debt is less of a negative in a mature phase of the cycle when appreciation going forward is expected to be limited.

In summary, there are many breeds of debt investment and investors should evaluate which methods are being used to enhance returns and to what degree. A balanced strategy across LTV levels, asset status, and step-in rights, could produce durable performance in mildly adverse market conditions. However, the debt markets, like the equity markets, are becoming more efficient, even for NTRELs. It is not realistic to expect high relative returns without taking some degree of risk.

Return outcomes across different real estate market scenarios for several specific debt strategies is explored in a recent paper by the LaSalle Research and Strategy team, "How Should Investors Be Thinking About Risk-Adjusted Debt Returns in European Real Estate as of October 2019?." This paper focuses on the trade-offs between different lending strategies and the returns they generate across different scenarios. It also highlights how specific structuring choices can lead to very different investment outcomes.

Presley Uptown, Charlotte, NC, USA

Durability and Duration

Currently, the average age of a company in the S&P 500 is 18 years; it was 60 years in 1958. The churn rate of companies in and out of mid-cap stock indices is estimated by McKinsey to be 75% over a ten-year period. The churn rate of properties (and listed companies) into and out of institutional REIT indices and private equity indices is much lower in well-developed markets across North America, Europe, Japan, and Australia. Changes in the composition of these indices are primarily a response to new assets/companies coming in, rather than the demise, bankruptcy or takeover of the constituent parts of these indices.

Between 1980 and 2018, the average duration[1] of an investment-grade corporate bond rose from four years to about seven years as companies extended the length of their borrowing in a low interest rate environment. Several countries and a few companies issued "century bonds,"[2] yet the vast majority of fixed-income instruments have durations of less than ten years. Private wealth is also tied to a combination of family-owned enterprises with short duration, typically less than half a generation. Research shows that the average small business is less than ten years old.[3]

The longevity of investment-grade real estate is due to its intrinsic nature—capital-intensive, fixed assets whose income-earning power erodes more slowly than other capital assets like aircraft, container ships, or computers. The average large income-earning property in an institutional index is roughly 30 years old, although this age varies by country and property type.[4] Logistics and self-storage properties average 20 to 30 years old, while office and some residential properties range between 30 and 50 years old, depending on the country.

One of the less well-understood aspects of real estate investing is how obsolescence and scrappage rates (removal from the stock) vary across property types and geography.

The capital expenditures required to keep buildings up-to-date and to implement carbon neutral or other sustainability goals are becoming understood and tracked through proptech tools such as Measurabl, Carbon Delta, and GRESB.

In the fixed-income world, the significance of long duration instruments is that they are especially sensitive to changes in interest rates. For real estate, a long economic life has a different significance, since the final payment to a real estate investor is not contractual, but depends on the rental income stream, the capitalization rate, and the discount rate at the time a property is sold. The implication of real estate longevity, then, is different from bond duration. Real estate *depreciates* in ways that bonds do not. Well-managed real estate also has income that *keeps pace with inflation* in a way that bonds do not. The decades-long age of properties in major real estate indices demonstrates that the economic life of land and buildings is more durable than nearly any other part of an investor's portfolio.

1 Duration is a financial metric for fixed-income instruments, which is based on the weighted average of the times until predetermined payments are received. It is not the term of the loan.

2 Austria, Belgium, and Ireland issued century bonds in 2019. The Walt Disney Company, the Coca-Cola Company, and the Cleveland Clinic have also issued ultra-long duration bonds in recent years.

3 Sources: S&P analysis by Richard Foster of Innosight. Investment-grade bond duration: Bloomberg Barclays Aggregate Bond indices. The average age of a small business in the U.S. is from J.P. Morgan Research 2017.

4 For some property types (logistics), the average age is less than 20 years; for others like London or New York City offices, it is much older (between 50 and 75 years). One U.S. researcher used U.S. energy information data to determine that the average age of a "mixed-use" property is 75 years, well above the all-property average. This statistic shows how trends in planning and zoning also shift over time. Mixed-use zoning in urban areas in the U.S. was more prevalent before 1940, when "living above the store" was common. Post-war suburban development patterns separated land uses. Only recently has mixed-use zoning come back into fashion in suburbia.

Niche Property Types Revisited

In the 2019 *ISA*, we highlighted the growth of niche property types within the publicly traded real estate universe, particularly in the U.S. We recommended that institutional investors consider a "completion" strategy that combines publicly traded niche properties with existing core (private) real estate allocations.

