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New York

Economic Overview 2Q19



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2Q19 Overview

The New York metro added a ninth consecutive year of net job growth to the current economic cycle in 2018, with most gains in the healthcare industries. Additionally, positive momentum in key demographics such as household income and unemployment rate have further supported another year of economic expansion in the metro. However, a closer look reveals some headwinds that signal the looming end of the expansion years. The New York metro's annual job growth has decelerated every year since it peaked at 2.7% in 2014. Job growth today is no longer outperforming the national average, with the 1.8% gains registered in 2018 equal to that of the rest of the nation. Furthermore, while the unemployment rate for the metro continues to contract in line with the national rate, New York's annual growth in the median household income is below the national pace.

The New York metro's financial activities sector jobs leads all metros across the United States by a wide margin. Tax reforms and deregulation aided in the expansion of private hedge fund management firms, and many of the major U.S. banks such as JPMorgan, Citigroup, and Wells Fargo have reported rising profits in 2018. The metro's most influential industry also shows some signs of concern as net job growth in the metro's most prominent economic driver has been unsubstantial and has failed to fully recoup the losses from the Great Recession. Additionally, Deutsche Bank and Wells Fargo have reduced headcount in 2018, as certain units of the businesses have suffered and failed to meet expectations. Fueled by geopolitical tensions, rising operational costs, and increased competition, many of the prominent financial companies have been forced to scale back. Financial firms such as AllianceBernstein and Barclays have even begun office relocations outside of the expensive New York market, shrinking their overall footprint in the metro. Regarded as the financial capital of the world, the performance of the financial industries strongly effects the local New York economy along with national repercussions and an impact on a global scale.

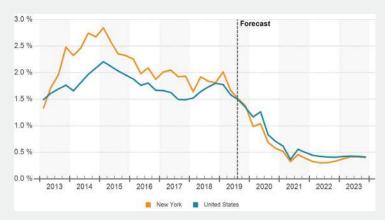
The saving grace has been New York's technology, advertising, media, information (TAMI) jobs, which made up for the sluggish growth in the financial sector. The market's highest-paid employment base has been gradually shifting from finance toward TAMI for almost three decades, and as a result, New York City has become the second-largest technology hub in the world. Technology giants such as Bloomberg, Google, and Facebook have significantly expanded their presence in Manhattan, while numerous technology-based start-up firms continue to establish footprints in the metro. New York recently beat out San Francisco as the best tech city in a recent study by Savills, who cited the amount of venture capital, deep talent pool, and recruitment

potential as the main drivers for its top ranking.

The growth is not just limited to established large-cap corporations, as venture capital investment in the metro closed out a record year in 2018 with nearly \$14 billion in investment. Annual VC investment rose 65% to \$4.5 billion in 19Q1 according to a PwC MoneyTree report. Technology-based startup firms continue to attract investments such as Peloton and Letgo, which raised \$550 million and \$500 million respectively. WeWork, which has become a top occupier of space in Manhattan, accounted for the top two venture capital deals of 2018, for a total of \$4 billion invested by Softbank. The recent investment adds to the \$4.4 billion that the Japanese conglomerate had previously invested in 2017, which includes \$1.4 billion to WeWork's global subsidiaries. Just a few days into 2019, Softbank committed another \$2 billion to the co-working space provider, which has since rebranded itself as The We Company, for a total investment of over \$10 billion.

However, there are some concerns, even in the TAMI sector. For most of the recovery, up until the end of 2015, technology-related jobs were the leading sector in growth. However, over the past three years, growth in technology-based industries has drastically decelerated. For instance, after the information sector recorded a net gain of over 5,000 jobs in 2015, growth decreased each following year and recorded a loss of over 1,000 jobs in 2018. Furthermore, the business professional services sector, which represents the majority of the technology industries as well as the office-using industries that drive the metro, has fallen 65% from its peak year in 2015, when about 41,000 jobs were added compared to just under 15,000 jobs added this past year. Though the proliferation of health care jobs is good for the metro, it is not a sector that is typically a heavy user of office space.

Year-Over-Year Job Growth







2Q19 Overview

New York Employment by Industry in Thousands:

| | Curren | it Jobs | Current | Current Growth | | listorical | 5 Yr. Fo | recast |
|--|--------|---------|---------|----------------|--------|------------|----------|--------|
| NAICS Industry | Jobs | LQ | Market | US | Market | US | Market | US |
| Manufacturing | 208 | 0.3 | 0.61% | 1.35% | -0.66% | 0.89% | -0.90% | -0.01% |
| Trade, Transportation & Utilites | 1,202 | 0.9 | 0.85% | 0.88% | 1.20% | 1.17% | 0.50% | 0.47% |
| Retail Trade | 659 | 0.9 | 1.20% | -0.12% | 1.50% | 0.86% | 0.63% | 0.37% |
| Financial Activities | 633 | 1.5 | -0.35% | 0.97% | 0.72% | 1.01% | 0.02% | 0.34% |
| Government | 918 | 0.9 | 0.10% | 0.44% | -0.32% | -0.01% | 0.56% | 0.76% |
| Natural Resources, Mining & Construction | 285 | 0.7 | 4.00% | 3.05% | 2.80% | 2.16% | -0.31% | 0.24% |
| Education & Health Services | 1,537 | 1.3 | 3.23% | 2.22% | 3.02% | 2.12% | 0.39% | 0.55% |
| Professional & Business Services | 1,180 | 1.1 | 1.95% | 2.25% | 2.70% | 2.64% | 0.83% | 1.98% |
| Information | 252 | 1.9 | -0.12% | -0.85% | 1.37% | 0.03% | 0.80% | 0.56% |
| Leisure & Hospitality | 711 | 0.9 | 1.84% | 2.50% | 3.69% | 2.51% | 0.84% | 0.60% |
| Other Services | 317 | 1.1 | 3.16% | 1.30% | 1.87% | 0.99% | 0.46% | 0.29% |
| Total Employment | 7,244 | 1.0 | 1.60% | 1.54% | 1.79% | 1.45% | 0.47% | 0.55% |

Demographic Trends

| | Curren | Current Level | | Current Change | | 10 Yr. Change | | Change |
|-------------------------|------------|---------------|-------|----------------|-------|---------------|-------|--------|
| Demographic Category | Metro | US | Metro | US | Metro | US | Metro | US |
| Population | 14,277,107 | 329,211,250 | 0.2% | 0.6% | 0.3% | 0.7% | 0.3% | 0.7% |
| Households | 5,234,167 | 121,235,336 | 0% | 0.5% | 0.3% | 0.6% | 0.2% | 0.6% |
| Median Household Income | \$73,432 | \$63,704 | 3.5% | 3.3% | 2.2% | 2.2% | 4.6% | 4.4% |
| Labor Force | 7,073,049 | 163,397,266 | 0.4% | 0.9% | 0.3% | 0.6% | 0.5% | 0.6% |
| Unemployment | 3.8% | 3.6% | -0.2% | -0.3% | -0.6% | -0.6% | - | - |

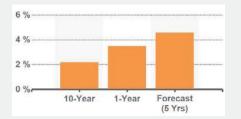
Population Growth



Labor Force Growth



Income Growth

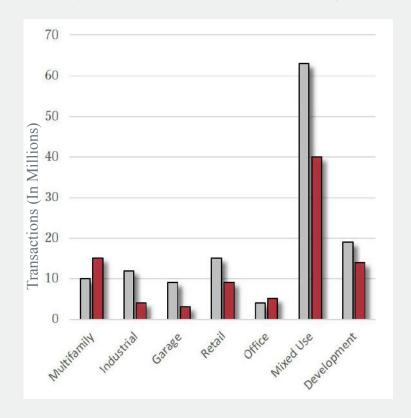




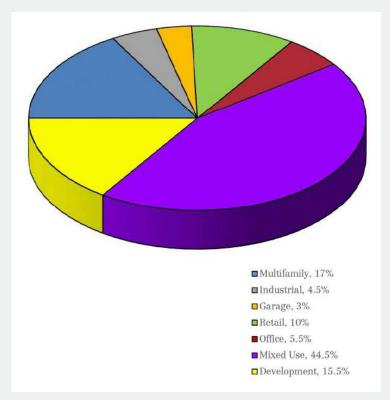


Southern Queens Spotlight

Transaction Volume (First Half 2018 vs. First Half 2019)



Transaction by Building Class (First Half 2019)



Transaction Volume

Transaction activity in the Southern Queens commercial real estate market declined considerably throughout the first half of 2019, registering only 90 trades overall, down approximately 32% from 132 trades in the first half of 2018.

Mixed Use properties remain the most actively transacted property class with 40 trades, which represents a 37% decrease from the 63 trades through the first half of 2018.

Multifamily sales experienced a noticeable surge, from 10 to 15 trades in the first half of this year, representing a 50% increase.

Industrial sales in the Southern Queens region fell sharply from 12 trades to 4, representing a nearly 70% decline.

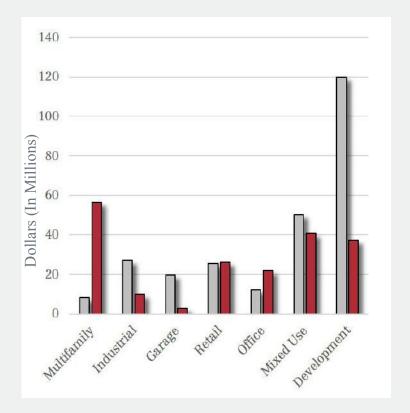
Retail property transactions also experienced a slump, falling from 15 trades through the first half of 2018 to only 9 through the first half of this year.



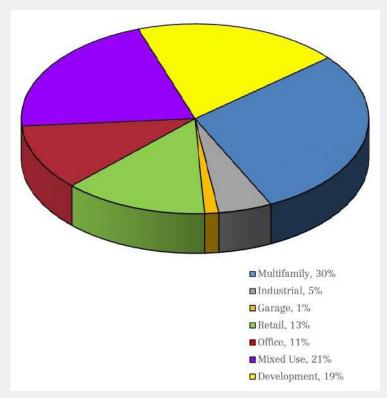


Southern Queens Spotlight

Sales Dollar Volume (First Half 2018 vs. First Half 2019)



Sales Volume by Building Class (First Half 2019)



Sales Dollar Volume

Commercial real estate dollar sales volume in the southern Queens commercial Real Estate market fell 26% to \$195 million in the first half of 2019, down from \$263 million in the first half of 2018.

Multifamily sales volume experienced explosive growth during this period to \$56 million transacted, nearly seven times the \$8.2 million recorded in the first half of 2018. This increase was predominantly driven by the sale of two large apartment buildings in Jamaica and a portfolio sale of garden apartments in Hollis.

Dollar sales volume among Development Sites plummeted 69% from nearly \$120 million in the first half of 2018 to only \$37.4 million in the first half of this year.

Industrial property sales volume in southern Queens also fell substantially, approximately 64%, from \$27 million transacted in the first half of 2018 to \$9.7 million in the first half of 2019.

Retail property sales volume remained steady, hovering at approximately \$26 million for the first half of 2018 and 2019.

