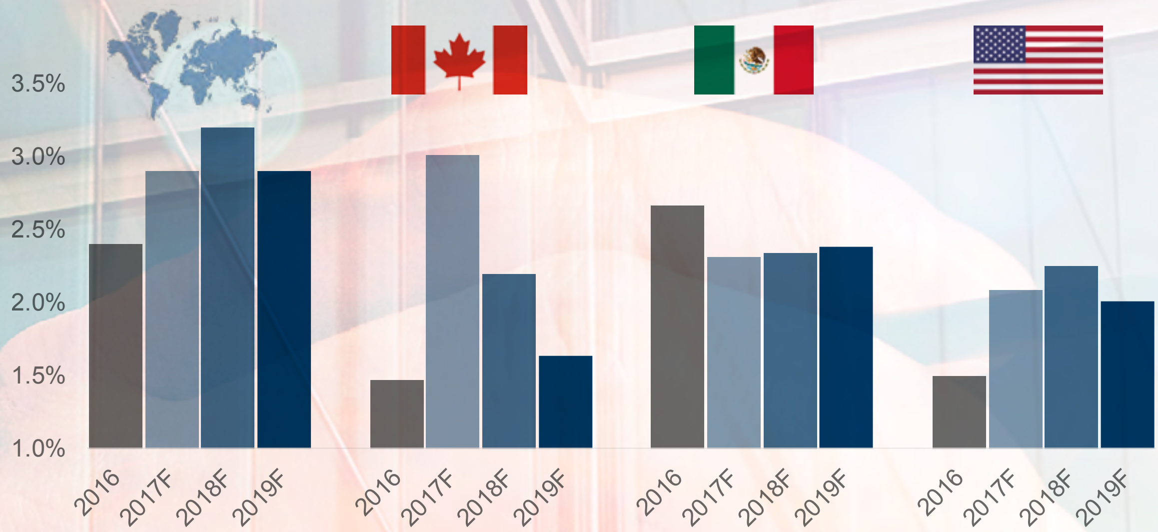
NORTH AMERICAN INDUSTRIAL FORECAST REPORT 2018-2019

METHODOLOGY

Cushman & Wakefield's market forecasts use baseline metro-level economic projections provided by Moody's Analytics. For industrial leasing conditions, forecasts are derived econometrically. The forecast models provide detailed estimates of new supply and preleasing, occupancy growth, and asking rent growth that are validated at the local level. This approach allows Cushman & Wakefield to quantify baseline forecasts across markets and time in an impartial, scientific and statistically significant way, while leveraging local market intelligence, ensuring that clients have the best possible information available to support future real estate decisions.

The Party's Not Over

Real GDP Growth (Annualized Rate, %)



Source: Oxford Economics, Cushman & Wakefield

Tremendous Resilience

The North American industrial market has experienced a record-setting run, registering some of the strongest leasing tallies and tightest market conditions on record. Across the continent, occupier demand for modern, functional logistics space has been strong, with leasing of newly constructed speculative and build-to-suit product accounting for over half of the net occupancy gains since 2016. We expect this trend to continue. Between year-end 2017 and 2019, Cushman & Wakefield anticipates the North American industrial market will post 655 million square feet (msf) of net absorption—which would place it among the strongest periods on record, second only to 2014-2016, when net absorption hit 833 msf. During the next two years, demand will be most robust in port-proximate markets, inland distribution hubs, and major population centers. From 2017-2019, the Inland Empire, Chicago, Dallas, New Jersey, Toronto, the Pennsylvania I-81/I-78 Distribution Corridor, Indianapolis, Atlanta, Phoenix, and Nashville will see the greatest net occupancy gains. When considering net absorption as a percentage of inventory—a proxy for relative demand—Mexico City, Tampa, Seattle, Monterrey and Vancouver move into the top ten. While many of these markets are also atop the leaderboard for forecasted deliveries, strong occupier demand will moderate increases in vacancy.

Renewed confidence in the economy, and in the U.S., higher levels of real discretionary income, are anticipated to boost retail sales. A stronger U.S. housing market will buttress demand for building materials, home furnishings and consumer durables. The National Association of Realtors expects existing homes sales in the U.S. to increase 3.7% in 2018, with new single-family homes sales growing 13.9%. Similarly, overall housing starts are forecast to grow by 9.4%—with single-family housing units rising by 13.1%—in 2018. Strength in single-family housing correlates well with increased retail sales as homebuyers often seek out items to stock their new residences. Although housing starts in Canada will witness a slowdown in the next two years, they are still expected to near 450,000 nationally. Pockets of multifamily and condominium oversupply in Edmonton and Calgary, as well as high home prices in Toronto and Vancouver, will weigh on construction. To the south, Mexico's residential investment is expected to tick up temporarily from historic lows as recent earthquake and hurricane damage requires rebuilding. The same is true for parts of the Gulf Coast in the U.S.

In Canada and the U.S., stronger economic growth and a much-improved manufacturing outlook will buttress leasing among occupiers and in markets most closely tied to cyclical spending. Leasing in the northern region of Mexico, including Monterrey, will continue to be driven by auto and machinery manufacturers as well as the logistics firms that support them. By contrast, Mexico City—where 80% of leasing activity is tied to distribution—retailers and third-party logistics (3PL) providers will be key demand drivers. Manufacturing conditions for tenants tied to the aerospace, chemicals, machinery, and computers and electronic products subsectors are the brightest[1]. The annual growth of computers and electronic products output is projected to be 2.6% through 2019, while the average growth of the machinery subsector output is expected to be 2.5%. If the recent strengthening of U.S. corporate investment in equipment foreshadows a stronger period of business investment—which is anticipated—then the outlook for both sectors will strengthen further. For the chemicals subsector, demographic tailwinds for the pharmaceutical industry from an aging population, is expected to power output growth of 2.5% annually through 2019. Stronger global growth and an uptick in air travel will be tailwinds for tenants connected to aerospace products and parts, where industry sales are expected to see a strong 3.8% average growth rate through 2019. Given current geopolitical tensions, increased defense spending could further boost output for the aerospace market.

In the coming years, following the implementation of energy reform in 2013 that ended 75 years of state monopoly in the Mexican oil and gas sector, petrochemical companies are likely to emerge as a more significant component of Mexico's tenant mix. The reform—meant to attract private investment, to modernize the Mexican energy industry, and to boost economic growth—will change the way value chains can be consolidated. U.S. oil companies, specifically, are eager to gain access to the new market. In 2016, the first deep-water oil licenses were awarded to American companies that won five out of eight blocks up for bid in the Gulf of Mexico. In 2017, the first of many significant investments under the new legal framework took place with Chevron signing a contract for deep-water

1 According to November 2017 forecasts from the Manufacturers Alliance for Productivity and Innovation (MAPI) Foundation.

exploration and Texan refiner Tesoro becoming the first private firm to win the right to transport refined oil through Mexican state-owned pipelines.

The New Kid on the Block: newCommerce

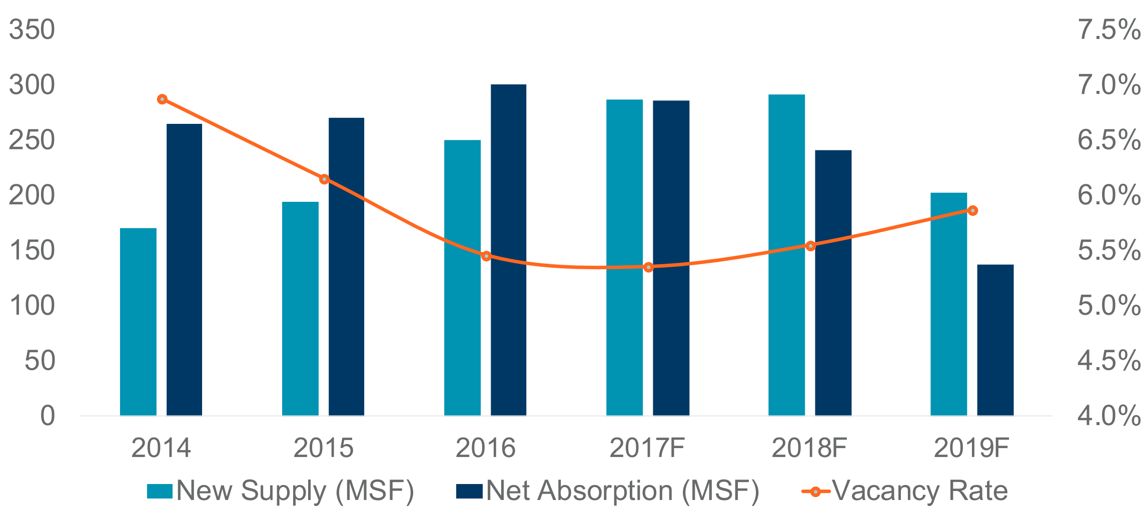
In just five years, eCommerce distribution space demand[2] has grown from less than 5% of North American leasing in 2013 to about 19-20% of all new leasing in North America—with it comprising an even higher share in the U.S. at about 20-22%. Online sales in the U.S. represent 9.3% of total retail sales—while in Canada it comprises just 7.2% of all Canadian retail sales. Even so, online sales are growing nearly four times faster than overall retail sales (15.6% versus 4.2% in Q3 2017), demonstrating the potential for further growth and disruption in both countries. A significant and growing share of online sales are General Merchandise, Apparel and Accessories, Furniture and Other Sales (retail sales categories)—commonly referred to as GAFO[3] —which represents merchandise normally sold in department stores that typically require warehousing and distribution. These sales represent 26.9% of U.S. online transactions. Mexico's $8.5 billion in online purchases represents only 2.0% of its total retail sales, but that share is

2 This includes dedicated eCommerce fulfillment space and does not include shared distribution space for both direct-to-consumer fulfillment and store replenishment.

3 GAFO includes the following kinds of retail businesses: general merchandise stores (NAICS 452), clothing and clothing accessories stores (NAICS 448), furniture and home furnishings stores (NAICS 442), electronics and appliance stores (NAICS 443), sporting goods, hobby, book and music stores (NAICS 451), and office supplies, stationery, and gift stores (NAICS 4532).

Don't Bet Against North America's Industrial Fundamentals

Solid Demand But New Deliveries Will Slowly Elevate Vacancy



Source: Cushman & Wakefield

expected to rise—especially as the government continues to deepen its financial reforms providing greater access to the formal banking sector, which would facilitate online sales activity. Its National Banking Commission estimates that nearly one-third of Mexican adults do not currently have access to a bank account, an obvious obstacle to online purchasing.

Online business-to-business (B2B) commerce is also rising rapidly. B2B describes the electronic commerce between businesses at the level of manufacturers, wholesalers, and retailers. A finished manufactured product is often the result of multiple B2B transactions as goods and materials needed for manufacturing a final product are purchased and distributed. The acquisition and transport of these inputs invariably requires shipping, the eCommerce value of which has more than doubled in almost every sector in the U.S. since 2003. According to the U.S. Census Bureau, online sales of manufacturing shipments have grown to embody almost half of the overall value of them. The eCommerce value of wholesale trade—an intermediate step in the distribution of merchandise—is also a major theme in B2B eCommerce. Online sales made up roughly a quarter of all merchant wholesale trade in 2015 (the most recent year for which data is available), up from 18.5% in 2010.