The niche sector continues to gain traction from both a global and U.S. perspective. Niche property types are producing attractive total returns and more companies have come to market. Here we address the differences in the U.S. public and private real estate indices. We also assess how niche sectors are gaining acceptance beyond U.S. borders. Finally, we highlight the defensive return profile of select public niche property types during recent market downturns, as well as the potential for enhanced risk-adjusted returns when these properties are combined with private real estate allocations.

U.S. PUBLIC VS. PRIVATE REAL ESTATE PROPERTY TYPE DIFFERENCES

Diversified core real estate is readily accessible in both the public and private markets across the globe through core open-ended funds and REITs. In the U.S.,[1] however, these markets differ markedly in terms of property type weightings. The main vehicle for private real estate—the NFI-ODCE (ODCE) universe of core open-ended funds—consists almost exclusively of the four main property types: office, apartments, retail, and industrial. Only 4% of the Index is in the "other" or niche category. This composition differs materially from that of the widely used public index. As of year-end 2018, some 59% of the FTSE NAREIT All Equity REITs Index (NAREIT) was comprised of niche property types, with only 41% allocated to the four major property types. The public niche property universe is well diversified with 15 different property types in the grouping. The largest sectors include infrastructure or cell towers, healthcare, data centers, free standing or triple net lease, and self-storage.

Although the public real estate sector has less exposure to all four major property types, most pronounced is the exposure to office properties—11% of the U.S. REIT index compared to 35% in the private index. This dynamic has evolved over time. The U.S. REIT index was more aligned with the private index as recently as 2006, when the niche sector comprised 26% of the universe. The retail sector has seen the biggest shift in the public market, declining from 24% in 2006 to 12% 2018, in part due to the steep discount for mall properties.

GLOBAL GROWTH OF NICHE REITS

As noted earlier, more than half of the U.S. public real estate universe is comprised of niche property types as opposed to traditional core property types. While the U.S. is the world leader in both the growth and relative share of niche property types, alternative property types are gaining traction and taking share in other countries as well. As we show in Growth of Niche REITs Ex-U.S. on page 59, the share of niche REITs[2] outside the U.S. is rising, growing from 2% in 2010 to 7% in 2019, along with a market capitalization jump from less than $5 billion to ~$33 billion in the same period. Outside of the U.S., the U.K. public real estate market has been one of the leaders in niche property sector growth, increasing from 3% in 2010 to over 20% in 2019. Given the strong performance and market acceptance of niche REITs in the U.S., we believe that niche REITs will continue to grow faster than core property types in many countries outside the U.S.

PERFORMANCE OF NICHE PROPERTY TYPES IN RECENT EQUITY MARKET DOWNTURNS

While the overall U.S. public REIT sector and broader U.S. equity market fell sharply during the Global Financial Crisis (GFC), several key niche REIT sectors were much more resilient and posted significant relative outperformance. This trend has also persisted in recent market disruptions or downturns. The demand drivers for four of the more defensive sectors—healthcare, self-storage, triple net leases, and manufactured housing—are less levered to the overall economy than the more economically sensitive property types, such as office and industrial. While these characteristics apply to both public and privately owned vehicles in these asset types, these properties are more accessible via public markets.

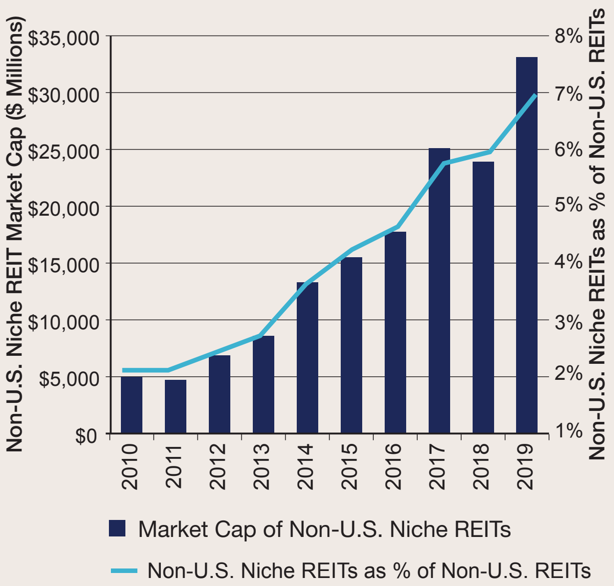
COMBINING PUBLIC NICHE EXPOSURE AND PRIVATE CORE FUNDS

Private open-ended funds are a popular and effective way for U.S. (and increasingly non-U.S.) institutions to access core real estate in the U.S. These funds are attractive due to their solid returns, low volatility, and improving transparency and liquidity. As we discuss above, they differ greatly from the public markets in providing exposure to niche property types. Public niche property type REITs have generally performed better than core property type REITs in the 10 years since the GFC, with the U.S. niche universe gaining nearly 15% on an annualized basis, outperforming the core real estate securities universe by ~2% per year.