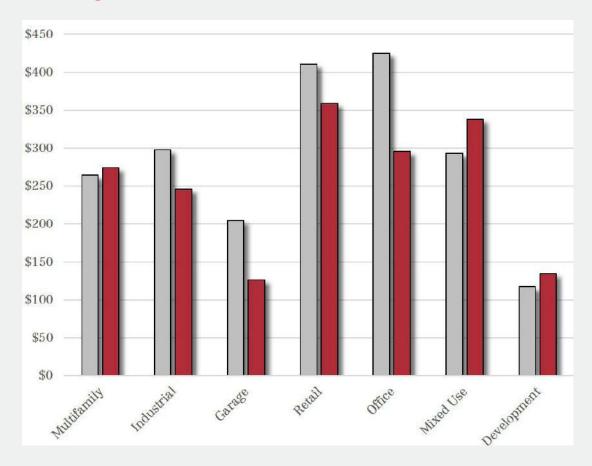
Southern Queens Mixed Use property trades slid 20% in dollar volume from \$50 million to \$41 million transacted in the first half of 2019.





Southern Queens Spotlight

Average P.P.S.F. Values (First Half 2018 vs. First Half 2019)



Price Per Square Foot Values

The average price per square foot for all commercial property sales in Southern Queens in the first half of 2019 was \$253 per sq. ft. an approximate \$34, or 13% dip from the first half of 2018.

The average price per square foot value for garage properties saw a significant 62% drop to \$126 per lot sq. ft. in the first half of 2019, down from \$205 per lot sq. ft. in the first half of 2018.

Office price per square foot values tumbled 44% in the first half of 2019, from \$425 per sq. ft. in the first half of 2018 to \$295 per sq. ft.

Development site average price per buildable sq. ft. climbed slightly from \$117 per buildable sq. ft. in the first half of 2018 to \$135 per buildable sq. ft. in the first half of 2019, representing a 13% increase.

Industrial property average price per sq. ft. values fell 17% in the first half of 2019 compared to last year, from nearly \$300 per sq. ft. to \$246 per sq. ft.

The metrics used for this report include commercial property sales \$500,000+ in Building Classes, C, D, E, F, G, K, O, S, & V.







932M Inventory SF

27M
Under Construction SF

5.1M 12 Mo. Net Absorp. SF 5.0% Market Cap Rate

8.4% Vacancy Rate

\$56.92 Market Rent/SF

\$665 Market Sale Price/SF

The leasing demand for new, modernized office space has driven the market's fundamentals this cycle, particularly in supply. Already the largest office market in the nation, the metro is expected to expand even further in the near term with a nation-leading 26.5 million SF under construction. Major occupiers today are using their office space to recruit and retain top talent, which has altered the focus of what prospective tenants require from their office needs. Additionally, increased transit connectivity within Manhattan has made the geographic location less of an issue with tenants now open to moving outside the core of Midtown. As a result, areas prime for new developments or major renovations are top destinations for office tenants. This "flight to quality" trend is exemplified by the continued exodus of tenants from aging product to the \$25 billion development in Midtown's Far West Side and the new World Trade Center complex in Downtown. This trend is driving developers in Midtown South to meet the area's unparalleled demand from tech tenants with more boutique office projects that are reshaping the appeal along Chelsea's High Line.

However, the metro could be forced the market to an inflection point over the coming years. This is due to the abundant supply in the development pipeline coupled with large looming vacancies from planned tenant moves stemming from the leasing surge into improved product. Major office occupiers across prominent Midtown submarkets such as Grand Central, Plaza District, and Times Square will eventually vacate their aging product, which could put downward pressure on occupancy rates and further depress market rents.

The market has recently witnessed measures taken which may help stabilize future fundamentals. The city council passed rezoning legislation in 2017 in an attempt to curtail the outflow of tenants from Midtown East. This rezoning initiative now allows developers to purchase unused adjacent air rights in order to build larger, more modern office towers. Additionally, the few forwardthinking landlords who have spent significant capital to renovate their assets, in anticipation of future moveouts, have seen their efforts pay dividends. Some owners may decide to repurpose their assets altogether, as seen with recent talk of possibly converting the Chrysler Building into a hotel.

Institutional-grade trophy office towers and value-add properties are selling at well above the previous peak at approximately \$650/SF, as the average New York office price per square foot has pulled away even further from the national average. An influx of foreign capital, particularly from Chinese institutional investors in 2015, and their acquisitions of trophy Midtown towers have propelled valuations and contracted the average cap rates roughly 200 basis points since the recession. However, investor focus is not limited to prestigious Midtown buildings, as recent activity is highlighted by trades of assets in areas like Chelsea which are experiencing heavy demand, but limited new supply. Though fewer trades occurred last year, sales volume still rebounded from a lackluster 2017 because of these lofty valuations.

While the prospect of interest-rate hikes in the future appears to leave limited room for further cap rate compression, the New York metro should comfortably remain the national leader in sales volume and the top destination for international investment. Though the metro's investment market is no longer considered to be at its peak, the metro remains attractive to foreign buyers who are drawn by the areas superior liquidity, strong leasing demand and with an educated workforce to satisfy long-term, conservative investors

Key Indicators:

| Current Quarter | RBA | Vacancy Rate | Gross Asking Rent | Availability Rate | Net Absorption SF | Deliveries SF | Under Construction SF |
|-----------------|-------------|--------------|----------------------|----------------------|----------------------|------------------|--------------------------|
| 4 & 5 Star | 458,138,677 | 10.1% | \$69.38 | 14.6% | 469,698 | 122,000 | 24,866,473 |
| 3 Star | 352,822,588 | 7.4% | \$47.67 | 10.5% | (293,006) | 50,000 | 2,116,816 |
| 1 & 2 Star | 121,051,989 | 4.3% | \$34.30 | 6.2% | 98,438 | 4,233 | 34,100 |
| Market | 932,013,254 | 8.3% | \$56.92 | 12.0% | 275,130 | 176,233 | 27,017,389 |



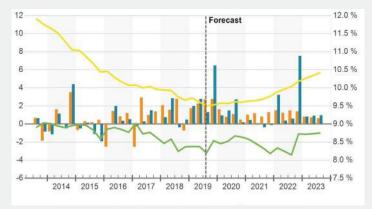


Office

Tenant preference for quality 4 & 5 Star properties remains the driving force of healthy leasing activity in the metro. In today's tight labor market, tenants are using their office space as a tool to recruit top talent. As a result, new construction and renovated properties that are rich with amenities are the ideal choice for large occupiers. However, a concerning trend is the lack of new tenant entrants into Manhattan, as much of the new stock is being absorbed by existing tenants within the city. With new office properties sparking existing tenants to trade spaces between buildings and submarkets, a significant amount of vacant space is on the horizon once the dust settles.

The "flight to quality" leasing trend has contributed to robust demand while placing less of an importance on location. The Hudson Yards development, located in a nontraditional area on the Far West Side, has been at the forefront of this trend. Tishman Speyer's asset in the development, the Spiral, has achieved recent success in the past 12 months with close to one million SF leased. Tenants like Alliance Bernstein and Pfizer, who plan to relocate from core areas in Midtown once the building delivers in 2022, were attracted by the floor-to-ceiling windows and abundance of green space that the project offered. Another example of this trend took place in one of the largest deals this cycle, with Deutsche Bank signing for over 1.2 million SF at One Columbus Circle in late 2018. The financial services provider is vacating their longtime home in the Financial District for better space located in a polar opposite area just south of Central Park.

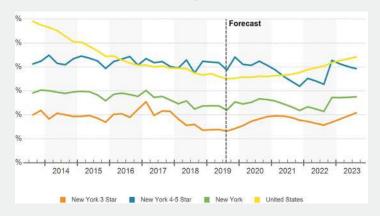
Net Absorption, Net Deliveries & Vacancy



Another substantial driver of demand has been the coworking sector. The prominence of the technology, advertising, marketing, and information (TAMI) sector not only spearheaded much of the recovery, but has helped elevate flexible office spaces into a viable option for many tenants in the market. Flexible spaces were primarily fueled by the emergence of start-up tech firms that needed room to grow, but are now also considered by established corporations, like IBM and Amazon, to house divisions within the firm. The largest of these firms is WeWork, whose valuation has skyrocketed to \$47 billion.

In February 2019, WeWork agreed to occupy 201,231 SF at 199 Water Street in Downtown, just one of eight leases signed by the firm since 2018 which exceeded 100,000 SF. The flexible space provider continues to aggressively add locations throughout the metro as its lofty valuation is based on continued breakneck expansion. The company currently occupies more than 5 million SF in the metro,

Vacancy Rate



surpassing J.P.

Morgan as New York's largest office tenant.

The demand for updated office space is not limited to the borough of Manhattan. Office availabilities are at cyclical highs for Brooklyn, as apartment fundamentals in the market exploded in recent years. Developers have responded by building new office buildings, though the majority of projects consisted of repurposing industrial assets as seen in the massive Navy Yard and Industry City redevelopments. To a lesser extent, the borough of Queens, in particular, Long Island City, has also emerged as a desirable office destination. The area boasts some of the metro's highest availability rates, with the availability rate in the 4 & 5 Star inventory well above 30% in 2018, as demand yielded premium supply additions. As landlords built modern offices in the outer boroughs, many did so on speculative investments, which has caused a bit of oversupply as demand has tapered off, with tenants flocking to new construction in Manhattan instead.

Rental growth has been stagnant in recent years, indicating that owners are feeling supply-side pressure. Landlords who hiked rents earlier in the cycle are finding it more difficult to do so today, restricted by the looming vacancies in their aging buildings and the knowledge that tenants now have increased options as they value the product over the location. Even those landlords that have been able to backfill their spaces have had to offer significant concessions in work allowance and free rent.







At an average of approximately \$56/SF for all office properties in the metro the best gains of the cycle appear to have already been made, fueled by strong leasing demand from TAMI sector firms. Today, rental growth in the New York metro has fallen well below the national average after consistently exceeding it before 2016. The poor rental performance can be linked to an abundance of new supply which has given tenants leverage and made it difficult for landlords of aging product to hike rents. Rental growth could be worse except landlords are hesitant to drop their asking rents, opting to instead offer generous concession packages to secure leases. With a notable amount of available space on the market, the competition to land tenants is fierce and has resulted in concession packages notably rising since 2017. When signing a long-term lease, a mid-tolarge sized occupier can expect to obtain at least 12 months of free rent and \$90/SF in tenant improvement allowance.

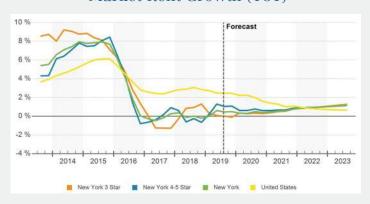
As tenant preferences continue to change, Midtown's rent premium is likely to decrease further compared to the other office clusters due to the amount of looming vacancies in its aging product. Midtown is the lone office cluster whose asking rents are currently below 2008 levels, though the area still remains the most expensive. The prices for new 5 Star properties are still lofty enough to rank among the highest in the metro, evidenced by Citadel's record-breaking lease at 425 Park Ave. and numerous leases signed at both Hudson Yards and 1 Vanderbilt that have fetched well over \$100/SF. However, as the rents in new construction and redevelopments of prime assets are able to reach new heights, Midtown has experienced negative rental growth in recent quarters as a notable amount of properties

rents in both Lower Manhattan and Midtown South have eclipsed last cycle's peaks, thanks largely to the popularity of both areas with New York's rapidly expanding TAMI tenants. Driven by tech demand largely outpacing supply, average asking rents in Midtown South submarkets are rapidly converging with those in Midtown, with rents in Gramercy, SoHo, and Hudson Square already surpassing those in some areas of Midtown. Rents in Downtown have recently benefitted from large blocks of space leasing up, with the ensuing drop in vacancy driving rental growth across all submarkets. Despite the increase in rents, Downtown still represents a cheaper option compared to most of Midtown and Midtown South, with modern office spaces at the World Trade Center securing commitments at a more reasonable \$80/SF.