With a focus on individual packages rather than pallets, differences in inventory turns, significantly greater product variety, ever-quicker and reliable delivery expectations, and a need to accept returns, eCommerce is an intense user of space. A recent study[4] by global real estate investment trust, Prologis, concluded that, on average, electronic fulfillment required three times the distribution center space required for traditional brick-and-mortar store replenishment. These characteristics are also increasing the need for logistics-related real estate closer to urban areas to meet customer demands for same-day/next-day delivery. For many retailers, future sales—and profits—will be dependent on how quickly and consistently goods can be delivered to customers in major metro areas. Electronic fulfillment models are evolving rapidly as retail chains wrestle with inventory management and seek supply chain strategies that cost-effectively keep store shelves stocked, while also meeting the increased service demands of eCommerce. It has become clear that neither one size—nor supply chain strategy—fits all. It is also clear that in the paradigm of an online world, the interaction that a retailer has with the customer often occurs on the retailer's website, and on the customer's doorstep. Developing robust, flexible, highly responsive final-mile-networks capable of consistently meeting delivery commitments in an ever-tightening time window will remain an essential component of doing business.

Because large tracts of entitled land in the location and configuration desired by tenants is often difficult to find, upward pressure on infill land pricing—and the premium placed on assembled, entitled land ready for development—will continue to increase. That supply/demand imbalance is also why infill-sited warehouse product will remain among the best performing of all commercial real estate segments. Over the past two years, occupancy rates for infill warehouse buildings in the U.S. have

4 The Global E-Commerce Revolution. (2016). Retrieved from http://www.prologis.com/logistics-industry-research/global-e-commerce-impact-logistics-real-estate

tracked more than 350 basis points (bps) higher than less supply constrained greenfield warehouse product. In 2017, infill warehouse is expected to boast the highest year-over-year average annual rent growth of any property type in the U.S. at 9.8%, compared to 3.7% for industrial, 4.7% for all classes of office product, and -3.4% for shopping centers.

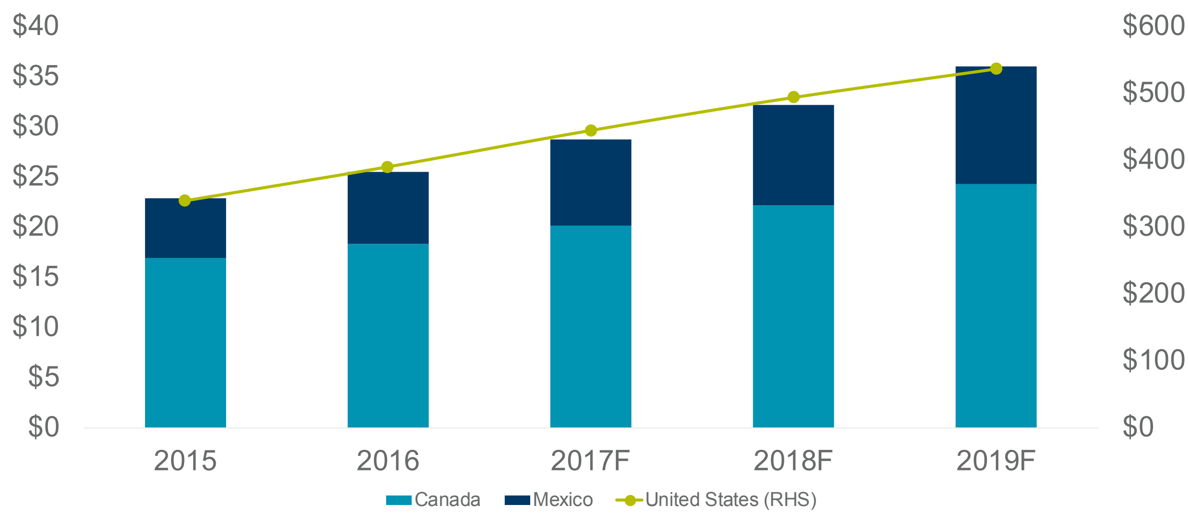
The advancement of omni-channel shopping, technology, bricks-and-mortar experiential retail, and the need to coordinate supply chain functions, will continue to have widespread effect on the demand for logistics real estate. Although supply chain strategies will remain as varied as the retailers who pursue them, it is clear that logistics is becoming a revenue driver with high-velocity distribution centers increasingly considered strategic assets of a retailer's business.

If You Build It, They Will Come

Historically strong demand and low vacancy will continue to spur development. Across North America, demand has exceeded supply for the past six years. By year-end 2017, supply will finally catch demand, and then outpace it in 2018 and 2019. North American industrial markets are expected to deliver 782 msf of new product by year-end 2019. Most of these deliveries will come online in the U.S where the development pipeline is currently at its highest level this cycle. In Canada, demand will run well ahead of supply in 2017, with the gap slowly closing in 2018 and 2019 despite land scarcity and development costs weighing on the pipeline. In Mexico, both supply and demand will decelerate in 2017 with net absorption just above new deliveries, before both move up to-and-fro in 2018 and 2019.

eCommerce Intensifies Connection of Consumers & Industrial

eCommerce Sales (Billions of USD)



Statista, U.S. Census Bureau, Cushman & Wakefield

Among North American industrial markets, Chicago is forecast to see the greatest amount of new product delivered by year-end 2019, followed by the Inland Empire, Dallas, Atlanta, New Jersey, the Pennsylvania I-81/I78 Distribution Corridor, Indianapolis, Toronto, Nashville, and Vancouver. Despite the uptick in U.S. deliveries, supply and demand remain in relative equilibrium in most markets. In fact, of the 34 U.S. markets with over 1 msf of speculative product in the pipeline as of Q3 2017, vacancy rates continued to tighten in over half, indicating a need for additional space.

Somewhat surprisingly, after three years of red-hot demand for logistics space—which has driven vacancy rates in many markets to historic lows—development remains constrained. In fact, controlled development of industrial property has been a unique feature of the current expansion, in stark contrast to the speculative run-up in 2004-2007 prior to the financial crisis. Looking forward, concern over the length of the current economic cycle, the growing institutional profile of developers and capital partners, recent restrictions on development funding by banks (e.g., Basel III and Dodd-Frank), and lack of developable land and rising construction costs—including record-high land costs in many markets—will likely slow the pace of new deliveries in 2018 and 2019. Consequently, preleasing rates are expected to remain above 40% in the U.S. through 2019.

Slow Rise

One impact from strong demand and controlled supply will be a slow rebalancing of vacancy, not a rapid rise. In 2009, North America's industrial vacancy rate peaked at 10.2% and, by the end of 2017, is expected to decline to 5.4%—a nearly 500 bps decline. This despite more than 1.3 billion square feet of new supply hitting the market between 2009 and year-end 2017. As a reference point, after the 2001 recession in the U.S., North America's vacancy rate peaked at 8.8% in 2003 and only fell 140 bps before bottoming out in late 2007. By year-end 2019, North America's industrial vacancy rate is forecast to rise by 50 bps to 5.9%, still well below the 20-year historical average of 7.9%. The entire increase will be attributable to the U.S., where vacancy is expected to rise by 50 bps—to 5.9%—for all industrial product types. Such tight market conditions will continue to create a challenging operating environment for industrial occupiers seeking to expand their supply chain networks.

Vacancy rates will continue to be lowest in densely populated markets with high barriers to supply. Greater Los Angeles will rank as the tightest market in North America through 2018, with vacancy anchored below 2%. Similarly, vacancy rates in Toronto and Vancouver will track below 2.5%, while Mexico City's vacancy rate is expected to register 4.8% in Q4 2019. Of the top 20 markets with the most supply delivering between 2017 and 2019, 13 will also rank in the top 20 tightest markets in 2019, highlighting the significant constraints these markets will face.

Over the next two years—buoyed by Canada's recent economic rebound—Calgary, Montreal, Edmonton, and Vancouver will experience the greatest tightening among North American markets. Vacancy in those markets will decline by 210, 100, and 70 bps for the latter two, respectively. While those vacancy declines are partly due to a pullback in supply from 2016-2017, stronger demand is also a driver. In the U.S., St. Louis, Phoenix, the Pennsylvania I-81/I-78 Distribution Corridor, and Northern California's San Francisco Peninsula and Oakland will be among those markets experiencing the steepest decline in overall vacancy rates. Mexico's Monterrey will see its vacancy rate decline 20 bps, ranking it 11th in North America.

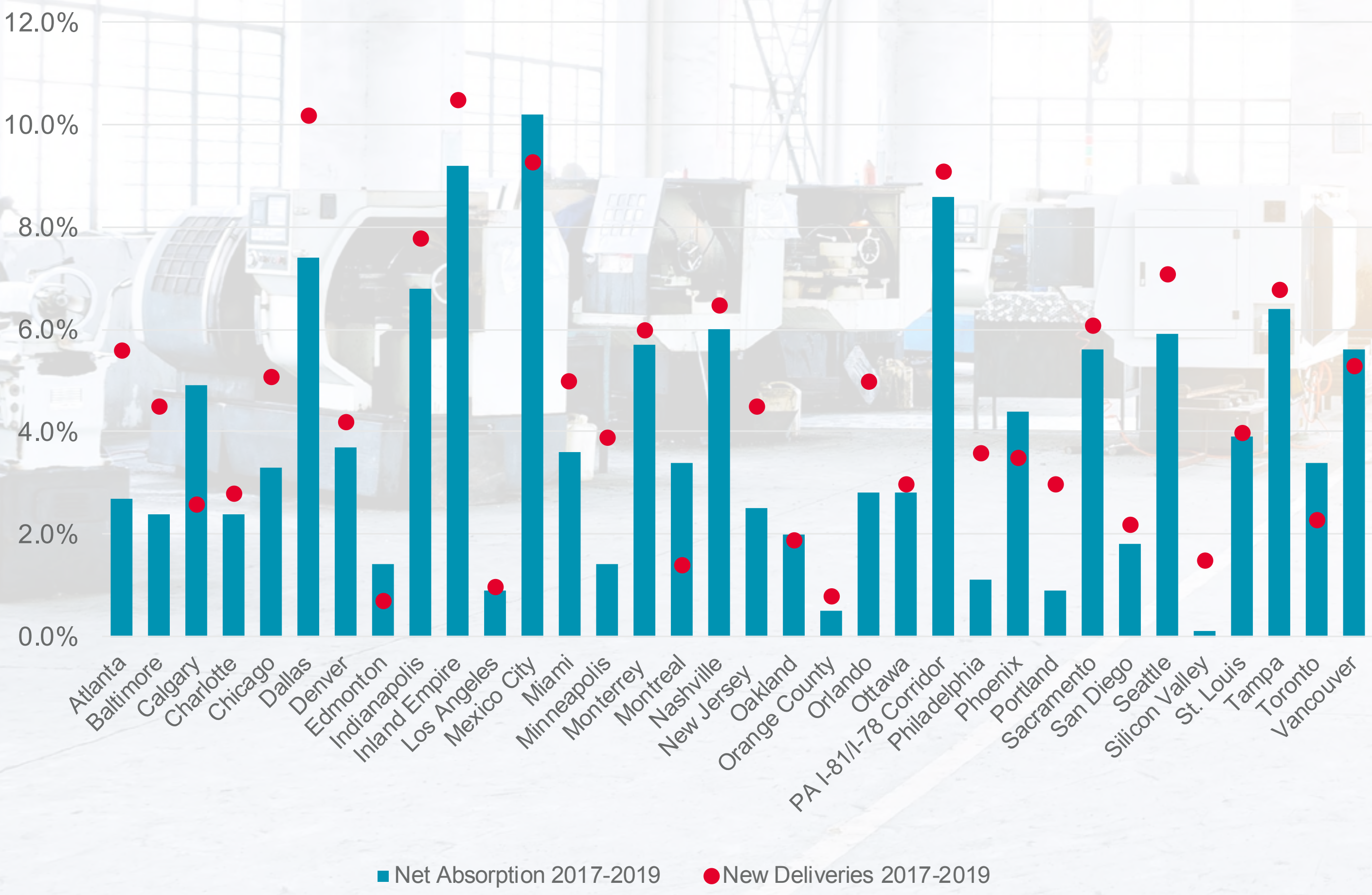
Rents Will Run, But Slower

Growth in year-end asking rents across North America is expected to decelerate slowly over most of the forecast horizon. By