1 We use the U.S. as an example due to the transparency of the ODCE index.

2 Based on the ex-U.S. component of S&P Developed REIT Index.

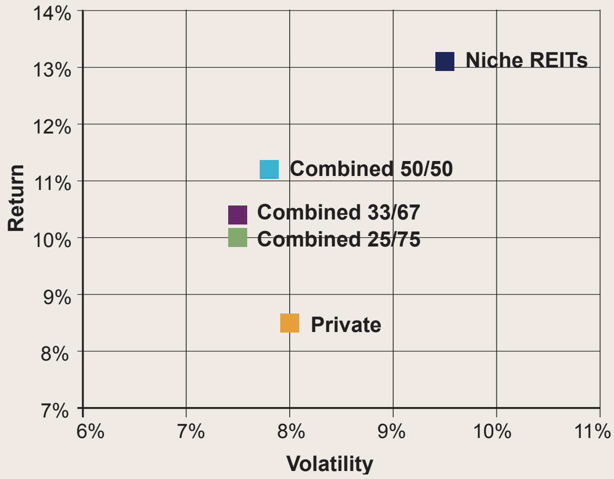
Growth of Niche REITs Ex-U.S.



Source: S&P Developed REIT Index.

Data as of November 2019.

Historical Returns and Volatility of Select Combinations of Private Core Real Estate and Niche REITs



Sources: NAREIT, NCREIF (ODCE), Green Street Advisors, and LaSalle Securities.

Data from December 31, 1998 through March 31, 2019.

Niche REIT Relative Performance in Recent Equity Market Downturns (U.S.)

Performance During Market Downturns	Lehman Bankruptcy to Trough (9/1/08–2/28/09)	Eurozone Debt Crisis (4/1/11–9/30/11)	2018 Year-end Growth Scare (9/1/18–12/31/18)
NAREIT All Equity REITs Index (total return)	-60.0%	-12.6%	-8.0%
S&P 500 Index (total return)	-41.8%	-13.8%	-13.0%

Niche Real Estate Subsector Relative Return	Relative to NAREIT	Relative to S&P 500	Relative to NAREIT	Relative to S&P 500	Relative to NAREIT	Relative to S&P 500
Healthcare	16.0%	-2.2%	3.9%	5.1%	6.7%	11.7%
Self Storage	19.6%	1.4%	12.1%	13.2%	5.5%	10.5%
Triple Net (free standing)	29.3%	11.2%	8.7%	9.8%	10.7%	15.7%
Manufactured Homes	22.3%	4.1%	19.9%	21.1%	7.9%	12.9%

Sources: FTSE NAREIT All Equity REITs Index, Bloomberg, and LaSalle Investment Management.

In the 2019 *ISA*, we suggested that investors should consider combining private core real estate with an allocation to niche property types through the public markets. We evaluated how this strategy would have performed (using three-year rolling average returns[3]) over the past 20+ years (see Historical Returns and Volatility of Select Combinations of Private Core Real Estate and Niche REITs above). All combinations tested (25%, 33%, and 50% public niche) would have produced higher returns with lower volatility than a purely private core real estate strategy. Our results provide evidence to support the positive impact of a combined public and private strategy for core real estate allocations.

SUMMARY

Many institutional investors have realized the benefits of niche property types: higher returns, diversification, and resilience during downturns. In the U.S., many core funds are increasing their allocations to these sectors. Yet adding core niche properties to a mostly private core real estate strategy remains challenging. The public markets offer an attractive and liquid way to gain exposure to niche property types and core investors should seriously consider including these property types in their real estate allocation.

3 The standard deviation of annualized, rolling three-year returns used to make private and public more comparable given the liquidity constraints and appraisal lag of private funds.

The Real Estate Universe in 2020

LaSalle's real estate universe research quantifies country and property type allocations across the world. We annually update three types of market value estimates in 201 countries: real estate owned by listed REITs and real estate operating companies (REOCs), real estate owned by institutions inclusive of both private and public, and all real estate that generates income.