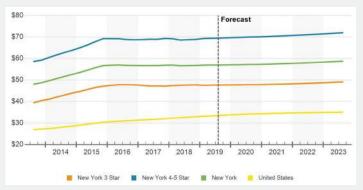
have decreased asking rents at one point over the last two years. Meanwhile,

The rent gains this cycle was not limited to just Manhattan as the emergence of the office markets in Brooklyn and Queens resulted in strong rental growth for neighborhoods like Brooklyn Heights, DUMBO and Long Island City. TAMI demand for offices coupled with a growing percentage of younger educated residents has helped Downtown Brooklyn and Northwest Queens become viable office markets during this cycle, with rents in both submarkets inflating about 40% since 2010. Though both boroughs have experienced recent spells of lackluster demand, Brooklyn has had slight gains in rental growth while landlords in Queens are opting to lower rents to secure a sizeable commitment. With a considerable amount of square footage expected to deliver in the next several years, it will be interesting to observe how demand affects pricing.

Market Rent Growth (YOY)



Market Rent Per Square Foot



4 & 5 Star Expenses Per Square Foot (Annual):

| Market / Cluster | Utilities | Cleaning | Insurance | Taxes | Other | Total |
|------------------|-----------|----------|-----------|---------|---------|---------|
| New York | \$1.38 | \$1.43 | \$0.48 | \$9.14 | \$10.21 | \$22.64 |
| Midtown | \$2.24 | \$1.46 | \$0.59 | \$15.49 | \$14.06 | \$33.84 |
| Queens | \$0.93 | \$1.27 | \$0.40 | \$5.77 | \$7.41 | \$15.78 |

Expenses are estimated using NCREIF, Trepp, IREM, and CoStar data using the narrowest possible geographical definition from Zip Code to region.

1 & 2 Star Expenses Per Square Foot (Annual):

| Market / Cluster | Utilities | Cleaning | Insurance | Taxes | Other | Total |
|------------------|-----------|----------|-----------|---------|--------|---------|
| New York | \$0.53 | \$0.97 | \$0.28 | \$5.90 | \$3.08 | \$10.76 |
| Midtown | \$0.55 | \$1.18 | \$0.42 | \$13.70 | \$7.14 | \$22.99 |
| Queens | \$0.38 | \$1.14 | \$0.35 | \$5.56 | \$2.71 | \$10.14 |

Expenses are estimated using NCREIF, Trepp, IREM, and CoStar data using the narrowest possible geographical definition from Zip Code to region.





Office

2Q19 Construction

Developments of 4 & 5 Star office properties continue to break ground with developers investing in various project types, from modern skyscrapers to state-of-the-art boutique projects to repurposed industrial assets. The motivation for increased construction stems from the new demand profile which has tenants utilizing their modern office space as a recruitment tool. This preference for modern space, which has defined the leasing activity in recent years, triggered a dramatic spike in office square feet under construction. As a result, projects today are aiming to include an abundance of natural light through the addition of outdoor terraces, floor-to-ceiling windows, and column-free floors. Despite a nationleading 26 million SF under construction, oversupply does not seem to be a concern, especially in Manhattan, as robust demand for the new quality office product has seen projects deliver nearly fully occupied.

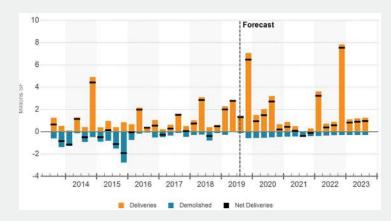
Leading the Manhattan construction boom is the megadevelopment at the Hudson Yards, accounting for about half of the metro's total square feet under construction. With its focus on meeting the demands of companies looking for modern office spaces, the \$25 billion mixeduse, multi-property project on the far west side of Midtown remains at the forefront of Manhattan's evolving office landscape. The project is experiencing healthy demand from a diverse mix of industries with a tenant roster featuring recent additions such as Pfizer, BlackRock, and Ernst & Young, joining companies such as Time Warner, KKR, and Skadden. Despite the enormity of the towers, ranging from 1.5 million to 2.9 million SF, completed projects are near full occupancy and the majority of the square feet close to delivery is already pre-leased. As a result, developers are as bullish as ever with the Two Manhattan West and 3 Hudson Boulevard projects moving forward on spec with no anchor tenant commitments, a rarity for projects of this size.

Renovations of outdated properties offer property owners another option to complement demand. Vornado Realty Trust is investing hundreds of millions of dollars to update and redevelop its portfolio around the Penn Station transit hub. In August 2017, the former Farley Post Office began its redevelopment into the Moynihan Train Hall, which will offer 767,000 SF of Class A office space, with a specific focus on catering to large tech occupiers. The developer also finalized renovation plans to transform One and Two Penn Plaza into a modern office campus, rehabilitating the area directly above the Pennsylvania Train Station. The successful leasing trends at the nearby Hudson Yards played a key factor in the developer's decision to invest in significant capital improvements, as the potential jump in rental income with upcoming expiring leases justified the cost.

Despite the exodus of firms from the core of Midtown, the

area's proximity to transit hubs still largely appeals to tenants and has been enough to motivate owners to renovate their existing assets. L&L Holding Company's redevelopment projects in the Plaza District and Grand Central are prime examples of investments bearing fruit. L&L made headlines when hedge fund manager Citadel signed to anchor the 705,244 SF 425 Park Avenue, as the lease was signed at a blended rent of \$175/SF including a record-breaking \$300/SF for the top floor. The redevelopment of 390 Madison Avenue was accompanied by amenities like outdoor terraces, which helped the building quickly become fully leased to tenants like J.P. Morgan, Shiseido, and Hogan Lovells LLP. Additionally, the Midtown East rezoning has opened opportunities for the historic office corridors like Grand Central and Park Avenue to add new 4 & 5 Star developments. SL Green's One Vanderbilt, which is currently about 60% pre-leased, and J.P. Morgan's planned headquarters at 270 Park Ave., are early projects to spring from the new legislation. Developers are also chasing demand outside the borough of Manhattan, hoping cheaper rents and a burgeoning residential scene will attract large occupiers. The common strategy has been to convert industrial buildings into creative open office spaces, although a handful of ground-up developments are set to hit the market in the coming years. Recently, developers have found it difficult to secure large commitments. Though today's tenant values the product over the neighborhood, it seems the idea of relocating outside Manhattan is a bridge too far. As a result of this lackluster demand, owners are allowing co-working firms like WeWork and Regus to anchor their properties. As more projects come to fruition, tenant relocations from Manhattan will certainly be a key for market fundamentals surviving the supply surge.

Deliveries & Demolitions







2Q19 Construction

 Properties
 Square Feet
 Inventory
 Preleased

 54
 6,650,663
 0.7%
 57.4%



Under Construction:

| Pro | perty Name/Address | Rating | Bldg. SF | Stories | Start | Complete | Developer/Owner |
|-----|---|-----------|----------|---------|----------|----------|---|
| 1 | Dock 72 63 Flushing Ave. | * * * * * | 670,000 | 17 | May-2016 | Sep-2019 | Rudin Management |
| 2 | One Jackson 28-01 Jackson Ave | * * * * * | 537,000 | 26 | Jun-2017 | Sep-2019 | Tishman Speyer |
| 3 | 25 Kent Ave | * * * * * | 507,000 | 8 | Sep-2016 | Sep-2019 | Heritage Equity Partners / Rubenstein Partners, LP. |
| 4 | One Willoughby Square 420 Albee Sq | * * * * * | 500,000 | 34 | Jul-2018 | Mar-2021 | JEMB Realty Corp. |
| 5 | Three Jackson 28-10 Queens Plz S | * * * * * | 445,000 | 26 | Jun-2017 | Oct-2019 | Tishman Speyer |
| 6 | Corporate Commons III 1440 South Ave | * * * * * | 391,223 | 8 | Oct-2017 | Nov-2019 | The Nicotra Group, LLC / The Port Authority of NY |





The investment sales market is no longer considered to be at its peak. Despite a rebound in 2018, investor activity last flourished between 2015 and 2016 due to a surge in Chinese investment; an investor group that has mostly left the market since. Driven by the steep asset valuations, there were three sales that closed over \$1 billion in 2018. However, the number of deals above the \$1 billion threshold has fallen over the past two years as investors remain cautious of where the economy stands in the cycle and expected interest-rate hikes in the near term appears to have limited cap rate compression. Yet overall activity is still fueled by lofty valuations and prices per SF well exceeding those of the last cycle's peak. The average cap rates have compressed roughly 200 basis points since the recession and hovered around 5% for the metro. Meanwhile, assets in Manhattan are trading at cap rates well below the metro average, especially for prime properties identified for potential value addition.

Sales activity thus far in 2019 is driven by two trades of 4 Star assets located in the east side of Midtown. Rockpoint Group acquired 1 Dag Hammarskjold Plaza, a 50-story 780,000 SF tower along Second Ave., for \$566 million (\$723/SF) just days into the new year. The property, home to several UN foreign missions and healthcare providers, has room to raise rents in the future and take advantage of the extensive renovation completed in 2015. Just a few blocks away, the Chetrit Group acquired a majority interest in 850 Third Ave. for \$422 million (\$684/SF) from the Chinese conglomerate HNA Group. The 617,000 SF property represented an investment opportunity for the Chetrit Group with a solid tenant roster and potential for value additions while HNA Group, which has undertaken a massive divestment of real estate assets, took a loss with the deal after previously purchasing the asset for \$463 million in 2016. The \$151 million sale of the Chrysler Building is surprisingly not expected to drive investment volume in 2019 as the previous owners, the Abu Dhabi Investment Council, are undertaking a massive loss. The iconic building, which sold for \$720 million at the height of the market in 2008, is said to be in need of massive upgrades while the new owners, RFR Realty, will have to submit ground lease payments of more than \$32 million annually. It is fair to wonder if landlords will hold onto trophy assets longer as the amount of capital expenditure required to modernize an asset will be quite significant, but essental in order to compete with the bevy of new construction in Midtown's Far West Side and Downtown.

While the prestigious office towers of central Midtown account for much of the most expensive assets in New York, recent trade activity in Chelsea exemplifies how much value addition opportunities have pushed asset prices in the area. In October 2018, a joint venture of L&L Holding, Normandy Real Estate Partners, and J.P. Morgan acquired the 1.2 million SF Terminal Stores for \$880 million from GreenOak Real Estate and Waterfront NY Realty. Four years earlier, GreenOak Real Estate bought a 49% interest in the asset for \$147 million from Waterfront NY Realty. The West Chelsea former warehouse complex represents a value-add redevelopment opportunity in a section of Manhattan that remains the forefront of the city's office landscape transformation. In March 2018, Google purchased the 1.2 million-SF Chelsea Market for almost \$2.4 billion, well above the \$800 million valuation Jamestown paid for the property in 2011. Benefiting from

leasing demand focused on migration to the western neighborhoods, areas in proximity to the Hudson Yards development such as Chelsea experienced immense asset appreciation this cycle. Sales volume in Downtown dropped off considerably, after notable transactions completed in 2017. Pricing gains haven't been as dramatic in Downtown properties, due to higher vacancy rates and lower market rents. As such, investor interest in the area is mainly focused on prestigious Class A properties, viewed as safer investments due to higher occupancy and rental rates. In December 2017, Brookfield Properties sold a 49% interest of One Liberty Plaza to The Blackstone Group at a valuation of over \$1.5 billion. The asset valuation of the trophy building marked one of the most expensive deals ever in the Downtown office market. Foreign investors are also keen to the prominent assets in Downtown. In May 2017, Canada-based Ivanhoe Cambridge partnered with Callahan Capital Properties and acquired 85 Broad St. for approximately \$650 million.