North America's Industrial Supply & Demand

North American Industrial Supply & Demand Forecast

All Types, Net Absorption and New Deliveries 2017-2019 (% of Inventory)



Source: Cushman & Wakefield

the end of 2019, rent pressure in the U.S. and Canada will help push the continent's asking rent growth, which is expected to increase by 3.7% in the U.S. and 3.8% in Canada for overall industrial product of all classes. Average annual rent growth—the average of year-end growth rates from 2017 through 2019—will be highest in the Canadian cities of Toronto, Vancouver and Montreal. In the U.S., Oakland and the Inland Empire, Sacramento, Northern New Jersey, Orange County, and Miami will lead with the strongest annual rent growth, more than 3% over the forecast horizon. The outlook is less positive for Mexico. Falling rents will be exacerbated by a weakened peso, causing rent growth to be slightly negative in 2017 and 2018 before stabilizing and increasing by 0.8% in 2019, the increase occurring in tandem with a small drop in vacancy and limited new deliveries.

North American Industrial Demand

All Types, Net Absorption (SF)

	2014-2016	2017-2019
Atlanta	26,068,200	15,667,700
Baltimore	15,584,800	5,012,500
Calgary	5,695,844	6,235,050
New Jersey	35,683,700	22,647,300
Charlotte	13,073,300	4,383,800
Chicago	54,451,800	40,589,400
Dallas	52,987,500	38,902,000
Denver	8,450,200	9,296,300
Edmonton	-6,960,722	1,772,251
Indianapolis	17,569,600	18,341,100
Inland Empire	66,709,000	51,290,600
Los Angeles	42,251,800	9,820,800
Mexico City	12,122,951	10,904,311
Miami	8,152,000	5,889,500
Minneapolis	7,597,800	1,571,600
Monterrey	5,689,165	5,482,146
Montreal	9,060,790	9,696,291
Nashville	16,425,000	13,078,300
Oakland	8,677,700	3,450,800
Orange County	8,806,000	1,508,100
Orlando	9,312,600	3,395,600
Ottawa	49,221	654,266
PA I-81/I-78 Corridor	41,572,900	23,803,100
Philadelphia	11,033,700	3,379,000
Phoenix	10,849,500	14,150,800
Portland	10,870,900	1,790,500
Sacramento	7,408,100	7,891,300
San Diego	5,938,400	3,022,800
Seattle	12,014,700	9,009,700
St. Louis	11,727,600	9,784,300
Tampa	2,898,000	5,427,600
Toronto	33,672,617	27,564,412
Vancouver	12,091,951	11,974,694

Not Too Hot, Not Too Cold

The outlook for the North American economy is one of tempered growth. For the first time since the financial crisis, we enter a new year with synchronized global growth and a global economy that appears to have regained its footing. Real world GDP—a harbinger for growth in North American industrial demand—reaccelerated faster than expected in 2017, to 2.9%, from 2.4% in 2016. Real world GDP is also expected to grow by 3.2% in 2018 and by 2.9% in 2019. Stabilizing oil prices, rebounding global consumption, increasing manufacturing activity, and greater trade flows are further reason for optimism. They also suggest that the bumpy ride of the last three and a half years—during which major pullbacks in private sector investment occurred as energy profits plummeted, the scare of a hard landing in China arose, and consumer sentiment retreated—are reflected in the rearview mirror. This is especially good news for Canada and Mexico, whose economies rely more on exports as a source of growth. Continued job creation, stronger wage growth, and impending tax cuts in the U.S., should buoy household wealth and spur stronger consumer spending. Among North America's metros, the strongest economic growth—the average annual growth rate of real gross metro product from 2017 to 2019—will be concentrated in the U.S., with

Orlando (5.9%), Jacksonville (4.9%), Raleigh (4.7%), Tampa/St. Petersburg (4.6%), Miami (4.4%), Las Vegas (4.3%), Austin (4.3%), Portland (4.2%), Columbus (3.8%), Dallas/Fort Worth (3.8%), Charlotte (3.8%), Phoenix (3.7%), and Seattle (3.7%) the strongest performers.

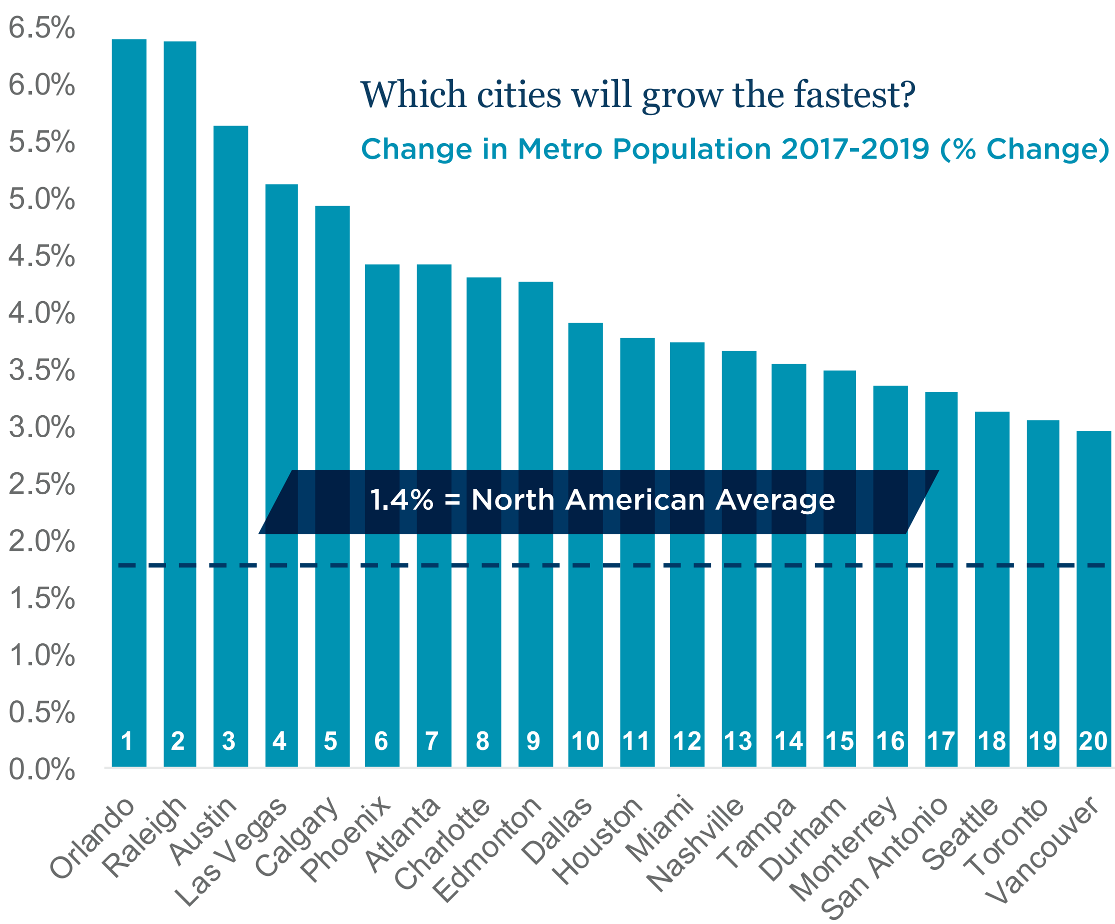
Follow the People

Throughout an economic cycle, demand for warehouse space responds to the immediate economic environment and the near-term outlook. Over the long-term, population and demographics drive demand patterns. Over the next decade, total population growth across the continent is expected to slow as the populace ages, particularly in Canada and the U.S. This will increase the importance of immigration in both countries as an avenue to augment the workforce. Mexico City, New York, Los Angeles, Toronto, Chicago, Dallas, Houston, Miami, Philadelphia, and Washington, DC will remain the most populated North American cities in 2019. Given the trend toward urban and suburban densification—city center sprawl to surrounding areas that creates

Follow the People

Source: Oxford Economics, Moody's Analytics, U.S. Census Bureau geographically larger metropolitan areas—distribution markets that support the flow of goods to the largest cities (e.g., Central and Northern New Jersey and the Pennsylvania I-81/I-78 Distribution Corridor) will benefit. The fastest growth in population is projected to occur in major secondary U.S. and Canadian cities including Orlando, Raleigh, Austin, Las Vegas, Calgary, Phoenix, Atlanta, Charlotte, and Edmonton. These cities will have an average growth rate that is nearly three times the average of all cities on the continent. As they grow, so will demand for industrial real estate.

Demographics and the undercurrents of aging will impact the industrial market through 2019 and beyond. Over the past five years, U.S. and Canadian baby boomers began leaving the labor force. This demographic shift will fuel demand for pharmaceuticals and medical products. According to the U.S. Census Bureau, during the next ten years, the population of Americans aged 65 and older will grow by an average of 3.3% each year and will account for slightly more than 20% of the total U.S. population by 2030. Since roughly half of an individual's lifetime medical expenditures occur after age 65,



this group stands to drive substantial gains in healthcare demand.

To capture significant operational savings, many healthcare systems in the U.S. and Canada are engaging in supply chain overhaul to ensure that their distribution assets and logistics strategies are aligned to provide the most cost-effective, sustainable solutions. The average hospital carries 6,000 to 8,000 stock keeping units (SKUs) of in-house inventory at any one time, but it may warehouse and distribution 35,000 SKUs or more end-to-end. As a result, supply chain costs can consume 40% of total operating budgets, the second-largest expense for hospitals after labor. Even small improvements in supply chain performance can translate into tremendous bottom-line savings. This dynamic will favor 3PLs capable of offering inventory management, cold-chain logistics, just-in-time deliveries for healthcare providers with limited on-site storage space and home-healthcare deliveries to residential settings.