Our estimates of institutionally invested real estate and income-producing property stayed flat in 2019. A slight decline in our estimate for the U.K. had ripple effects across our global estimates because we use ratios of real estate to GDP in this highly transparent market to drive our estimates in countries without bottom-up data. Decelerating appreciation in Hong Kong and China, combined with the headwind of a stronger U.S. dollar, also contributed to a lack of uplift in the aggregate figures this year. That said, there were notable increases in our institutional estimates for the U.S., Continental Europe, Singapore, and Japan, driven primarily by a combination of appreciation and construction.

Public (or listed) real estate is the only one of our three global universe estimates to increase significantly in this update. This segment expanded its share of global institutional property over the last year, growing by 5% to account for 47% of institutionally held real estate, based on gross asset value.

The Asia Pacific region's share of income-producing property remained steady at a third of the global total in 2019, up from a fourth one decade ago. We expect it to reach 40% within the next ten years. For now, the Americas remains the largest region, helped by the recent strength of the U.S. dollar.

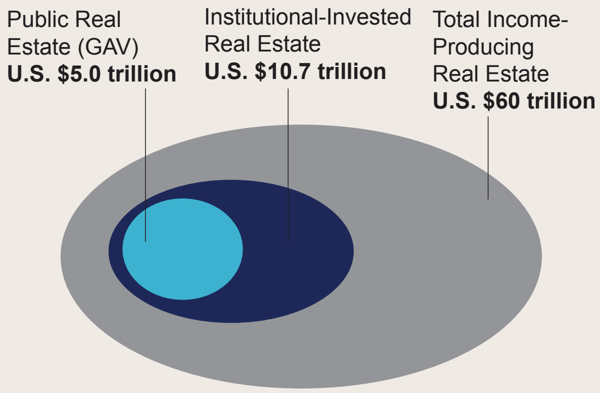
One goal in undertaking these annual estimates is to discover and highlight differences between the underlying stock of potential investments and what investors actually hold in their portfolios. This year we revisit and spotlight one area of persistent divergence: property type allocations.

The graphs show our estimates by property type for our three real estate universe categories. For all income-producing real estate, where we must rely on U.S. and U.K. data, rented residential real estate accounts for just under half of the universe and niche, or alternative, property types like self-storage and data centers account for just under a tenth.

Interestingly, neither the public market allocation nor the private institutional allocation is close to those niche and residential property type estimates. Global real estate securities appear overweighted to niche properties, whereas private institutional investors appear underweighted to niche. The global private weight to niche and residential has changed very little over the last five years.

There are plausible explanations that these tilts are the product of efficient markets. REITs, because they are often both owners and operators, are often well suited to specialize in niches. A large portion of rented residential stock consists of very small properties, often owned by individuals, which may make them challenging for private institutions to allocate to. Yet these persistent differences cannot be fully explained away, and, in our view, they provide support for considering above-index weights to both residential and niche property types in the years to come.