Far less than the feverish pace of 2015-16, global investors continue to allocate their capital to U.S. commercial real estate (CRE) and New York still benefits as the leading market in foreign capital. Brookfield Asset Management added to its stable of Manhattan CRE when it acquired a 100% leasehold interest in the office condominiums at 666 Fifth Ave., for about \$1.3 billion in August 2018. The Canada-based asset manager paid an upfront sum for a 99-year leasehold with its subsidiary Brookfield Properties to operate the building. Located on the infamous Fifth Avenue corridor of Manhattan, the property was valued for having the potential for improved rental return after major renovations to modernize the office spaces. Canadian investments regained the market share lead of foreign capital as China curtailed the flow of outbound capital into the United States. After years of aggressive trophy office acquisitions, Chinese government restraints reduced the deal flow and volume from one of New York City's most active buyers. Some owners are now trying to sell off their assets. Chinese conglomerate, HNA Group, sold a partial interest of 245 Park Ave. to SL Green Realty in November 2018 after acquiring the asset for \$2.21 billion in May 2017 at a 4.6% cap rate. Despite the drop-off in interest, New York City still remains the largest recipient of Chinese investment compared to other markets across the nation.

Sales Volume & Market Sale Price PSF







Sale Comparables

276

Avg. Cap Rate

6.4%

Avg. Price/SF

\$445

Avg. Vacancy at Sale

6.1%



Sale Comparables Summary Statistics:

| Sales Attributes | Low | Average | Median | High |
|---------------------------|-----------|-------------|-------------|---------------|
| Sale Price | \$110,000 | \$5,723,856 | \$1,500,000 | \$104,000,000 |
| Price Per SF | \$0.73 | \$445 | \$402 | \$3,727 |
| Cap Rate | 2.7% | 6.4% | 6.4% | 15.2% |
| Time Since Sale in Months | 0.1 | 6.8 | 7.4 | 12.0 |
| Property Attributes | Low | Average | Median | High |
| Building SF | 848 | 44,634 | 4,500 | 1,387,607 |
| Stories | 1 | 3 | 2 | 31 |
| Typical Floor SF | 80 | 7,189 | 2,270 | 88,663 |
| Vacancy Rate at Sale | 0% | 6.1% | 0% | 100% |
| Year Built | 1868 | 1952 | 1950 | 2018 |





Recent Significant Sales

| | | | Proper | ty | | Sale | | | | | |
|-----|---|--------|----------|---------|---------|---------------------------|---------------|---------------|----------------|--|--|
| Pro | operty Name - Address | Rating | Yr Built | Bldg SF | Vacancy | Sale Date | Price | Price/SF | Cap Rate | | |
| • | Empire Stores 55 Water St | **** | 1868 | 443,316 | 10.4% | 12/31/2018 | \$104,000,000 | \$938 | - | | |
| | The Bindery Building 30-02 48th Ave | **** | 1926 | 176,759 | 0% | 10/9/2018 | \$75,000,000 | \$424 | 9 5 | | |
| 3 | 1000 Dean St | **** | 1920 | 170,183 | 1.5% | 6/7/2019 | \$55,950,000 | \$329 | = | | |
| | 22 Chapel St | **** | 1950 | 36,800 | 0% | 12/31/2018 | \$26,450,000 | \$719 | 181 | | |
| 5 | 404-406 Pine St | **** | 1969 | 59,003 | 0% | 2/8/2019 | \$24,088,761 | \$408 | | | |
| 6 | Octagon Plaza 1720 Whitestone Expy | **** | 1985 | 62,545 | 0% | 3/28/2019 | \$24,000,000 | \$384 | - | | |
| V | 500 Dekalb Ave | **** | 1969 | 76,500 | 0% | 12/13/2 <mark>01</mark> 8 | \$22,876,649 | \$299 | N2 | | |
| 8 | 525-555 Broadway | **** | 1931 | 120,000 | 0% | 12/14/2018 | \$22,350,000 | \$18 6 | 74 | | |
| 9 | 1623-1627 Kings Hwy | **** | 2010 | 21,960 | 0% | 3/28/2019 | \$18,000,000 | \$820 | 5.5% | | |
| 10 | 37-30 Review Ave | **** | 1949 | 31,300 | 100% | 7/16/2019 | \$16,250,000 | \$519 | | | |
| • | 8721 5th Ave | **** | 1958 | 15,000 | 0% | 10/17/2018 | \$15,930,000 | \$1,062 | 5.0% | | |
| P | 70,835 Buildable SF 39-40 30th St | **** | 1946 | 22,000 | 0% | 3/15/2019 | \$15,200,000 | \$691 | 50 | | |
| 13 | 13930 Queens Blvd | **** | 2002 | 63,897 | 0% | 3/29/2019 | \$14,600,000 | \$228 | 74 | | |
| | 1302 Kings Hwy | **** | 1925 | 16,600 | 0% | 10/12/2018 | \$13,500,000 | \$813 | 5.0% | | |
| 15 | 36-01 Queens Blvd | **** | 1931 | 28,500 | 76.2% | 9/20/2018 | \$11,900,000 | \$418 | 8.0% | | |
| 16 | Parker Office Bldg 104-70 Queens Blvd | **** | 1962 | 30,000 | 0% | 11/8/2018 | \$11,639,401 | \$388 | 25 | | |
| 1 | 2832 Linden Blvd | **** | 1986 | 28,100 | 0% | 2/14/2019 | \$11,300,000 | \$402 | | | |
| 1 | 44-61 11th St | **** | 1959 | 18,500 | 0% | 10/19/2018 | \$10,500,000 | \$568 | 4.0% | | |
| 19 | Richmond Valley Atrium 4864 Arthur Kill Rd | **** | 2008 | 23,641 | 12.7% | 11/8/2018 | \$8,500,000 | \$360 | 6.3% | | |
| 20 | 2308 Jackson Ave | **** | 1931 | 17,800 | 44.1% | 6/14/2019 | \$8,150,000 | \$45 8 | - | | |





2Q19 Submarkets

| Inv | Inventory Inventory | | | | | 12 Month Deliveries | | | | Under Construction | | | |
|-----|---------------------|--------|----------|----------|------|---------------------|----------|---------|------|--------------------|---------|---------|------|
| No. | Submarket | Bldgs. | SF (000) | % Market | Rank | Bldgs. | SF (000) | Precent | Rank | Bldgs. | SF(000) | Percent | Rank |
| 1 | Bronx | 587 | 13,250 | 1.4% | 20 | 0 | 0 | 0% | - | 4 | 595 | 4.5% | 8 |
| 2 | Central Queens | 301 | 4,677 | 0.5% | 49 | 0 | 0 | 0% | - | 2 | 246 | 5.3% | 16 |
| 3 | Chelsea | 515 | 44,496 | 4.8% | 5 | 3 | 426 | 1.0% | 2 | 3 | 337 | 0.8% | 15 |
| 4 | Downtown Brooklyn | 206 | 25,336 | 2.7% | 11 | 1 | 9 | 0% | 20 | 2 | 637 | 2.5% | 6 |
| 5 | Northeast Queens | 731 | 11,704 | 1.3% | 23 | 0 | 0 | 0% | - | 4 | 422 | 3.6% | 12 |
| 6 | Northwest Queens | 454 | 17,093 | 1.8% | 14 | 1 | 56 | 0.3% | 9 | 7 | 1,732 | 10.1% | 3 |
| 7 | South Brooklyn | 1,112 | 18,984 | 2.0% | 13 | 8 | 275 | 1.4% | 3 | 9 | 236 | 1.2% | 17 |
| 8 | South Queens | 417 | 6,487 | 0.7% | 39 | 0 | 0 | 0% | - | 4 | 37 | 0.6% | 27 |
| 9 | Staten Island | 925 | 6,921 | 0.7% | 37 | 1 | 5 | 0.1% | 21 | 2 | 456 | 6.6% | 9 |
| 10 | World Trade Center | 45 | 36,652 | 3.9% | 7 | 0 | 0 | 0% | - | 2 | 456 | 1.2% | 10 |

| Ren | ıt | Gross Ask | ing Rent | 12 Month | Asking Rent | Annualized Qu | arterly Rent |
|-----|--------------------|-----------|----------|----------|-------------|---------------|--------------|
| No. | Submarket | Per SF | Rank | Growth | Growth Rank | | Rank |
| 1 | Bronx | \$35.64 | 30 | 0.1% | 17 | -2.6% | 42 |
| 2 | Central Queens | \$40.87 | 26 | -1.1% | 56 | -2.5% | 40 |
| 3 | Chelsea | \$65.89 | 14 | 0.4% | 45 | 2.7% | 6 |
| 4 | Downtown Brooklyn | \$48.69 | 20 | 0.7% | 13 | -1.7% | 25 |
| 5 | Northeast Queens | \$43.69 | 23 | -2.8% | 69 | -6.4% | 69 |
| 6 | Northwest Queens | \$43.73 | 22 | -0.6% | 44 | -2.5% | 41 |
| 7 | South Brooklyn | \$35.85 | 29 | -0.8% | 10 | -3.8% | 59 |
| 8 | South Queens | \$41.32 | 25 | -2.4% | 66 | -5.1% | 66 |
| 9 | Staten Island | \$30.39 | 39 | -1.0% | 58 | -3.8% | 56 |
| 10 | World Trade Center | \$66.62 | 12 | 3.5% | 2 | 5.0% | 2 |

| Vac | ancy & Net Absorp. | | Vacancy | | | 12 Month Net | Absorption | |
|-----|--------------------|-----------|---------|------|-----------|--------------|------------|------------------|
| No. | Submarket | SF | Percent | Rank | SF | % of Inv. | Rank | Construct. Ratio |
| 1 | Bronx | 747,666 | 5.6% | 19 | (110,049) | -0.8% | 62 | - |
| 2 | Central Queens | 331,062 | 7.1% | 34 | (87,278) | -1.9% | 58 | - |
| 3 | Chelsea | 2,964,557 | 6.7% | 31 | 185,604 | 0.4% | 12 | 1.7 |
| 4 | Downtown Brooklyn | 2,584,821 | 10.2% | 50 | (625,799) | -2.5% | 68 | - |
| 5 | Northeast Queens | 289,520 | 2.5% | 3 | 289,520 | 0.5% | 29 | - |
| 6 | Northwest Queens | 2,315,380 | 13.5% | 65 | 143,104 | 0.8% | 17 | 0.4 |
| 7 | South Brooklyn | 2,273,901 | 12.0% | 58 | (472,522) | -2.5% | 66 | - |
| 8 | South Queens | 228,778 | 3.5% | 7 | 102,752 | 1.6% | 21 | - |
| 9 | Staten Island | 256,881 | 3.7% | 9 | 55,358 | 0.8% | 28 | 0.1 |
| 10 | World Trade Center | 4,490,936 | 12.3% | 61 | 837,087 | 2.3% | 2 | 2.7 |