A More Modest Sizzle

Tax reform legislation has been approved by both houses of the U.S. Congress, although as of this writing, differing House and Senate bills need to be reconciled. There are aspects of the tax proposals that could modestly boost future demand of logistics space by retailers. Because the retail sector pays among the highest

The Leaderboard

Forecasted Fundamentals for North American Industrial Markets

NET ABSORPTION 2017-2019

MARKET	MSF
Inland Empire	51.3
Chicago	40.6
Dallas	38.9
New Jersey	30.2
Toronto	27.6
PA I-81/I-78 Corridor	23.8
Indianapolis	18.3
Atlanta	15.7
Phoenix	14.2
Nashville	13.1
Vancouver	12.0
Mexico City	10.9
Los Angeles	9.8
St. Louis	9.8
Montreal	9.7
Denver	9.3
Seattle	9.0
Sacramento	7.9
Calgary	6.2
Miami	5.9

VACANCY 2019

MARKET	Rate
Los Angeles	1.5%
San Francisco	1.7%
Oakland	1.8%
Vancouver	2.1%
Toronto	2.1%
Orange County	2.3%
Nashville	3.3%
Silicon Valley	4.3%
New Jersey	4.5%
Charlotte	4.7%
Montreal	4.8%
Mexico City	4.8%
Seattle	4.8%
PA I-81/I-78 Corridor	4.9%
Indianapolis	4.9%
Inland Empire	5.3%
Denver	5.3%
San Diego	5.6%
Calgary	5.8%
Miami	5.8%

DELIVERIES 2017-2019

MARKET	MSF
Chicago	62.7
Inland Empire	58.4
Dallas	53.7
Atlanta	32.3
New Jersey	30.7
PA I-81/I-78 Corridor	25.3
Indianapolis	21.1
Toronto	18.6
Nashville	14.0
Phoenix	11.1
Seattle	10.9
Philadelphia	10.9
Los Angeles	10.6
Denver	10.6
St. Louis	10.1
Mexico City	9.9
Baltimore	9.4
Sacramento	8.7
Miami	6.1
Orlando	6.1

effective corporate tax rate of any sector—at or close to the maximum 35%—a lower corporate tax rate might encourage more investment in U.S. operations, including supply chains. But in terms of increased consumer consumption—a key driver of logistics demand—the likely impact would be slight. Cushman & Wakefield believes that, over the medium-term, the tax cuts provided for under the current proposals are unlikely to generate significant additional economic growth or to push up inflation expectations significantly.

The summary of projections from the Federal Open Market Committee—the body within the U.S. Federal Reserve charged with determining monetary policy—suggests that three interest rate hikes to the federal funds rate are expected in 2018. Even with tax cuts, the consensus forecast calls for monetary policy to tighten only marginally faster than was expected otherwise. That means short-term interest rates will remain below their normalized rate—the rate at which monetary policy neither stimulates nor contracts the economy—for at least another few years.

Banxico, the Bank of Canada, and the Federal Reserve have all raised overnight rates in 2017, and are among the few central banks in the world doing so. Note that central banks typically raise rates under two circumstances: when an economy is performing well enough that higher costs of capital will not inhibit growth, or when an economy is over-heating (or is likely to), putting pressure on inflation. Over the last few years, however, while the Federal Reserve and the Bank of Canada have raised rates due to rosier growth prospects, Banxico has raised rates to combat inflationary effects of exchange rate and commodity price movements. All three banks are now witnessing solid labor market conditions in their respective economies—an indication that monetary policy actions taken to date have not caused the North American economy to veer off course.

It's Getting Crowded, and Costly

Labor markets in North America are tight and getting tighter. From 2014-2016, North America added 10.3 million nonfarm payroll jobs—as many as it did at the height of the last expansion (2005-2007). Such strong job creation has helped power historically strong demand for industrial space and has made finding adequate warehouse labor an increasingly difficult, and costly, task. Labor markets in all three countries are now nearing, or are at, full employment. The unemployment rate in Canada, Mexico, and the U.S. are forecast to end 2017 at roughly 5.9%, 3.4%, and 4.0%, respectively. For perspective, commonly accepted definitions of full employment are associated with unemployment rates of 6.0% in Canada, about 4.0% in Mexico, and between 4.0-4.5% in the U.S. With continued demand for labor—and less of it readily available—there is likely to be even more upward pressure on wages.

It also means that finding available and appropriately skilled warehouse labor, at modest wages, will remain a challenge through 2019. In the U.S., the Employment Cost Index—a quarterly economic series detailing the changes in the costs of labor for businesses in the economy—has risen since 2016 at a faster pace for warehouse workers than for all civilian workers. This trend is mirrored in forecasts for income: the largest growth in real per capita income will be in industrial markets, particularly those in Florida and distribution-centric markets in Pennsylvania and the Midwest. Since labor

Infrastructure

Infrastructure improvements will remain a hot topic through 2019. The U.S. population has more than doubled since the 1960s, when most of the nation's major infrastructure systems were designed and its roads, bridges, waterways are in poor conditions. The Trump Administration has made infrastructure a key issue, but the outcome of its plan remains uncertain.

» **How Big is the Problem?** The American Civil Society of Engineers estimates a total "infrastructure gap" of nearly $1.5 trillion needed by 2025. Similarly, the U.S. Department of Transportation estimates that over $800 billion is required just to shore up the country's roads and bridges.

» **What is the Plan?** The White House's 2018 budget proposal elaborated on the President's infrastructure plan worth $1 trillion. According to the proposal, funding would mostly consist of private capital that the administration says would be incentivized by $200 billion of new federal spending, including low-cost loans. The proposal consists of expanding tax-exempt bonds, increasing public-private partnership, and speeding up the permitting process.

» **Where Does It Stand?** The administration has stated that it plans to make infrastructure a key policy priority in 2018. It will likely be a tough sell. Congressional members of both parties have been slow to embrace the plan. Further, portions of the impending tax bill eliminate the tax advantage of public-private partnerships deals—so-called private activity bonds—which the administration had hoped would be a staple of the original infrastructure plan. As a result, the likelihood of advancement in 2018 is a toss-up, at best.

typically accounts for 50% or more of traditional warehouse operating costs, the relationship between labor supply and location is significant. As headcounts in modern fulfillment centers rise, labor conditions will increasingly be prioritized in site selection. Occupiers will seek sites with sufficient labor to keep headcounts at sustainable levels. Increasingly, they will be required to pay-up to ramp-up warehousing and fulfillment operations.

Upbeat Consumer Sentiment Bodes Well

The combination of strong labor markets, low interest rates, and soaring equity markets has fostered improved consumer confidence, particularly in the U.S. where the Conference Board's Consumer Confidence index registered its highest level in 17 years in November 2017. There are strong links between consumer optimism, wealth, and spending. In North America, reliance on consumer spending is perhaps even more acute than elsewhere in the world. In 2016, consumer expenditures accounted for more than two-thirds of North American GDP, with the U.S. leading (69%) and Mexico not far behind (67%). In Canada, consumer spending represents closer to 59% of GDP—still a substantial component of economic growth and a key driver of industrial leasing.

Higher consumer confidence alongside healthy household balance sheets and relatively low interest rates suggest that U.S. consumer's recent dip into savings may continue, as accelerating wage growth is lagging behind spending. In the U.S., forecasts for consumer spending growth, adjusted for inflation, currently range from 2-3% for 2018 and 2019. The storyline is a bit different in Mexico. Movements in exchange rates and commodity prices unleashed inflation over the past two years, leading to higher interest rates that have pressured credit growth and pushed the savings rate to a nearly two-decade low. Despite that, consumer spending is still expected to remain between 2-3% in Mexico through 2019. Meanwhile, consumer spending in Canada will be the strongest among North American economies in 2017—with a 3.5% growth rate compared to 3.2% in Mexico and 2.7% in the U.S. Still, the reality of high household debt and rising interest rates in Canada will cause consumer spending to stabilize and moderate, growing between 1.8-2.3% in 2018 and 2019.

May I Carry That for You?

Because 3PLs provide an array of services to customers across a broad spectrum of industries tied to consumption, demand for their services tend to reflect trends in consumer spending. 3PL demand is also affected by the number of firms outsourcing warehousing functions. Early in the economic expansion, when firms were retooling after the recession, there was an uptick in outsourcing of warehouse operations to 3PLs, driven by a desire to protect profit margins by moving from fixed-cost warehouse expenses to variable service fees that were more reflective of demand. More recently, there has been a shift toward vertically integrated logistics networks that offer a full range of supply-chain solutions. Given the increasing complexity of logistics, this trend will continue. The increased adoption of just-in-time supply chain management, through which firms cut inventory costs by shifting to smaller, more frequent delivery of inputs, will also continue to boost demand for 3PL services.

In recent years, the use of technology in warehouse operations has increased. Many firms are now using supply chain management applications and leveraging technology to help reduce inventory and lower costs. For instance, some operators have started using wireless and mobile internet technology to aid in tracking and monitoring product from the assembly line to the loading dock. With each passing year, logistics management is becoming more technologically advanced and more capital intensive. Growing demand for electronic fulfillment—which requires more rapid inbound and outbound movement of goods—will spur the implementation of new technologies in warehouse management. Advances in real-time data collection and development of rapid track-and-trace technology will continue to improve efficiency. Even modest improvements in barcode scanners and inventory systems can have big impacts on productivity. These changes will further benefit larger, integrated 3PLs that are capable of investing capital in proprietary technologies.

Risks Take a Regional Focus: NAFTA 2.0

Among the greatest risks to the industrial outlook is trade policy. Both downside and upside risks are becoming more regional with politics and policymaking key determinants of how the North American economy and industrial market will perform. Uncertainty surrounding the North American Free Trade Agreement (NAFTA) has weighed on Mexico's private investment during 2017, and will likely continue to do so until there is greater clarity on the treaty's status.

NAFTA has had a profound effect on the North American industrial market. Since it took effect in 1994, the amount of truck traffic flowing between the U.S., Canada, and Mexico has increased dramatically, with annual loaded truck containers bound for the U.S. from its northern and southern neighbors increasing 184.1%. As cross-border trade and foreign direct investment flows have increased, so, too, has the need for additional warehouse inventory. Since 1994, North American warehouse stock has grown by over 5 billion square feet, with U.S. warehouse inventory growing by more than 3.5 billion square feet.

Under NAFTA, supply chains across North America have largely become supranational, allowing tariff-free trade flows between the U.S., Canada, and Mexico. In 2016, 76.5% of exports from Canada went to the U.S., accounting for 13.4% of U.S. imports. Similarly, 81% of exports from Mexico were destined for the U.S., with Mexican exports comprising 13.7% of U.S. imports. More than half of Canada and Mexico's imports are from the U.S. Although U.S. trade is more diversified with its largest trading partners accounting for no more than about 20% of imports or exports, concentrated exposure to specific industries ties the U.S. economy to its NAFTA partners.

A large portion of U.S. trade with the world, and especially with Mexico, is part of an interconnected global supply chain, where one input is produced in one country, then shipped to another country, and so on, until production is completed. The fragmented nature of NAFTA production has reduced costs of manufacturing by providing firms lower cost intermediate inputs. These are products—like auto parts—that are used in the production of final goods. Quite often, trade in them takes place within firms, especially in automotive, electrical and machinery manufacturing. For example, Ford and General Motors use regional supply chains which move intermediate inputs across NAFTA borders multiple times before the final product rolls off the factory floor. This helps keep overall production costs low and allow the automakers to compete globally by lowering the cost of their products abroad. Lower production costs also means lower consumer prices. That means more money in consumers' pockets to purchase other goods that also generate demand for industrial space. If changes in trade policy were to make it costlier to access intermediate inputs, the disruption would cascade through regional supply chains, thus affecting demand for commercial real estate.