LaSalle's 2019–20 Global Real Estate Universe



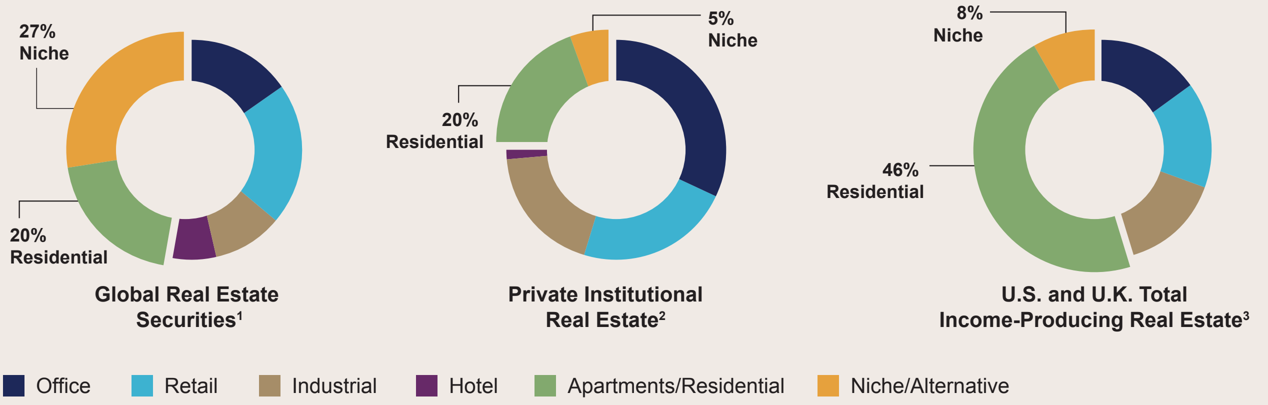
Defining the Real Estate Universe

Public Real Estate	The gross asset value (GAV) of real estate owned by REITs and REOCs listed on public exchanges. Includes vertically integrated development companies in emerging markets but not homebuilders.
Institutional-Invested Real Estate	The unleveraged total value of all professionally managed real estate portfolios, both public and private.
Total Income-Producing Real Estate	Value of existing stock of all commercial (office, retail, industrial, alternatives) real estate with the potential to be income-generating and all currently rented residential buildings. Owner-occupied residential homes, infrastructure, and agricultural land are not included.

Sources: Oxford Economics, Citigroup, Bloomberg, NCREIF, MSCI, Investment Property Forum (U.K.), National Bureau of Statistics of China, U.S. Bureau of Economic Analysis, U.S. Federal Reserve, and company financial statements.

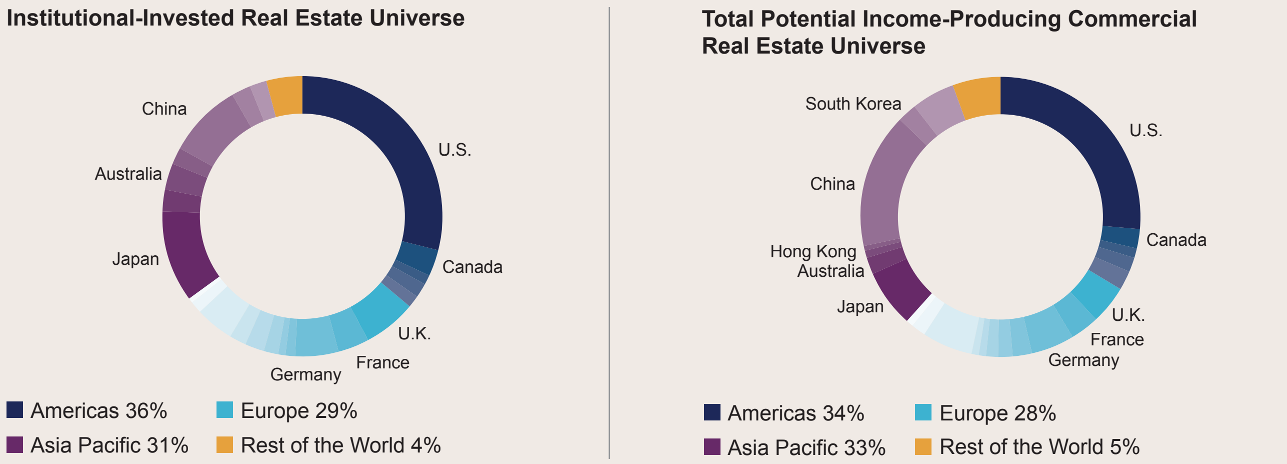
Estimates reflect data through 2019:Q3.

Varied Property Type Distribution



1. Based on the estimated gross asset value of REITs and REOCs that have a single property type specialization. Note that companies with diversified portfolios are not included here. Sources: LaSalle Investment Management Global Real Estate Securities, Citigroup, and Bloomberg. Data as of 2019:Q3.
2. Based on the ANREV, INREV, and NCREIF Global Real Estate Fund Index (GREFI). The distribution is also consistent with the sum of MSCI country index property type breakdown. Data as of 2019:Q2.
3. Based on our bottom-up estimates for U.S. and U.K. total income-producing real estate and is equal-weighted between these two markets. Estimates as of 2019:Q3.

Distribution of the Institutional-Invested Universe and Total Real Estate Universe



Sources: LaSalle Investment Management Global Real Estate Securities, Oxford Economics, Citigroup, Bloomberg, NCREIF, MSCI, Investment Property Forum (U.K.), National Bureau of Statistics of China, U.S. Bureau of Economic Analysis, U.S. Federal Reserve, and company financial statements.

Estimates as of 2019:Q3.

Core and Non-Core Real Estate

The decline of core returns from low double digits five years ago, to mid-single digits in 2019 and projected for the next several years, leads investors to wonder if they should shift to higher risk strategies to maintain the return level that their real estate allocation has earned since 2010. Many pension funds have actuarial target returns in the 5% to 7% range; core returns are likely to drift toward the low end of that range over the next three years. As a result, LaSalle is spending more time helping clients decide whether, how, and when to allocate across different risk-return styles in real estate.