Retail

591M Inventory SF 7.5M

2.8M

6.2%

Under Construction SF

12 Mo. Net Absorp. SF Market Cap Rate

3.9% Vacancy Rate \$40.57

\$382

Despite the obstacles facing traditional retailers throughout the U.S. created by e-commerce, New York retail fundamentals are better positioned given its unmatched density and concentration of wealth. That's not to say the market is not seeing any effects of disruption as declines in vacancy have dissipated over the last two years. While several high-profile projects are expected to deliver in the near term, they are predominantly preleased which should keep vacancy levels flat. Rent growth has trended downward since 2015, and now sits in negative territory as of 19Q1, as the proliferation of new projects makes it difficult for owners to hike rents. Still, fundamentals are stable as a rise in jobs and earnings coupled with increased tourism pave the way for consumer

Ground floor retail, specifically in Manhattan's prime retail corridors, tells a different story. Storefront vacancies have risen considerably as retailers are conceding ground to e-commerce while rents can reach well above \$3,000/SF in certain prominent corridors according to the Real Estate Board of New York (REBNY.) The fact that major names like Gap, Tommy Hilfiger, and Henri Bendel can reach well above \$3,000% in certain prominent corridors according to the Heal Estate Board of New York (HEBNY.) The fact that major names like Gap, forminy Hillinger, and Henri Bendel have vacated the Fifth Avenue corridor during a time when foot traffic from tourism is at an all-time high speaks to the challenges facing retailers. Brands are shifting away from large expensive flagship stores, opting to instead beef up their online presence while operating smaller shops designed to provide interactive customerdriven experiences. Owners are finally reacting in hopes of quelling the gains in vacancy, with REBNY reporting that the majority of ground floor retail has witnessed annual declines in asking rents. Landlords have also offered short term leases and provided more expital to enhance tenant build-outs as a strategy to fill vacancies. New construction in the metro outlines the shift toward more experience, knowing that shopping today is increasingly done online. At 20 Hudson Yards, shoppers not only have access to traditional retailers but also 77,000 SF of online-only brands not found anywhere else to go along with a food and beverage component featuring an abundance of dining options. At the American Dream Mall in New Jersey, entertainment options include a theme park and an indoor show park when the mall oness later in 2019. options include a theme park and an indoor snow park when the mall opens later in 2019.

New York was the first market where investors swooped back in and bid pricing back up to prerecession levels b 2013. Sales volume this year is off to a strong start with over \$2 billion traded in 19Q1. Investment activity in 2018 marked the highest annual sale volume in the current cycle, eclipsing the previous year by roughly \$2.5 billion. New York isn't a market for investors seeking to beat the national major-markets average in total returns, as the current price per SF is at all-time highs and cap rates are among the lowest in the U.S. However, New York is still a strong choice for core investors given its desirability to retailers, unparalleled density, and history of above-average income growth.

Key Indicators:

| Current Quarter | RBA | Vacancy Rate | Gross Asking Rent | Availability Rate | Net Absorption SF | Deliveries SF | Under Construction SF |
|---------------------|-------------|--------------|----------------------|----------------------|----------------------|------------------|--------------------------|
| Malls | 34,237,103 | 2.6% | \$44.70 | 3.5% | 3,110 | 0 | 2,113,100 |
| Power Center | 25,069,118 | 4.3% | \$29.46 | 8.1% | 36,036 | 0 | 0 |
| Neighborhood Center | 79,468,703 | 6.6% | \$29.57 | 9.1% | (133,216) | 0 | 519,520 |
| Strip Center | 15,784,794 | 5.9% | \$26.25 | 7.4% | (20,594) | 0 | 40,005 |
| General Retail | 432,628,411 | 3.4% | \$43.49 | 5.3% | 13,029 | 175,917 | 4,222,279 |
| Other | 3,205,032 | 4.4% | \$29.09 | 4.5% | 0 | 0 | 0 |
| Market | 590,393,161 | 3.9% | \$40.58 | 5.9% | (101,635) | 175,917 | 6,894,904 |

| Annual Trends | 12 Month | Historical Average | Forecast Average | Peak | When | Trough | When |
|----------------------|----------|-----------------------|---------------------|-----------|---------|-------------|---------|
| Vacancy Change (YOY) | 0.1% | 5.0% | 4.2% | 7.0% | 2006 Q3 | 3.7% | 2018 Q4 |
| Net Absorption SF | 2.8 M | 3,793,144 | 2,301,199 | 8,634,964 | 2008 Q2 | (2,357,723) | 2006 Q4 |
| Deliveries SF | 4.1 M | 3,545,705 | 3,472,292 | 6,101,185 | 2010 Q1 | 1,171,786 | 2013 Q1 |
| Rent Growth | -1.3% | 1.3% | -0.3% | 5.0% | 2007 Q4 | -3.8% | 2009 Q4 |
| Sales Volume | \$5.7 B | \$4.6 B | N/A | \$8.0 B | 2019 Q1 | \$1.8 B | 2010 Q1 |





2Q19 Leasing

Vacancies in retail properties appear to have stabilized over the past three years, settling in the range of 4%. The limited amount of new construction deliveries have aided vacancy compression throughout the cycle. Favorable demographics in the metro have also supported the strength in the fundamentals as the metro boasts high population densities, particularly in the New York City boroughs, along with lofty median household incomes across the more suburban locales of Northern New Jersey and Westchester County. A strong component of retail sales in Manhattan and popular areas of Brooklyn stems from tourism which has increased for the ninth consecutive year, eclipsing 65 million visitors in 2018.

Many of the biggest leases signed in 2018 occurred outside of Manhattan, as big-box retailers are able to establish larger storefront in the submarkets of Northern New Jersey and Brooklyn, for a fraction of the rent prices. In May 2018, At Home signed a lease for approximately 95,000-SF in Brick, New Jersey. The home furnishing wholesaler currently anchors the 246,000-SF community center property at 1930 Route 88, taking over space that was vacated by Kmart. In August 2018, JCPenny opened a new 86,000-SF store across three floors at the Kings Plaza Shopping Center, one of Brooklyn's largest malls. Even as the department store retailer has been dealing with store closures across the nation, the retailer took on a sizeable lease, attracted by South Brooklyn's dense population of middle-class families.

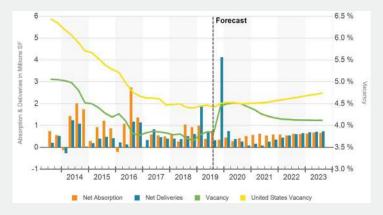
Vacancies on ground floor retail, particularly in New York City, have been rising as name brands are closing stores in the most prominent of retail corridors. Retailers have cited

dismal store sales coupled with pricey rents as reasons for closing up shop. Landlords have been hesitant to drop rents until recently which has further compounded the issue. The growing amount of empty storefronts has emboldened the city government to consider taxing landlords who continue to keep their retail vacant. Some tenants have used the current retail climate to experiment, such as Reebok's 25,000-SF lease signed in 19Q2 in a non-traditional corridor of Upper Manhattan. The space will be designed with customer experience in mind and will feature a barber shop, a shoe customization area, and dedicated space for hosting events.

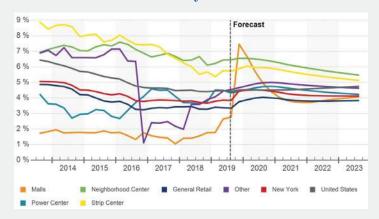
Deliveries are set to hit the market in 2019, though the more prominent additions are delivering nearly fully leased which should not impact vacancy figures. In 19Q1, the one million-SF Shops at Hudson Yards opened in Manhattan's Far West Side. In order to generate foot traffic, the operators are creating a multilayered approach of luxury shops, popular affordable retailers, an abundance of dining options, and an entire floor dedicated to online-only brands opening their first physical location. Opening later in 2019 is the American Dream Mall in New Jersey. The two million-SF mall will include an indoor ski slope, a water park, and rotating art installations to partner with their traditional retail aspects.

With expectations for strong income growth in the near term, bustling tourism, and desirability from brands looking to take advantage of the area's density, the New York metro should maintain its position as one of the preeminent retail markets in the country.

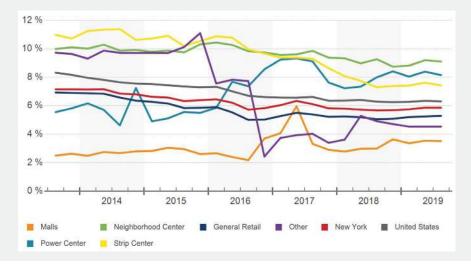
Net Absorption, Net Deliveries & Vacancy



Vacancy Rate



Availability Rate







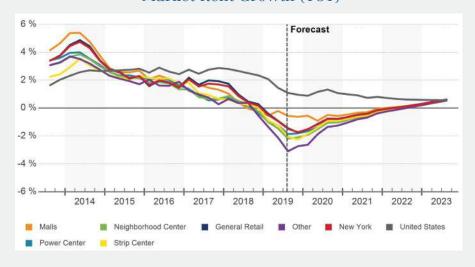
As the economy recovered, rental growth for retail properties has trended upward early on in the cycle, with rents increasing for seven consecutive years prior to 2018. In the past year, rental growth has declined and even registered losses in 19Q1. It seems as if landlords are reacting to the fact that retailers are more selective as e-commerce has chipped away at in-store sales and new developments rise throughout the metro.

While rent loss was recorded in all of New York's submarkets, New York's average rent still remains among the top in the nation because of lofty rents posted in Manhattan. The metro's most expensive rents are concentrated in the densely packed Midtown region of Manhattan, with the highest average asking rents in the nation dominated by Midtown Manhattan submarkets. Retail rents in the heart of Times Square and along Fifth Avenue represent some of the metro's most expensive rents, which is heavily fostered by tourism. Consumer spending via tourism plays an important component for rents in prime real estate, especially as the amount of annual visitors has risen

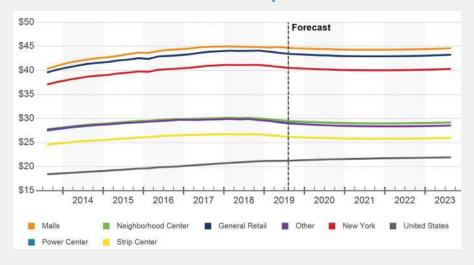
to 65 million, the most in the nation.

Ground floor retail, which has recently seen increased vacancies, has witnessed annual rent declines in the majority of Manhattan retail corridors according to the Real Estate Board of NY. Still, despite the drop in rents, name brands like Gap, Tommy Hilfiger, and Ralph Lauren have vacated their space in prime retail corridors as the abundance of foot traffic has not canceled out the increased usage of online shopping. In order to secure tenancy, landlords are opting to offer shorter-term leases and increase the amount of tenant improvement allowance for an enhanced buildout. But with in-store sales declining, rents represent the ultimate barrier as retailers have reached a limit to what they are willing to pay. This has caused some landlords to drop rents significantly to secure a tenant who heavily enhances their asset as landlords look to form a partnership with the tenant and no longer view them as just another item on the rent roll.

Market Rent Growth (YOY)



Market Rent Per Square Foot







2Q19 Construction

Despite the recession and evolving consumer preferences, deliveries have occurred this cycle as the metro's fundamentals appeal to developers. With more than seven million SF of projects under construction, a slight spike in inventory growth is expected in 2019. Yet due to the nation-leading size of the New York market and strong pre-leasing activity in the more prominent projects under construction, the supply growth on a percentage basis is quite low and should have a minimal effect on the market's vacancy rate.