Don't Let the Sun Go Down on Me

In November 2017, Canada, Mexico, and the U.S. concluded their fifth round of negotiations, and have agreed to keep negotiating until March 2018, with another round of negotiations scheduled to take place in Montreal in January 2018. So far, progress is reported to have been made on digital trade, harmonizing regulatory practices, food safety standards, streamlining customs procedures, and telecommunications. Among the remaining sticking points is a U.S. proposal for a "sunset" clause that would automatically terminate the agreement after five years unless all parties expressly agreed to keep it. Both Canada and

Mexico have somewhat softened their initial hardline stances against such a provision and have offered a softer counter proposal that would subject the agreement to review every five years but not automatically terminate it. The impact from such a clause on commercial real estate is unclear, but the prospect of automatic withdrawal every five years would likely hinder manufacturing-related investments, particularly in Mexico, as manufacturers make such investments with a much longer time frame in mind.

Driving Down the Deficit

By far, the most controversial issue is the U.S. attempt to cut its auto-related deficit with Mexico by shifting auto production back to the U.S. through raising the rules of origin for auto and adding a clause requiring that half of an auto's content be made in the U.S. The auto industry has one of the most heavily integrated supply chains of any industry. In 2016, it accounted for the entire $63.1 billion U.S. trade deficit with Mexico, and more. More than one-fourth of the total trade deficit in the U.S. (an additional $125 billion on top of the entire trade deficit with Mexico) is driven by the auto industry. Auto-related trade deficits, among nations or firms, is not uncommon. Just as large companies typically run deficits with their suppliers by purchasing inputs but selling little to the suppliers in return, so, too, do developed countries with lower-cost suppliers in its auto production chain.

To receive duty-free treatment currently under NAFTA, 62.5% of an auto must contain North American content—the highest content requirement of any trade agreement in the world. The U.S. proposal would raise that requirement to 85%, with the added stipulation that 50% be U.S.

Autonomous Trucking

Advancements in autonomous technologies and onboard systems will help truck drivers increase efficiency and improve safety. Key automation trends include driver-assisted technologies, many of which are already available in new Class 8 trucks, and platooning and fully autonomous transport, which will take years to reach the market.

- **Driver-assisted Technologies**: An array of technologies is making new trucks more technologically advanced than ever. Adaptive cruise control, which relies on forward-looking radar to maintain a specified following distance, and lane departure warnings that audibly warn drivers if the truck drifts from the lane are common. Collision-mitigation systems that rely on radar, lasers or cameras to not only alert drivers but act automatically to potential crash situations have improved dramatically.
- **Electronic Stability Control:** In the U.S., the National Highway Transportation Safety Administration began implementing a phased-in mandate in 2017 that will require new commercial trucks to be equipped with electronic stability control systems to safeguard against rollovers and crashes.
- **Telematics Devices:** The ability to capture and transmit data will allow carriers to make better decisions and create operational efficiencies by automatically collecting information on drivers' hours-of-service records, fuel tax reporting and more.
- **Self-Driving Trucks:** Most of the major Class 8 truck manufacturers, including Paccar, Daimler and Volvo, as well as newer companies, such as Waymo, Otto, and Tesla, are testing autonomous technology. While technology could ultimately eliminate the need for a driver, it is likely that drivers will remain a critical link in the supply chain for a considerable amount of time.

content. It is highly unlikely that Canada and Mexico would ever agree to such provisions, and it is not certain that higher content requirements would decrease the U.S. trade deficit.

In the absence of NAFTA, some production in Mexico would likely fall in favor of manufacturing in the U.S. or Canada. However, it is possible that many of the parts and components now crossing borders would continue to cross without the benefit of duty-free treatment, but also without the burden of proving rules of origin, and at a higher cost to consumers.

Much of the production in Mexico is focused on lower margin passenger cars that would be much less cost effective to produce in the U.S. or Canada. In some cases, companies could decide it is better to absorb higher tariffs than to absorb higher production costs by relocating manufacturing activities to the U.S. In those instances, changes in commercial real estate demand would be minimal, although production of low margin items in Mexico would be scaled back or eliminated entirely. The demise of the agreement might also drive auto-makers to source components from Asia instead of Mexico and pay the low 2.5% most-favored-nation tariff. In either case, increased demand for commercial real estate is not likely to occur; demand for industrial real estate could suffer if firms chose to source product from outside of North America.

U.S. Trade With NAFTA Partners

Ranked by Value of NAFTA Import Volume

2016	Market	Share of All Imports	Share of All Exports
1	Texas		
2	Michigan		
3	California		
4	Illinois		
5	Ohio		
6	New York		
7	Pennsylvania		
8	Washington		
9	Indiana		
10	Tennessee		
11	New Jersey		
12	Massachusetts		
13	Minnesota		
14	Georgia		
15	Kentucky		
16	Florida		
17	Arizona		
18	North Carolina		
19	Wisconsin		
20	Missouri		

Caught in a Bind

Should the trade agreement fail, U.S. exporters might be in a bind, as exported goods could face much higher tariffs in Mexico. Under the current provisions of NAFTA, all trade between Mexico and the U.S. is duty-free, so exporters in both countries benefit. Absent NAFTA, the average tariff on U.S. exports to Mexico would rise to 7.4%. Mexico would still be able to raise tariffs on some products much higher—up to about 35%—without violating World Trade Organization (WTO) trading rules. In contrast, U.S. tariffs would rise on average to 4.0%, with the U.S. unable to increase them further without running afoul of its commitments to the WTO.

Why? Mexico's bound rates—the maximum rate a WTO member can impose—are much higher than U.S. bound rates. This means that NAFTA offers protection to U.S.

exporters by shielding them from tariff uncertainty in Mexico. Such a discrepancy in bound rates between advanced and emerging countries is not uncommon. The U.S. and other advanced countries have agreed during multiple trade liberalization rounds to bind their tariffs at lower levels to protect member countries against trade wars and to sustain trade liberalization. If the U.S. were to raise its tariffs on imports from Mexico above bound rates, WTO rules would require the U.S. to compensate Mexico.

The 18 other free trade agreements to which Mexico is a member are also of concern for U.S. exporters. If Mexico were to increase tariffs on products available from its other free trade partners, U.S. exporters could be exposed. For example, Mexico accounts for 30% of U.S. steel exports; its bound rate (i.e., maximum tariff) on steel is 35%. Because of its numerous trade agreements, Mexican firms could turn to alternative steel suppliers with little additional cost, hurting U.S. firms that currently export steel to Mexico.

O Canada

Trade between Canada and the U.S. in non-energy goods has more than doubled since NAFTA was ratified, and trade barriers of any kind would risk choking the volume of cross-border shipments and logistics-related demand. Among the most vulnerable Canadian industries to changes in trade policy are automobiles and auto parts, transportation equipment, clothing and textiles, and food and beverage manufacturing. Canadian textile, clothing and leather manufacturers rely on the U.S. market for nearly 60% of their sales and would be affected by even small changes in U.S. tariffs. Considering the industry has already seen output cut in half over the past decade as firms have offshored to

Cold Storage Heating Up

Cold storage demand is primarily driven by consumption of food, pharmaceuticals, and perishable products that require refrigerated or frozen storage. Over the next few years, demand will be bolstered by rising levels of consumer spending and growing trade activity. These factors and changing consumer tastes, will generate demand for organic, and all-natural varieties of food, spurring growth of cold storage warehousing and distribution.

» **Changing Consumers**: Rising demand for fresh, organic, and gluten-free foods will require a more versatile food storage system and, in many cases, will necessitate additional investment in material handling equipment and cold storage strategies.

» **Regulation:** The phasing-in of the Food Safety Modernization Act (FSMA) will require that food products be traceable all the way back to the point of origin. FSMA's traceability and strict reporting requirement means that, in some cases, the tenancy of cold storage warehouses will change as food companies outsource logistics to highly specialized 3PLs and cold storage operators.

» **Vertical Integration:** In response to changing consumer preferences and the proliferation of just-in-time production—by which manufacturers attempt to reduce inventory and warehouse costs by receiving goods only as needed in the production process—large food companies that have capital like Kraft, Nestle, and Unilever will increasingly operate their distribution and storage internally, allowing for greater control and flexibility.

» **Outsourcing:** As the cost of owning cold storage space near ports and major transportation routes becomes more expensive, an increasing number of manufacturers and distributors will seek to outsource these functions.

lower-cost destinations in Asia, many firms would likely not survive if tariffs were to rise. Leasing by electrical equipment and appliance producers, and computer and electronics manufacturers—where the U.S. market consists of 60% and 84% of sales, respectively—would also slow in a post-NAFTA world. Similarly, food and beverage producers—for whom the U.S. accounts for 24% of overall Canadian food and beverage sales—would face among the highest U.S. tariffs.

Among the provinces, Ontario faces the greatest risk. The tightly-integrated North American auto sector is a major component of its economy. Well-established supply chains link 26% of Ontario's GDP to U.S. exports, with nearly 83% of its total export shipments flowing south of the border to the U.S. in 2016. New Brunswick and Alberta also send more than 80% of their exports to the U.S., but those exports are predominantly in the lower-risk refined petroleum industry. Because those provinces export oil, they are likely to slip by with fewer direct effects.

Where Did the Workers Go?

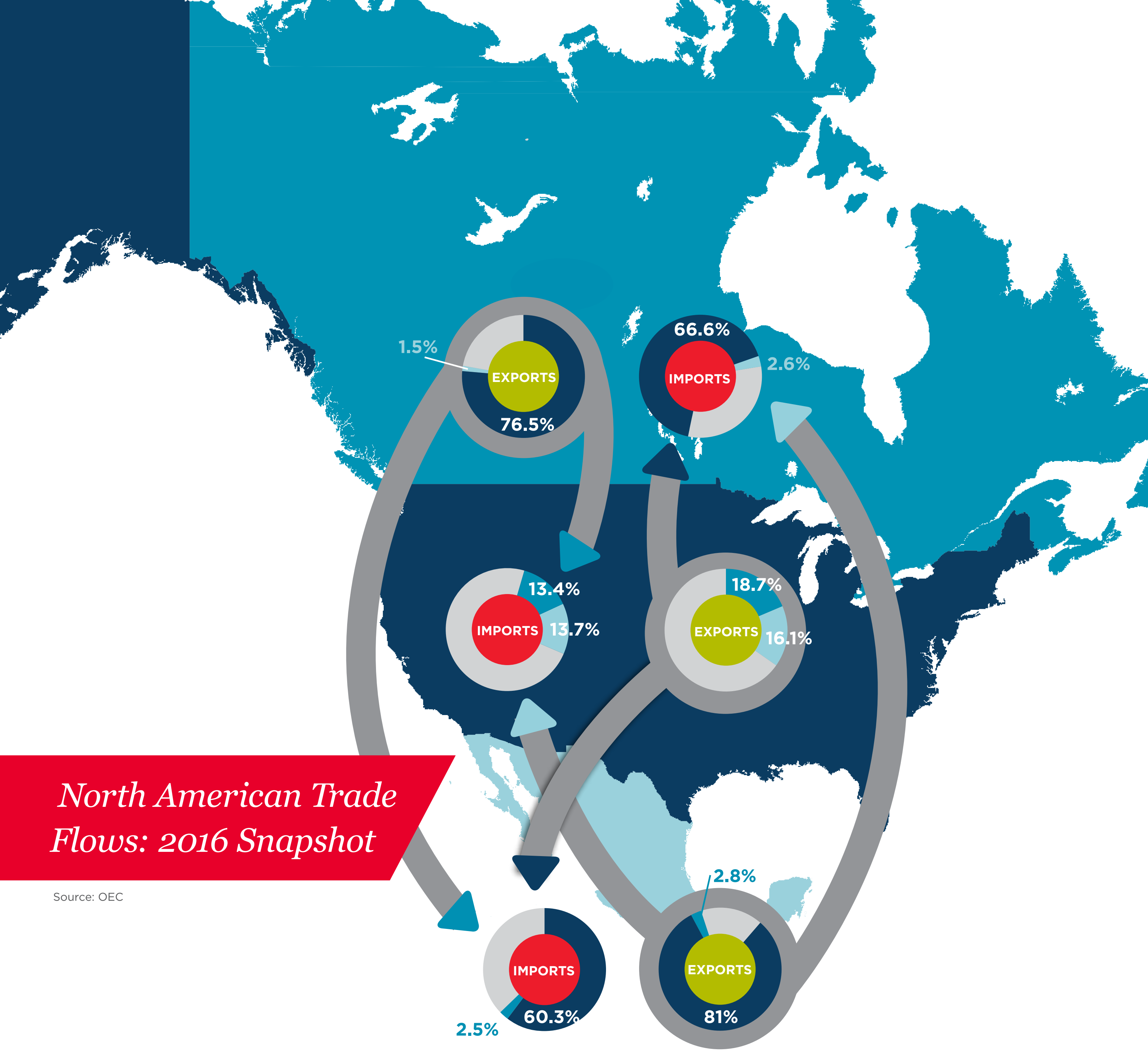
In addition to impacting the flow of goods, trade policy can affect the flow of people. Restrictions in the flow of workers would make an already tight labor market tighter. The NAFTA professional visa program is the largest work visa program in the U.S., representing more than one-third of its 2.3 million foreign-born workers and trainees. Industrial-related occupations with the largest number of foreign-born workers include production, transportation and material moving, construction and extraction, and science and engineering. Considering labor shortages are becoming more prevalent—especially in the construction sector in the southern U.S.—policy changes could make the job of filling jobs much more difficult.