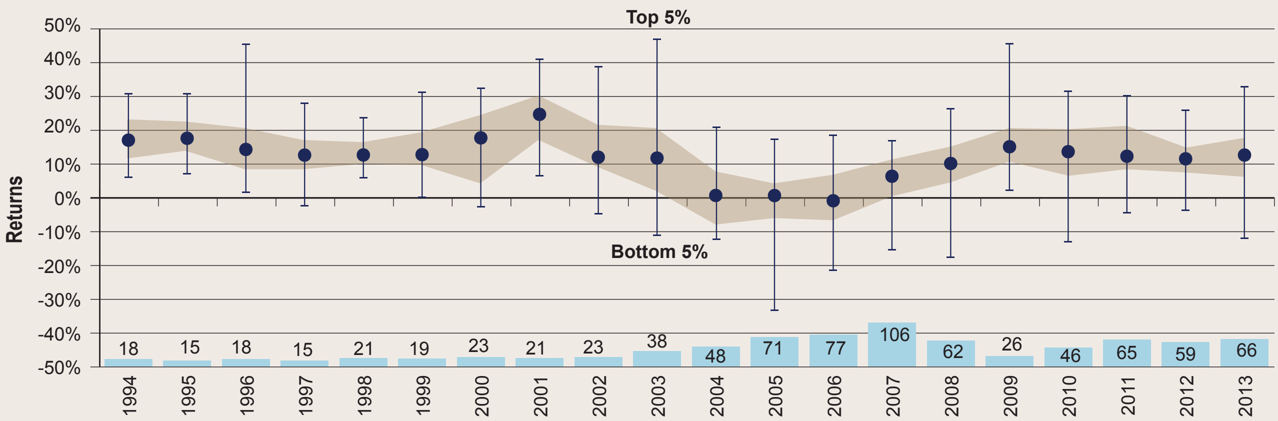
Core-oriented private equity real estate investors typically evaluate their real estate investments by focusing on annual, time-weighted performance and specifically on the two components of returns: income and capital value. Non-core investors adopt the total return approach to achieve an objective of generating "alpha" by capturing higher than core income growth or capital appreciation through active management. Core and non-core strategies play a useful role in a real estate portfolio. They possess different risk-return profiles, even though they both have most of the basic financial characteristics described in the "case for real estate." Core investments are more reliable generators of income, which is especially important for mature pension plans and retirees. Non-core returns come with less certainty in terms of timing and liquidity. The highly diverse track record of closed-end funds demonstrates the wide dispersion of outcomes generated by value-add and opportunistic strategies together.

For core strategies, the expected total return of stabilized real estate over a long-term horizon tends to be just above its income return, as the impact of the more volatile capital value component gradually diminishes over time. For both core and non-core investors, it is beneficial to consider "time-diversifying" their investments. Buying near or at the bottom of a cycle typically provides investors with higher real estate yields and better capital appreciation potential than buying at the peak. Favorable entry points offer more room for error and help investors weather a market downturn. The challenge of executing a timing strategy is that peaks and troughs are only clearly identifiable in hindsight.

Improving data on historic non-core investment returns helps demonstrate the value to limited partners (LPs) of diversification in non-core real estate investing. The chart below shows the return of closed-end funds by vintage year using data from Cambridge Associates. The vintage year is the year of the legal inception of the fund, which is typically aligned with the first close and coincides with the time when many LPs are making their investment decisions. The chart shows the median fund return by vintage year and the distribution of fund returns for that year. The variation in returns is expected, but more surprising is the average standard deviation of returns within vintage years is almost twice as a high as the standard deviation of the median return across vintage years.

The data show that diversification across vintage years is the right approach. There are challenges to achieving full diversification as portfolio context and the pacing of the return of capital cause unpredictable swings in how much money an LP has to invest in any given year. Beyond this logistical challenge, vintage year diversification should be a planned goal. To avoid weak vintage years requires accurately predicting market downturns multiple years in advance. The real estate market and capital markets are cyclical, but the ability to accurately forecast cycles several years in advance is nearly impossible.

Internal Rate of Returns by Vintage Year: Real Estate Closed-End Funds



Source: Cambridge Benchmark Data, 2019:Q1. Based on data compiled from 1,022 real estate funds, including fully liquidated partnerships, formed between 1994 and 2017. Internal rates of returns are net of fees, expenses, and carried interest.

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