Developers historically faced tough barriers to entry in the Manhattan area, especially for large-scale developments, due to the lack of buildable land and zoning restrictions. However, as city officials approved rezoning plans in hopes to capitalize on under-utilized areas of the city, developers have taken advantage of the rare opportunity to build at such a large-scale. The mixed-use complex at the Hudson Yards is the pinnacle of such development in Manhattan. The Related Companies' 1,000,000-SF retail center at 20 Hudson Yards represents the retail component of the live-workplay community development underway. The development, which delivered in 19Q1, is the second largest freestanding retail property in the borough. Luxury retailer Neiman Marcus has leased 250,000-SF to anchor the property, establishing its first storefront in Manhattan.

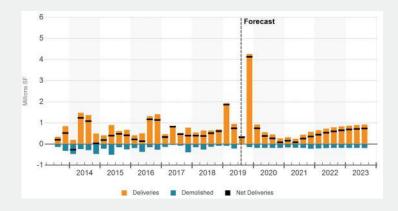
Similarly in the Lower East Side of Manhattan, a mixeduse development called Essex Crossing, will comprise of approximately 1.9 million SF of residential, office, and retail space. A development consortium labeled Delancey Street Associates (a collaboration between Taconic Investment Partners, L+M Development, BFC Partners, Goldman Sachs, and the Prusik Group) along with the help of local officials, aims to enhance and revitalize the neighborhood by converting mostly vacant land to modern mixed-use towers. Approximately 490,000 SF of retail space has delivered in the immediate area, with a tenant roster including Trader Joe's,

Target, Essex Street Market, Regal Cinemas, among others.

Aside from the mixed-use mega-projects in developing areas of Manhattan, typically retail projects of this size tend to break ground outside of the borough, where larger and more affordable land lots are available. The Meadowlands submarket in the Northern New Jersev section of the metro hosts the largest retail project currently under construction, called the American Dream at Meadowlands. With more than 15 years in the making, the 2,069,000-SF super mall is finally expected to deliver in late 2019. The massive mall complex will not only host major department store retailers such as Saks Fifth Avenue and Lord & Taylor, but also provide entertainment attractions such as an amusement park, water park, and an indoor snow park. Multinational conglomerate, Triple Five Worldwide has finally taken control of the development and sees the opportunity for the new complex to not only cater to the abundance of local residents but tourists as well.

With an ever-increasing amount of shopping done online, developers are focusing on experience-based layouts to create foot traffic momentum, with recent deliveries displaying what future large scale projects will look like.

Deliveries & Demolitions







2Q19 Construction

Properties Square Feet Inventory Preleased

70 2,565,448 0.4

0.4% 60.3%



Selection of Under Construction Properties:

| Pro | perty Name/Address | Rating | Bldg. SF | Stories | Start | Complete | Developer/Owner |
|-----|---|-----------|----------|---------|----------|----------|---|
| 1 | 1504 Coney Island Ave | * * * * * | 250,000 | 8 | Jun-2016 | Sep-2019 | Triangle Management |
| 2 | Tangram Tower 3709 College Point Blvd | * * * * * | 244,000 | 2 | May-2015 | Sep-2019 | Shanghai Construction Group, Inc. / Two Fulton Square LLC |
| 3 | Hyland Ave | * * * * * | 224,391 | 2 | Mar-2018 | Oct-2019 | Kimco Realty Coporation |
| 4 | Retail 350 St Nicholas Ave | * * * * * | 179,295 | 17 | Sep-2018 | Mar-2020 | ONE Commercial |
| 5 | Retail Portion of 532 Nep 532 Neptune Ave | * * * * * | 162,220 | 3 | Feb-2019 | Jan-2021 | Cammeby's International |
| 6 | 40-31 82nd St | * * * * * | 160,000 | 3 | Jul-2017 | Jul-2020 | Sun Equity Partners / 304 GC LLC |
| 7 | Retail Portion of The Cro. 147-40 Archer Ave | * * * * * | 100,000 | 3 | May-2018 | Mar-2020 | BRP Development Corp. |





Retail

2Q19 Sales

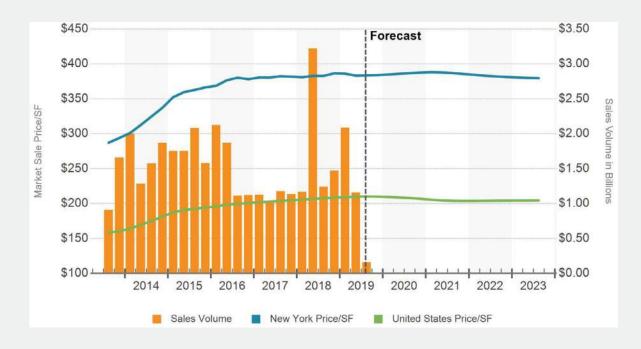
New York metro's retail investment continues to show strength as annual sales volume has been healthy since 2014. The robust investor interest for prime Manhattan land has inflated valuations to all-time high prices, with cap rates compressing to among the lowest across the nation. Following a cyclical high in 2018, when annual sale volume totaled approximately \$7.5 billion, momentum has carried over to 2019 with investment off to a strong start. Both volume and pricing continue to benefit from institutional investors looking for access to the strong growth prospects of prime assets in the metro's famous shopping corridors.

Prime retail assets located in premiere Manhattan corridors highlight the top sales in recent years. In February 2019, WeWork Property Investors, the investment arm of the shared office space provider, acquired a majority stake in the Lord & Taylor building, just south of Bryant Park on Fifth Avenue. In a joint venture with local private equity firm, Rhone Capital, WeWork Property Investors valued the 616,000-SF property at \$850 million. The lofty valuation is among the most expensive trades of a retail property this cycle and one of the most expensive commercial real estate transactions this year, regardless of asset type. Hudson Bay Co., the parent company of Lord & Taylor, will retain an ownership position valued at \$125 million. WeWork intends to invest heavily in capital expenditures to renovate the building, hiring architect Bjarke Ingels to oversee the redesign.

Though not reflected in analytics, the recent 48.5% interest sale of Vornado Realty Trust's retail portfolio to Crown Acquisitions and Qatar Sovereign Wealth Fund speaks to the perceived value of prime Manhattan retail assets. The interest sale, consisting of seven assets located in high foot traffic areas along Fifth Avenue and Broadway, values the portfolio at \$5.6 billion. Even as retailers are reducing footprints and closing stores, investors have been aggressive in securing assets in desirable locations as these longer-term holds do not come to market often.

One of the most expensive trades in 2018 was in the Times Square submarket, which is recognized as one of the top tourist attractions in Manhattan. In September, Vornado Realty Trust acquired the remaining ownership of the retail condominium space at the base of the Marriot Marquis Times Square Hotel for \$442 million. The real estate investment trust previously acquired the other half of the retail condo and invested in capital improvements to the space. The deal concludes a full ownership stake for the ground floor retail space (which was fully leased at the time of the sale), the 1,611 seat Marquis Theater leased to the Nederlander Organization, and the digital signage display at 1535 Broadway. The REIT now owns retail space and signage at 1535 Broadway and 1540 Broadway, both sides of the Times Square bow tie, one of the nation's most visited tourist destinations and shopping corridors.

Sales Volume & Market Sale Price Per SF







Sale Comparables
1,072
Avg. Cap Rate
Avg. Price/SF
Avg. Vacancy at Sale
2.7%



Sale Comparables Summary Statistics:

| Sales Attributes | Low | Average | Median | High |
|---------------------------|-----------|-------------|-------------|--------------|
| Sale Price | \$100,000 | \$2,407,436 | \$1,500,000 | \$25,000,000 |
| Price Per SF | \$12 | \$511 | \$456 | \$9,434 |
| Cap Rate | 0.9% | 6.1% | 5.8% | 19.8% |
| Time Since Sale in Months | 0.1 | 6.6 | 6.6 | 12.0 |
| Property Attributes | Low | Average | Median | High |
| Building SF | 135 | 6,555 | 3,300 | 1,476,661 |
| Stories | 1 | 2 | 2 | 25 |
| Typical Floor SF | 245 | 3,940 | 1,500 | 738,331 |
| Vacancy Rate at Sale | 0% | 3.9% | 0% | 100% |
| Year Built | 1829 | 1938 | 1931 | 2019 |





2Q19 Sales

Recent Significant Sales

| | | | Propert | ty | | | Sale | | |
|----------|--|--------|----------|---------|---------|------------|--------------|----------|------------------|
| Pro | perty Name - Address | Rating | Yr Built | Bldg SF | Vacancy | Sale Date | Price | Price/SF | Cap Rat |
| • | Queens Place Mall 88-01 Queens Blvd | **** | 2001 | 223,075 | 0% | 9/25/2018 | \$82,967,450 | \$372 | 853 |
| 2 | 24-16 Queens Plz S | **** | 2019 | 104,129 | 0% | 1/28/2019 | \$39,201,783 | \$376 | (1) |
| 3 | 650-666 86th St | **** | 1952 | 2,650 | 0% | 6/25/2019 | \$25,000,000 | \$9,434 | 55 |
| 4 | 134-136 N 6th St | **** | 1950 | 4,000 | 100% | 8/20/2018 | \$17,891,822 | \$4,473 | 141 |
| 5 | 1633 East 16th Street 1633 E 16th St | **** | 2019 | 61,224 | 14.1% | 1/31/2019 | \$17,600,000 | \$287 | 17-1 |
| 6 | 6156 Springfield Blvd | **** | 1991 | 28,016 | 0% | 6/7/2019 | \$16,963,705 | \$606 | 800 |
| • | 13501-13519 35th Ave | **** | 120 | 24,346 | 0% | 3/14/2019 | \$16,000,000 | \$657 | 120 |
| 8 | 70 N 6th St | **** | 1920 | 15,000 | 0% | 1/17/2019 | \$15,964,708 | \$1,064 | 1123 |
| 9 | 270-272 4th Ave | **** | 1931 | 19,192 | 0% | 6/3/2019 | \$15,000,000 | \$782 | ** |
| 10 | 188 Bedford Ave | **** | 1910 | 2,100 | 0% | 4/10/2019 | \$15,000,000 | \$7,143 | 17-2 |
| • | 43,760 SF As-Of-Right B 275 Livingston St | **** | 1920 | 12,100 | 0% | 10/9/2018 | \$14,800,000 | \$1,223 | 150 |
| P | 571 Fulton St | **** | 1915 | 10,622 | 0% | 9/6/2018 | \$14,500,000 | \$1,365 | 120 |
| 13 | 111,000 SF Buildable 815 Kings Hwy | **** | 1935 | 40,000 | 0% | 4/4/2019 | \$14,407,351 | \$360 | 13-28 |
| | 2875 Flatbush Ave | **** | 1991 | 51,000 | 0% | 8/28/2018 | \$14,150,000 | \$277 | - |
| 1 | 9519-95-23 37th Ave | **** | 1928 | 22,500 | 0% | 5/1/2019 | \$14,120,023 | \$628 | - |
| 6 | 7235 Broadway | **** | 1955 | 25,000 | 0% | 11/29/2018 | \$14,000,000 | \$560 | 150 |
| • | 44-15 College Point Blvd | **** | 1955 | 1,650 | 0% | 7/22/2019 | \$13,600,000 | \$8,242 | 55 |
| 8 | 60 N 6th St | **** | 1920 | 10,000 | 0% | 1/17/2019 | \$13,535,292 | \$1,354 | 840 |
| 9 | T Mobile Roosevelt & Main 13616 Roosevelt Ave | **** | 1931 | 3,125 | 0% | 12/12/2018 | \$13,500,000 | \$4,320 | - |
| 20 | 9601-9641 Queens Blvd | **** | 1946 | 8,763 | 47.9% | 5/6/2019 | \$13,000,000 | \$1,484 | |