Best Guess

The fate of NAFTA, and any resulting shifts in commercial real estate demand, will take time to unfold. Trade negotiations are seldom quickly accomplished, and even when an agreement is reached it can take months or years for the changes to take effect. Canada has proposed a timeline of roughly two years for renegotiations, which reflects past negotiations: the original NAFTA negotiations took 20 months and another 13 months after signing before implementation. Over the past decade, U.S. free trade agreements have taken even longer with negotiations, on average, taking 27 months, and implementation taking 58 months. So, the best bet is that uncertainty surrounding trade policy will last for a while.

Predicting with certainty what changes to commercial real estate after NAFTA would occur is difficult because it is impossible to know what tariff regime would replace it. It is also difficult to quantify the impact of uncertainty on business investment, and the broader spillover effects into non-trading industries. Because tariffs are a tax on trade flows, not net production, even incremental increases could have a disproportionate impact on industries that trade a lot across the border. The dismantling of NAFTA would likely cause financial-market volatility, negatively effecting near-term business confidence, hiring and investment and, therefore, economic growth and demand for commercial real estate.

Moody's Analytics estimates that if the U.S. were were to have exited the agreement this year and had a regional trade war been



North American Trade Flows: 2016 Snapshot

Source: OEC

initiated it would have shaved 140 to 210 bps off of North America's real GDP growth in 2018 alone. The Royal Bank of Canada estimates that real Canadian GDP growth would shrink by 1% over 5 to 10 years. Cushman & Wakefield's baseline scenario is one in which the agreement is modernized in a way that results in deeper integration and regulatory cohesion, with subtle changes to rules of origin content requirements—but not at the levels currently proposed by the U.S.—along with some type of automatic review—though short of an automatic cancellation clause. But the sides seem far from reaching consensus on any of these issues in the next few months. As a result, trade policy will remain the greatest risk to the outlook.

Logistics & Distribution

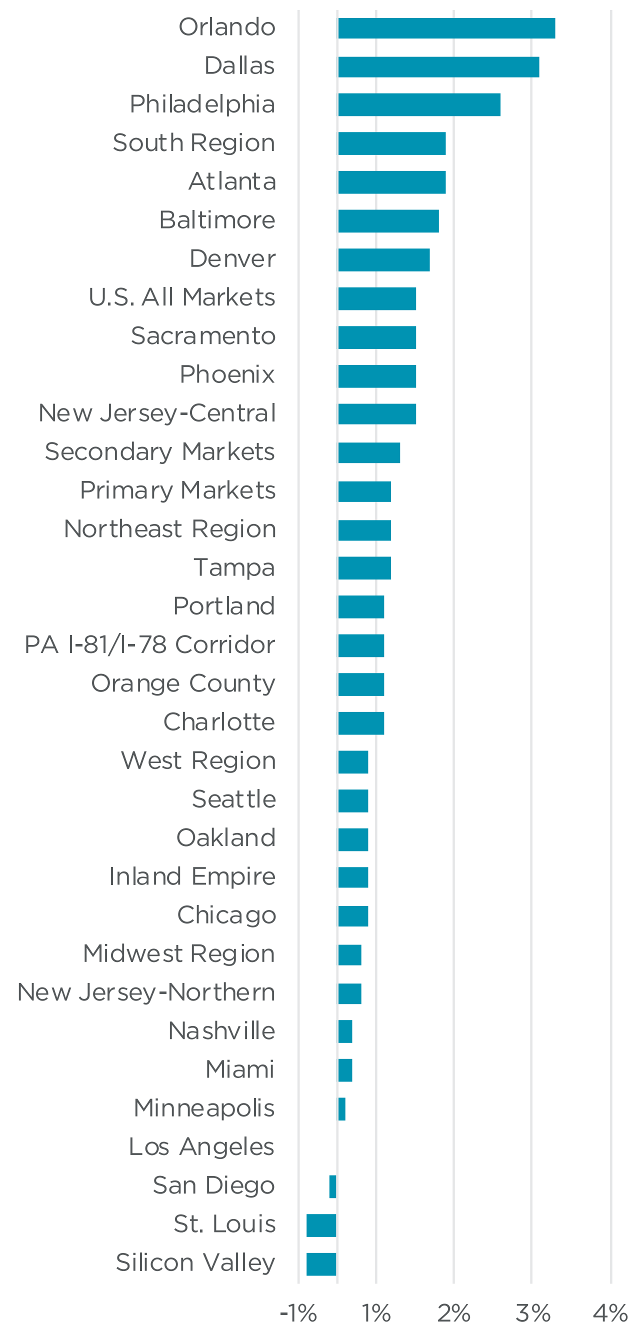
Warehouse Vacancy Forecast

All Classes, Year-end

	2016	2017F	2018F	2019F
Atlanta	9.4%	10.9%	12.3%	12.3%
Baltimore	6.1%	7.0%	7.1%	8.3%
Charlotte	3.8%	4.5%	4.7%	5.1%
Chicago	7.5%	9.2%	10.1%	9.6%
Dallas	6.0%	6.2%	7.9%	8.8%
Denver	4.8%	5.1%	5.8%	6.3%
Inland Empire	5.2%	5.6%	6.5%	6.0%
Los Angeles	1.3%	1.5%	1.4%	1.5%
Miami	4.1%	5.9%	4.6%	6.1%
Minneapolis	10.0%	10.3%	10.0%	10.4%
Nashville	3.0%	3.2%	3.3%	3.4%
New Jersey-Central	3.5%	3.8%	4.8%	4.8%
New Jersey-Northern	5.6%	5.4%	6.0%	5.7%
Oakland	2.1%	2.1%	2.4%	2.5%
Orange County	2.4%	2.4%	2.5%	3.0%
Orlando	3.7%	4.3%	5.2%	7.1%
PA I-81/I-78 Corridor	4.8%	5.3%	6.0%	5.9%
Philadelphia	4.1%	4.9%	6.4%	7.0%
Phoenix	13.9%	14.1%	14.4%	15.1%
Portland	3.5%	5.3%	6.0%	5.9%
Sacramento	7.5%	6.7%	7.6%	7.7%
San Diego	5.1%	4.6%	7.8%	4.5%
Seattle	3.9%	4.8%	6.1%	5.2%
Silicon Valley	2.5%	3.7%	3.3%	3.3%
St. Louis	7.4%	8.0%	8.1%	7.6%
Tampa	5.4%	5.4%	2.8%	6.1%
U.S., All Markets	5.1%	5.8%	6.4%	6.8%
U.S. Primary Markets	5.3%	6.0%	6.7%	6.7%
U.S. Secondary Markets	4.9%	5.5%	5.8%	6.3%
U.S. Midwest	7.6%	9.0%	9.7%	9.3%
U.S. Northeast	4.5%	4.8%	5.5%	5.5%
U.S. South	6.2%	7.1%	7.8%	8.5%
U.S. West	3.6%	3.9%	4.3%	4.3%

Change In Vacancy

2017-2019



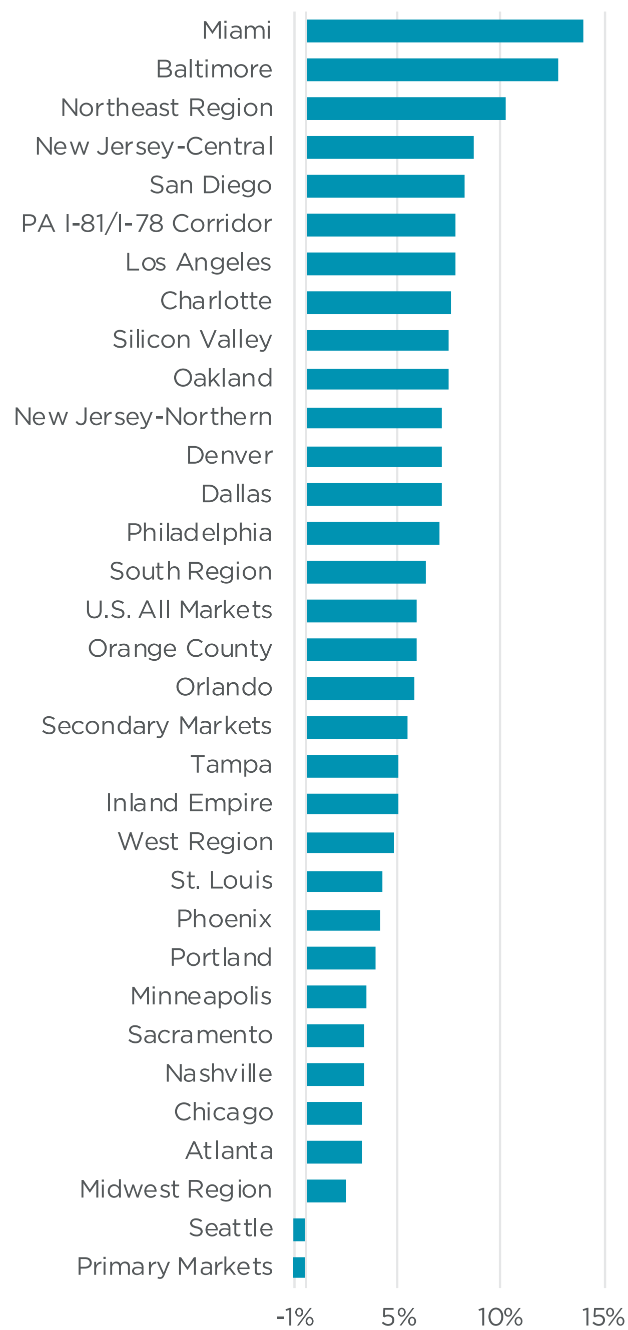
Warehouse Rent Forecast

All Classes, Asking Rents (NNN), Year-end

	2016	2017F	2018F	2019F
Atlanta	$3.67	$3.76	$3.81	$3.86
Baltimore	$4.58	$4.30	$4.53	$4.83
Charlotte	$4.60	$4.63	$4.84	$4.96
Chicago	$4.75	$4.80	$4.86	$4.93
Dallas	$4.26	$4.11	$4.27	$4.38
Denver	$6.29	$6.85	$7.03	$7.30
Inland Empire	$5.79	$7.12	$7.44	$7.44
Los Angeles	$8.30	$9.07	$9.38	$9.73
Miami	$8.26	$8.24	$8.79	$9.35
Minneapolis	$4.52	$4.49	$4.53	$4.58
Nashville	$4.13	$4.31	$4.36	$4.44
New Jersey-Central	$5.93	$6.34	$6.36	$6.52
New Jersey-Northern	$7.09	$7.57	$7.93	$8.19
Oakland	$8.34	$9.54	$9.80	$10.17
Orange County	$8.51	$9.66	$10.14	$10.60
Orlando	$5.23	$5.40	$5.62	$5.77
PA I-81/I-78 Corridor	$4.51	$4.83	$5.02	$5.09
Philadelphia	$4.24	$4.32	$4.47	$4.55
Phoenix	$4.90	$5.04	$5.21	$5.41
Portland	$6.22	$6.90	$7.11	$7.35
Sacramento	$4.38	$4.76	$4.89	$4.93
San Diego	$9.00	$9.20	$9.37	$9.51
Seattle	$5.96	$6.70	$6.57	$6.63
Silicon Valley	$854	$10.84	$10.98	$11.15
St. Louis	$3.91	$4.03	$4.19	$4.34
Tampa	$4.81	$5.14	$5.07	$5.11
U.S. All Markets	$5.25	$5.35	$5.47	$5.62
U.S. Primary Markets	$4.76	$4.94	$5.18	$5.28
U.S. Secondary Markets	$5.42	$5.72	$5.85	$6.05
U.S. Midwest	$4.57	$4.65	$4.73	$4.82
U.S. Northeast	$5.55	$5.80	$5.98	$6.06
U.S. South	$4.35	$4.41	$4.43	$4.65
U.S. West	$6.34	$7.15	$7.30	$7.46

Asking Rent Growth

2017-2019



Manufacturing

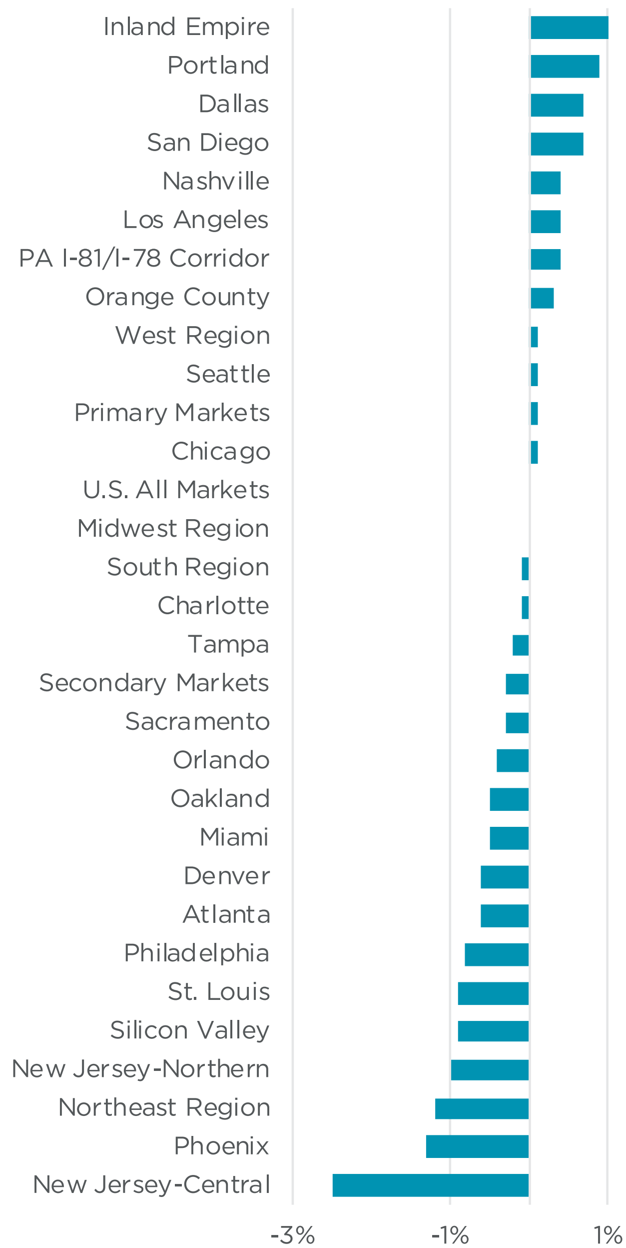
Manufacturing Vacancy Forecast

All Classes, Year-end

	2016	2017F	2018F	2019F
Atlanta	3.2%	2.3%	1.8%	1.7%
Charlotte	2.7%	3.8%	3.7%	3.7%
Chicago	4.8%	5.1%	5.2%	5.2%
Dallas	3.6%	2.2%	3.3%	2.9%
Denver	2.7%	2.6%	2.2%	2.0%
Inland Empire	1.8%	1.9%	2.3%	2.9%
Los Angeles	1.4%	1.2%	1.4%	1.6%
Miami	3.5%	2.0%	1.5%	1.5%
Nashville	2.9%	2.4%	2.7%	2.8%
New Jersey-Central	5.7%	5.1%	4.1%	2.6%
New Jersey-Northern	5.4%	3.8%	3.1%	2.8%
Oakland	1.8%	1.8%	1.6%	1.3%
Orange County	1.0%	1.4%	1.6%	1.7%
Orlando	4.1%	5.0%	5.0%	4.6%
PA I-81/I-78 Corridor	2.8%	4.0%	4.2%	4.4%
Philadelphia	4.2%	6.1%	5.2%	5.3%
Phoenix	6.4%	5.9%	5.2%	4.6%
Portland	3.8%	4.5%	5.3%	5.4%
Sacramento	12.2%	11.5%	11.6%	11.2%
San Diego	4.3%	4.7%	5.0%	5.4%
Seattle	1.6%	2.0%	2.2%	2.1%
Silicon Valley	3.3%	4.1%	3.7%	3.2%
St. Louis	4.6%	4.1%	3.7%	3.2%
Tampa	2.2%	1.8%	1.7%	1.6%
U.S. All Markets	3.8%	3.8%	3.8%	3.8%
U.S. Primary Markets	3.7%	3.7%	3.8%	3.8%
U.S. Secondary Markets	3.9%	4.0%	3.9%	3.7%
U.S. Midwest	4.8%	5.0%	5.1%	5.0%
U.S. Northeast	4.7%	5.1%	4.3%	3.9%
U.S. South	3.0%	2.6%	2.6%	2.5%
U.S. West	3.2%	3.2%	3.3%	3.3%

Change In Vacancy

2017-2019



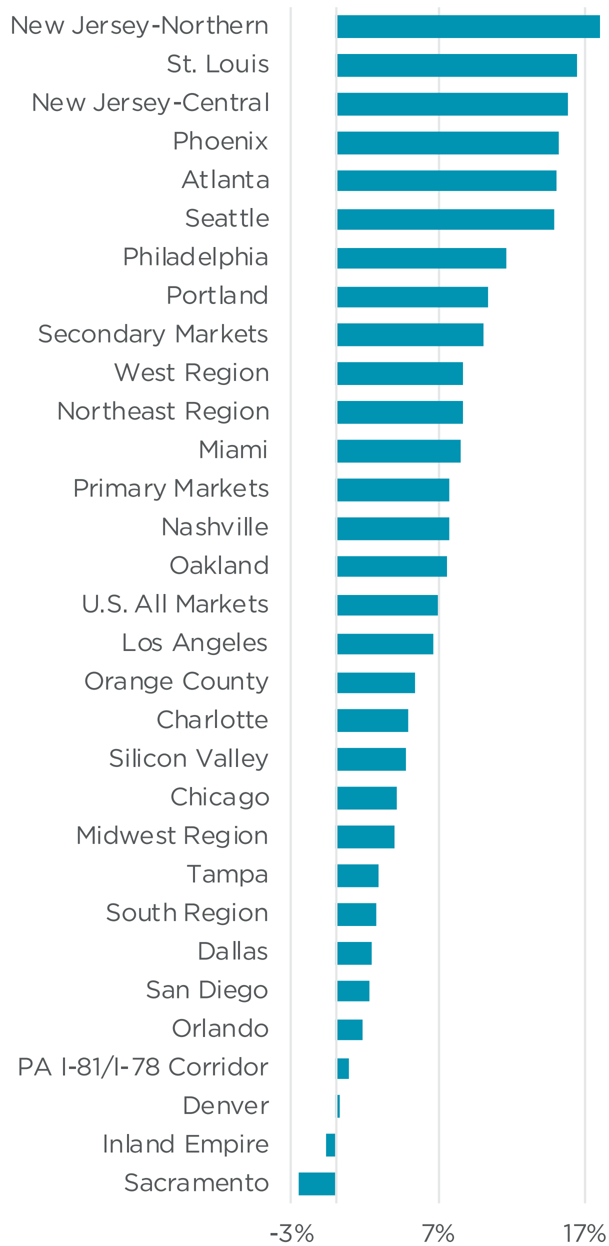
Manufacturing Rent Forecast

All Classes, Asking Rents (NNN), Year-end

	2016	2017F	2018F	2019F
Atlanta	$3.44	$3.60	$3.88	$4.14
Charlotte	$4.43	$4.03	$4.14	$4.23
Chicago	$4.46	$4.62	$4.71	$4.81
Dallas	$4.24	$4.41	$4.49	$4.52
Denver	$7.91	$8.05	$8.14	$8.07
Inland Empire	$6.97	$8.36	$8.39	$8.31
Los Angeles	$8.02	$8.60	$8.89	$9.17
Miami	$6.98	$7.31	$7.19	$7.93
Nashville	$2.39	$2.60	$2.72	$2.80
New Jersey-Central	$3.70	$5.95	$6.68	$6.89
New Jersey-Northern	$6.24	$6.53	$7.20	$7.76
Oakland	$9.44	$11.26	$11.75	$12.11
Orange County	$10.85	$12.32	$12.81	$12.99
Orlando	$5.99	$5.19	$5.25	$5.29
PA I-81/I-78 Corridor	$3.50	$3.50	$3.50	$3.53
Philadelphia	$3.62	$4.11	$4.39	$4.59
Phoenix	$7.24	$7.57	$8.06	$8.72
Portland	$5.99	$6.40	$6.68	$7.07
Sacramento	$4.86	$5.54	$5.45	$5.40
San Diego	$10.11	$10.08	$10.21	$10.31
Seattle	$4.39	$5.90	$6.52	$6.78
Silicon Valley	$13.31	$13.11	$13.60	$13.73
St. Louis	$6.89	$8.29	$8.82	$9.66
Tampa	$3.71	$4.03	$4.04	$4.15
U.S. All Markets	$4.99	$5.30	$5.52	$5.67
U.S. Primary Markets	$4.88	$5.20	$5.41	$5.60
U.S. Secondary Markets	$7.31	$7.80	$8.23	$8.59
U.S. Midwest	$4.70	$4.92	$5.01	$5.12
U.S. Northeast	$4.36	$4.98	$5.35	$5.41
U.S. South	$4.14	$4.06	$4.07	$4.17
U.S. West	$8.07	$8.73	$9.13	$9.49