2Q19 Submarkets

| Inv | entory | | Inventory 12 Month Deliveries | | | | | ι | Jnder Co | onstructio | n | | |
|-----|--------------------|--------|-------------------------------|----------|------|--------|----------|---------|----------|------------|---------|---------|------|
| No. | Submarket | Bldgs. | SF (000) | % Market | Rank | Bldgs. | SF (000) | Precent | Rank | Bldgs. | SF(000) | Percent | Rank |
| 1 | Bronx | 3,896 | 32,130 | 5.4% | 3 | 5 | 24 | 0.1% | 26 | 4 | 136 | 0.4% | 14 |
| 2 | Central Queens | 2,154 | 15,567 | 2.6% | 10 | 1 | 3 | 0% | 40 | 7 | 317 | 2.0% | 7 |
| 3 | Chelsea | 493 | 5,715 | 1.0% | 35 | 4 | 99 | 1.7% | 11 | 2 | 212 | 3.7% | 9 |
| 4 | Downtown Brooklyn | 526 | 6,146 | 1.0% | 30 | 1 | 2 | 0% | 44 | 0 | - | - | - |
| 5 | Northeast Queens | 3,143 | 23,878 | 4.0% | 6 | 8 | 97 | 0.4% | 12 | 14 | 432 | 1.8% | 3 |
| 6 | Northwest Queens | 1,717 | 13,160 | 2.2% | 12 | 2 | 51 | 0.4% | 17 | 7 | 208 | 1.6% | 10 |
| 7 | South Brooklyn | 7,556 | 42,853 | 7.3% | 2 | 6 | 190 | 0.4% | 6 | 9 | 562 | 1.3% | 2 |
| 8 | South Queens | 3,062 | 19,889 | 3.4% | 8 | 4 | 122 | 0.6% | 10 | 8 | 266 | 1.3% | 8 |
| 9 | Staten Island | 2,466 | 18,565 | 3.1% | 9 | 5 | 379 | 2.0% | 3 | 9 | 400 | 2.2% | 4 |
| 10 | World Trade Center | 15 | 881 | 0.1% | 63 | 0 | 0 | 0% | - | 0 | - | - | - |

| Rent | | Gross Ask | ing Rent | 12 Month | Asking Rent | Annualized Qu | arterly Rent |
|------|--------------------|-----------|----------|----------|-------------|---------------|--------------|
| No. | Submarket | Per SF | Rank | Growth | Rank | Growth | Rank |
| 1 | Bronx | \$42.51 | 27 | -0.9% | 14 | -2.8% | 46 |
| 2 | Central Queens | \$46.24 | 23 | -1.0% | 16 | -2.9% | 48 |
| 3 | Chelsea | \$105.58 | 14 | -0.9% | 15 | -2.9% | 47 |
| 4 | Downtown Brooklyn | \$79.60 | 20 | -0.4% | 5 | 0.5% | 1 |
| 5 | Northeast Queens | \$46.82 | 22 | -1.2% | 28 | -2.9% | 51 |
| 6 | Northwest Queens | \$43.81 | 25 | -1.0% | 18 | -2.6% | 36 |
| 7 | South Brooklyn | \$42.57 | 28 | -0.4% | 54 | -0.3% | 55 |
| 8 | South Queens | \$42.31 | 28 | -1.2% | 31 | -2.3% | 18 |
| 9 | Staten Island | \$32.36 | 39 | -1.8% | 50 | -2.5% | 31 |
| 10 | World Trade Center | \$97.59 | 15 | 0.2% | 2 | -2.8% | 45 |

| Vac | ancy & Net Absorp. | | Vacancy | | | 12 Month Net A | Absorption | |
|-----|--------------------|-----------|---------|------|-----------|----------------|------------|------------------|
| No. | Submarket | SF | Percent | Rank | SF | % of Inv. | Rank | Construct. Ratio |
| 1 | Bronx | 1,241,645 | 3.9% | 36 | (10,370) | 0% | 44 | - |
| 2 | Central Queens | 424,425 | 2.7% | 17 | 38,024 | 0.2% | 24 | 0 |
| 3 | Chelsea | 342,566 | 5.9% | 58 | (63,097) | -1.1% | 59 | - |
| 4 | Downtown Brooklyn | 284,073 | 4.6% | 44 | (27,917) | -0.5% | 53 | - |
| 5 | Northeast Queens | 851,749 | 3.6% | 28 | (113,403) | -0.5% | 66 | - |
| 6 | Northwest Queens | 487,994 | 3.7% | 30 | (35,326) | -0.3% | 56 | - |
| 7 | South Brooklyn | 1,217,461 | 2.9% | 17 | (115,020) | -0.3% | 67 | - |
| 8 | South Queens | 676,084 | 3.4% | 25 | 226,279 | 1.1% | 5 | 0.4 |
| 9 | Staten Island | 692,475 | 3.7% | 31 | 212,762 | 1.1% | 6 | 1.8 |
| 10 | World Trade Center | 80,097 | 9.1% | 64 | (55,140) | -6.3% | 58 | - |







New York

Industrial Market 2Q19

821M Inventory SF

5.3M
Under Construction SF

2.8M 12 Mo. Net Absorp. SF 5.7% Market Cap Rate

4.3% Vacancy Rate

\$13.73 Market Rent/SF

\$178

Market Sale Price/SF

Fundamentals are hot in the New York industrial market, as the rise of e-commerce has spurred increased demand for logistics space. The metro has taken on a large supply wave to meet this demand, with close to 20 million SF of net new inventory added since the start of 2016. Construction has been concentrated in New Jersey—and the Exit 8A Submarket in particular—where there is space to build sprawling facilities while maintaining easy access to New York and other large East Coast metropolitan areas. Fundamentals are also well positioned in the specialized industrial segment, thanks largely to demolitions and conversions that removed obsolete inventory.

Rent growth has been remarkably strong, topping 5% in every year since 2013. After increasing by just over 1% in the first half of 2019, however, rents are on pace to fall short of that mark this year. While the supply-driven pressure has slightly slowed rent growth, demand for space remains robust and vacancies are near a record low. More than 5 million SF is underway as of 19Q3, and supply-driven pressure will continue to be a factor in the near term.

Investors are keen to get a piece of the market, with redhot fundamentals offering prospective solid return on their investment. Sales volume has topped \$2 billion for six consecutive years, and topped \$4 billion in each of the last two years. More than \$2 billion traded in the first half of 2019, keeping transaction volume on this pace. Asset valuations have more than doubled since the start of the cycle, pushing cap rates down about 200 basis points since the start of the cycle.

Key Indicators:

| Current Quarter | RBA | Vacancy Rate | Gross Asking Rent | Availability Rate | Net Absorption SF | Deliveries SF | Under Construction SF |
|------------------------|-------------|--------------|----------------------|----------------------|----------------------|------------------|--------------------------|
| Logistics | 603,485,998 | 4.0% | \$13.14 | 6.3% | (54,255) | 107,808 | 4,061,203 |
| Specialized Industrial | 159,659,984 | 3.7% | \$14.15 | 5.1% | (244,967) | 47,800 | 635,086 |
| Flex | 58,250,266 | 9.6% | \$18.60 | 13.7% | (59,301) | 0 | 397,626 |
| Market | 821,396,248 | 4.3% | \$13.73 | 6.6% | (358,523) | 155,608 | 5,093,915 |

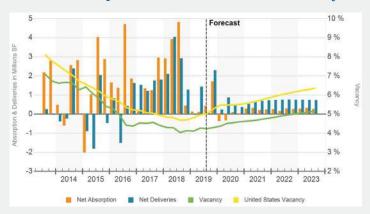




Vacancies have compressed in this cycle, with the market pushing below last cycle's equilibrium rate. Demand for well-located logistics product has helped drive vacancies down to near record lows. Cumulative net absorption over the last three years was about 25 million SF, most of which came for warehouse and distribution properties. But with the supply wave ongoing, and more than half of underconstruction space still available, vacancies will face a renewed challenge in the near term.

At about 600 million SF, New York's logistics inventory is one of the largest in the country, but it would be difficult to describe many of the metro's submarkets

Net Absorption, Net Deliveries & Vacancy



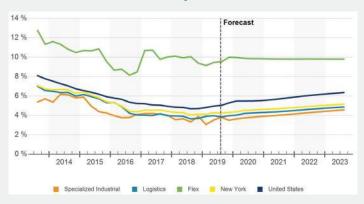
as hotbeds of warehousing and distribution. Property values in and around the urban core make residential, office, and retail uses much more viable than logistics. Development has been concentrated in New Jersey in this cycle, with submarkets in the Garden State supplanting those in Brooklyn and Queens as the largest in the metro.

In many cases, particularly in Brooklyn and Queens, aging warehouse stock is quickly being converted

to meet growing demand for offices and residences. The tenant base has been declining for decades in these areas, because distributors, retailers, and third-party logistics firms interested in accessing New York's large and growing population have left for less-costly suburban regions including Bergen, Passaic, and Hudson counties.

Underway port improvement projects should help drive future logistics demand. The Port of Newark Container Terminal is undergoing a \$500 million plan to increase the terminal's annual container capacity from a million containers to 2.4 million by 2020. When completed, the terminal will have a new gate facility, another 74 acres of container yard, an additional berth for Panamax ships, and two super post-Panamax cranes. The terminal installed a new computer brain in 2017 that coordinates the operation of the entire terminal to decrease wait times and increase efficiency. Over the last two years, the terminal opened more than 40 acres of new container storage. The demand effects of these upgrades are most likely to be felt in the Edison-Middlesex County submarkets, which sit to the south along the New Jersey Turnpike (I-95).

Vacancy Rate







Booming demand for logistics space has brought vacancies down to near a record low and spurred significant rent gains over the last few years. Rent growth has exceeded 5% in every year since 2013 and outpaced the gains of the National Index during this stretch. Asking rents are now close to 50% above their prerecession peak.

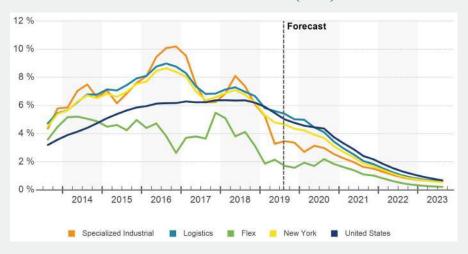
Increased supply appears to have softened rent growth slightly. After topping 8% in 2016, gains averaged closer to 6% over the last two years, when net deliveries topped 15 million SF. Rent growth barely exceeded 1% in the first half of 2019, but it would still be a stretch to call rent growth disappointing. More spec supply is underway than has delivered in recent years, but given the red-hot demand in the logistics segment, it would not be surprising for developments to land tenants before or shortly after delivery.

Although strong rent growth has been uniform across the metro, prime New

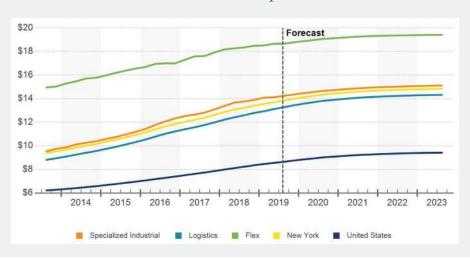
Jersey submarkets performed the best in the last year. As of 19Q2, among submarkets in the metro with more than 1 million SF of inventory, the top 10 for year-over-year rent growth were in New Jersey. Many of the top performing submarkets are located southwest of New York City, including Carteret/ Avenel, Exit 8A, and Perth Amboy/GSP, where gains all topped 5%. Gains were in the 3%-4% range for most sections of Brooklyn and Queens, still an impressive mark.