Asking Rent Growth

2017-2019



Flex

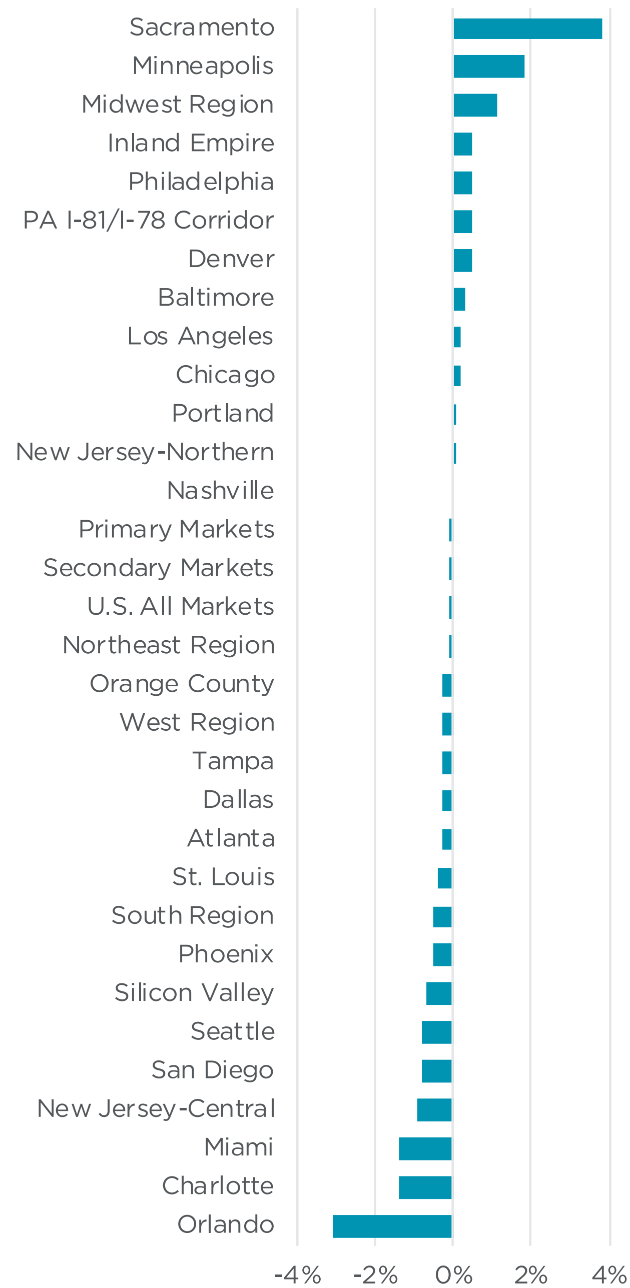
Flex Vacancy Forecast

All Classes, Annual Average

	2016	2017F	2018F	2019F
Atlanta	9.4%	8.9%	8.7%	8.6%
Baltimore	8.7%	8.2%	8.3%	8.5%
Charlotte	6.1%	4.9%	4.2%	3.5%
Chicago	6.0%	7.0%	7.1%	7.2%
Dallas	7.0%	8.0%	8.0%	7.7%
Denver	4.3%	4.6%	4.1%	5.1%
Inland Empire	1.8%	0.8%	1.1%	1.3%
Los Angeles	2.5%	1.9%	2.2%	2.1%
Miami	9.7%	12.4%	11.9%	11.0%
Minneapolis	7.3%	8.6%	10.0%	10.4%
Nashville	4.5%	4.2%	4.0%	4.2%
New Jersey-Central	6.8%	5.5%	4.9%	4.6%
New Jersey-Northern	8.5%	6.6%	6.6%	6.7%
Orange County	3.3%	2.0%	1.9%	1.7%
Orlando	11.6%	10.1%	8.7%	7.0%
PA I-81/I-78 Corridor	14.7%	5.7%	5.9%	6.2%
Philadelphia	4.7%	5.6%	5.8%	6.1%
Phoenix	13.3%	13.3%	12.8%	12.8%
Portland	7.6%	7.4%	7.4%	7.5%
Sacramento	7.2%	5.7%	9.7%	9.5%
San Diego	7.9%	8.2%	6.7%	7.4%
Seattle	10.5%	9.2%	9.6%	8.4%
Silicon Valley	10.4%	10.0%	9.6%	9.3%
St. Louis	8.7%	9.2%	8.9%	8.8%
Tampa	9.3%	10.1%	11.0%	9.8%
U.S. All Markets	7.4%	7.2%	7.1%	7.1%
U.S. Primary Markets	6.2%	5.9%	5.9%	5.8%
U.S. Secondary Markets	7.9%	7.9%	7.8%	7.8%
U.S. Midwest	7.0%	8.1%	8.9%	9.2%
U.S. Northeast	6.5%	5.8%	5.7%	5.7%
U.S. South	8.0%	8.0%	7.8%	7.5%
U.S. West	7.4%	7.0%	6.7%	6.7%

Change In Vacancy

2017-2019



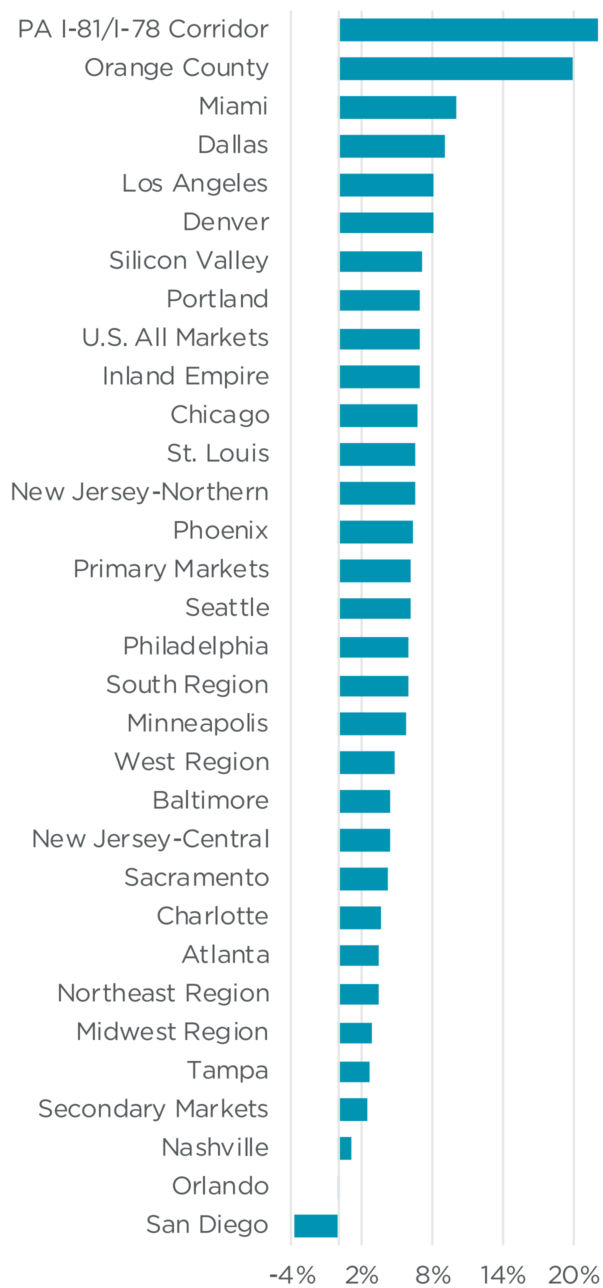
Flex Rent Forecast

All Classes, Asking Rents (NNN), Year-end

	2016	2017F	2018F	2019F
Atlanta	$8.47	$8.97	$9.20	$9.28
Baltimore	$10.79	$10.08	$10.25	$10.53
Charlotte	$8.38	$8.50	$8.70	$8.81
Chicago	$8.92	$10.31	$10.87	$11.00
Dallas	$8.64	$9.16	$9.65	$9.98
Denver	$10.58	$11.40	$11.90	$12.32
Inland Empire	$9.78	$9.67	$10.10	$10.33
Los Angeles	$11.72	$13.24	$13.83	$14.31
Miami	$11.39	$12.55	$13.00	$13.80
Minneapolis	$4.83	$4.90	$4.99	$5.18
Nashville	$9.01	$9.14	$9.18	$9.24
New Jersey-Central	$11.72	$12.31	$12.48	$12.84
New Jersey-Northern	$11.09	$10.25	$10.48	$10.91
Orange County	$13.87	$15.32	$16.95	$18.37
Orlando	$9.25	$9.35	$9.37	$9.36
PA I-81/I-78 Corridor	$5.35	$4.29	$4.71	$5.24
Philadelphia	$7.95	$7.94	$8.19	$8.41
Phoenix	$12.54	$13.56	$13.92	$14.42
Portland	$11.55	$12.41	$12.86	$13.26
Sacramento	$5.76	$6.48	$6.53	$6.75
San Diego	$16.65	$17.06	$16.73	$16.42
Seattle	$10.02	$11.74	$11.96	$12.46
Silicon Valley	$24.41	$25.38	$26.19	$27.18
St. Louis	$8.01	$8.17	$8.46	$8.71
Tampa	$8.85	$9.06	$9.09	$9.30
U.S. All Markets	$9.34	$9.81	$10.20	$10.48
U.S. Primary Markets	$9.75	$10.13	$10.51	$10.76
U.S. Secondary Markets	$15.35	$15.65	$15.67	$16.04
U.S. Midwest	$6.41	$6.83	$6.87	$7.02
U.S. Northeast	$10.30	$10.00	$10.09	$10.34
U.S. South	$9.28	$9.52	$9.82	$10.08
U.S. West	$19.21	$20.31	$20.80	$21.27

Asking Rent Growth

2017-2019



NORTH AMERICAN INDUSTRIAL FORECAST REPORT 2018-2019

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CONTRIBUTORS

Jason Tolliver, J.D.
Vice President
Americas Head of Logistics & Industrial Research
jason.tolliver@cushwake.com

Rebecca Rockey
Economist
Americas Head of Forecasting
rebecca.rockey@cushwake.com

Carolyn Salzer
Analyst
Americas Logistics & Industrial Research
carolyn.salzer@cushwake.com

Stuart Barron, CPA, CA
National Director of Research, Canadian Markets
National Research
stuart.barron@ca.cushwake.com

José Luis Rubí
Market Research Manager
Market Research
joseluis.rubi@cushwake.com

FOR MORE INFORMATION

John C. Morris
Executive Managing Director
Logistics & Industrial Service Line Lead for the Americas
Business Incentives Practice Lead
john.morris@cushwake.com

Bethany Clark
Managing Director, Strategy & Operations
Logistics & Industrial Services, Americas
bethany.clark@cushwake.com