Strong rent growth in the boroughs has not solely been driven by increasing demand in this cycle. A decrease in available modern, competitive space also has benefited rents. As older, cheaper assets get tom down or converted into more profitable uses, even anemic demand can support elevated asking rents. The inventory in the specialized industrial segment has declined by more than 6 million SF in this cycle. This has allowed for vacancies to fall and rents to boom despite inconsistent demand.

Market Rent Growth (YOY)



Market Rent Per Square Foot







Amidst improving fundamentals and a bullish outlook for the industrial market, construction is ramping up. Net deliveries topped 15 million SF over the past two years, and more than 3 million SF is projected to deliver in every year of the forecast. Construction is concentrated in the logistics segment, as warehouse and distribution properties capture most demand spurred by the ecommerce boom. The metro's overall specialized industrial inventory has actually shrunk by several million SF in this cycle, as older obsolete properties have been demolished or converted into other uses.

Many of the largest deliveries in recent years were build-to-suit distribution centers for high-credit tenants. As the e-commerce boom drives demand for logistics space, this type of construction has proved extremely popular. New Jersey offers more room to build than New York City does, as well as better access to other East Coast metro areas. Wayfair, Best Buy, and Home Depot were among the tenants to move into new warehouse and distribution facilities in New Jersey in 2018.

The Exit 8A Submarket has been a focal point for development in this cycle. More than 10 million SF of new inventory has opened since the start of 2014 in the submarket. Many recent deliveries in the submarket were in Cranbury, in logistics parks such as the Cranbury Logistics Center, Cranbury Station Park, and Prologis Park. Exit 8A has added Wayfair, Amazon, Home Depot, and W.B. Mason to its tenant roster in recent years. Development has started to shift elsewhere in the metro, and only around 250,000 SF was under construction in Exit 8A as of 19Q1.

Speculative construction is on the rise as demand remains red-hot. One of the largest deliveries in 19Q1 was the 445,000-SF Building 3 of the Cranbury

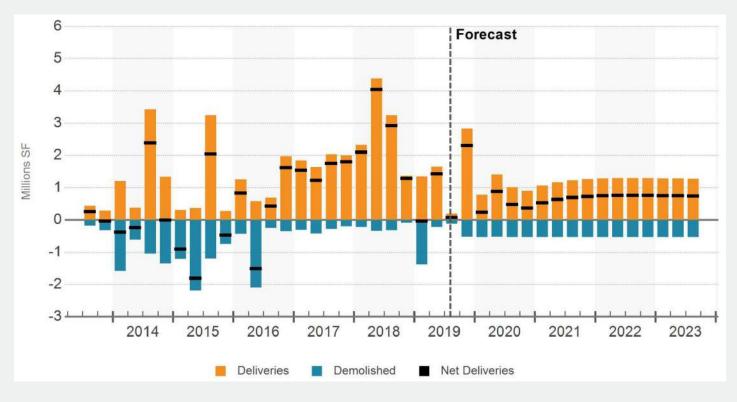
Logistics Center, which opened without a tenant in February. More than 60% of space in under construction inventory is still available, including nine blocks larger than 100,000 SF.

The Rockefeller Group recently completed the five property, roughly 2 million-SF Rockefeller Group Logistics Center in Piscataway. About half of the logistic park's RBA opened last year across two properties. A 725,000-SF distribution center opened in June 2018 and was leased to Best Buy, while a 311,000-SF property opened in September 2018 and was split evenly between Fujitsu General America and Humanscale. The final three buildings opened in the first half of 2019 and are each awaiting their first tenants.

Staten Island is becoming involved in the development scene, with a large delivery last year and additional projects underway. Matrix Development Group is responsible for most development in the borough, through the creation of the Matrix Global Logistics Park. The first delivery was a 975,000-SF property, opened last July, that is fully leased to IKEA. The second opening will be a 450,000-SF warehouse that is expected to open in 19Q3 and still searching for a tenant. Matrix Development Group has broken ground on an additional 975,000-SF project and a fourth building is proposed.

Industrial buildings in the boroughs often find better use as different property types. Many older industrial assets have been converted to residential use, and as neighborhoods along the water continue to gentrify, this type of space will increasingly come out of inventory. Nonetheless, that didn't stop FreshDirect from opening a nearly 425,000-SF distribution center in the South Bronx last summer. The facility acts as a distribution hub and the corporate HQ for the online grocer, bringing technologists and food researchers to the campus.

Deliveries & Demolitions





2Q19 Construction

Properties Square Feet Inventory Preleased

2,528,143

0.3%

55.9%



Selection of Under Construction Properties:

| Pro | pperty Name/Address | Rating | Bldg. SF | Stories | Start | Complete | Developer/Owner |
|-----|--|-----------|-----------|---------|----------|----------|--|
| 1 | Phase I 546 Gulf Ave | * * * * * | 975,000 | - | Mar-2018 | Mar-2020 | Staten Island Marine Development |
| 2 | 566 Gulf Ave | * * * * * | 450,000 | 1 | Nov-2017 | Oct-2019 | Matrix Development Group |
| 3 | 640 Columbia St | * * * * * | . 336,500 | 3 | Mar-2019 | Jun-2020 | DH Property Holdings |
| 4 | A 63 Flushing Ave | * * * * * | 211,626 | 5 | Feb-2019 | Oct-2019 | Steiner Equities Group, LLC / Steiner Studios |
| 5 | 212 63 Flushing Ave | * * * * * | 136,000 | - | Sep-2018 | Sep-2019 | - |
| 6 | 9-03 44th Rd | * * * * * | 119,000 | 3 | Jun-2018 | Oct-2019 | CBCS Brooklyn LLC |
| 7 | Kaufman Astoria Complex 34-11 36th St | * * * * * | 100,000 | 6 | Dec-2016 | Dec-2019 | Kauffman Astoria Studios / Asotria Studios Limited Partnership |
| 8 | 1427 Ralph Ave | * * * * * | 70,000 | 1 | May-2018 | Nov-2019 | I J Litwak Realty I LLC / Harris Litwak |





Robust demand and rent growth have corresponded with increased investment into the New York industrial market. Sales volume exceeded \$2 billion in each of the past six years and topped \$4 billion in each of the last two years. With more than \$2 billion trading in the first half of 2019, this trend is on pace to continue. Median pricing has more than doubled since the start of this cycle, and average cap rates have declined by about 200 basis points. Logistics assets have driven the majority of sales volume, as e-commerce continues to drive demand for warehouse and distribution facilities. Strategic industrial locations near airports, intermodal facilities, and the area's massive population base are attracting core industrial players and allowing capital to flow.

Scarcity among industrial assets in New York City is contributing to the rise in prices per SF. Prime Group Holdings acquired the 223,000-SF property at 62 Imlay St. in Brooklyn for \$100 million (\$448/SF) in February 2019. The building traded at a 5% cap rate and was fully occupied by Christie's at the time of the sale. The multistory warehouse was advertised as a potential redevelopment opportunity and is expandable up to 550,000 SF. The property was originally put on the market in June 2008 at an asking price of \$50 million

Ground leases have accounted for a few of the most notable deals in recent years. In some cases, industrial assets are being sold primarily for their land value and buyers are tageting conversion projects. In one of the largest transactions in the first half of 2019, Brown Place Equities acquired a 99-year groundlease for two industrial assets in the Bronx from HAB Realty Corp. for \$108 million. The two properties barely total 13,000 SF combined, but present an alluring multifamily redevelopment opportunity. The two assets sit on a combined 15,000-SF lot just a few blocks south of the Jackson Avenue Station that allows for 73,000 buildable SF. Upon closing the deal, Brown Place Equities

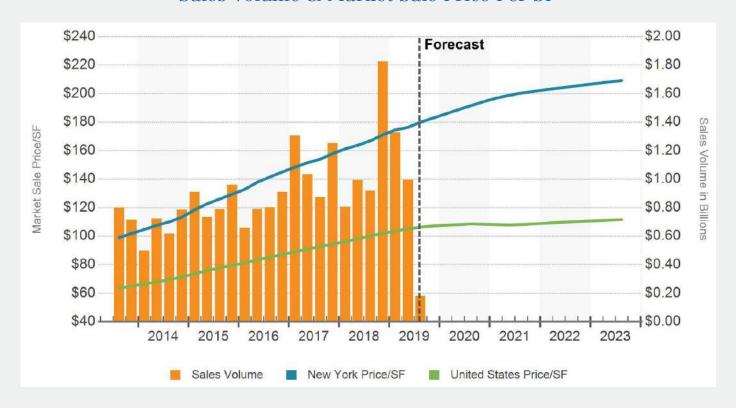
announced plans to build a multifamily property on the site.

In other cases, holders of ground leases are planning to build state-of-the-art industrial assets on their sites. The largest transaction of last year was a ground lease in Red Hook, Brooklyn. DH Property Holdings LLC acquired the ground-lease at 537-555 Columbia St. from Grinnel Realty Holdings LLC in May at a value of \$280 million. The site includes several industrial properties and buildable land, and DH Property Holdings reportedly plans to develop a last-mile warehouse at the site. With quality assets being snapped up across the metro and selling prices rapidly rising, ground leases provide another opportunity for investors and developers to enter the local industrial market.

An Amazon distribution center in Teterboro sold in one of the largest transactions of 2018. The 616,000-SF asset, located on Route 46, sold in July for \$149.1 million (\$242/SF). The property was built in 1954 and was leased to Amazon in 2016, with the company taking occupancy at the start of 2017. Landing Amazon clearly enhanced the asset's value, as it previously sold in June 2013 (while fully leased to Mohawk Industries) for \$81 million (\$131/SF).

More than \$4 billion changed hands in 2017, with several portfolio deals generating much of this volume. In the largest transaction, Duke Realty Corporation acquired the three-property ePort Logistics Center in Perth Amboy from Bridge Development Partners in November for \$237.4 million (\$184/SF). The assets total about 1.3 million SF of RBA. The largest property was leased to Target before the sale was recorded, and the other two properties were leased in 2018. In another portfolio transaction, Clarion Partners acquired buildings 1 and 2 of Cranbury Station Park, which were developed by Rockefeller Group Development. The properties total about 1.2 million SF and opened in 2016.

Sales Volume & Market Sale Price Per SF







Sale Comparables

Avg. Cap Rate

Avg. Price/SF

Avg. Vacancy at Sale

267

6.1%

\$333

11.2%



Sale Comparables Summary Statistics:

| Sales Attributes | Low | Average | Median | High |
|---------------------------|-----------|-------------|-------------|---------------|
| Sale Price | \$179,167 | \$6,984,427 | \$2,912,500 | \$100,000,000 |
| Price Per SF | \$39 | \$333 | \$376 | \$1,934 |
| Cap Rate | 2.0% | 6.1% | 5.6% | 12.6% |
| Time Since Sale in Months | 0.6 | 6.6 | 6.2 | 12.0 |
| Property Attributes | Low | Average | Median | High |
| Building SF | 500 | 19,545 | 7,356 | 450,000 |
| Ceiling Height | 8' | 17'7" | 17' | 40' |
| Docks | 0 | 1 | 0 | 36 |
| Vacancy Rate at Sale | 0% | 11.2% | 0% | 100% |
| Year Built | 1899 | 1953 | 1951 | 2016 |





Recent Significant Sales

| | | | Proper | ty | | | Sale | | | | |
|----------|---|--------|----------|---------|---------|------------|---------------|----------|----------|--|--|
| Pro | pperty Name - Address | Rating | Yr Built | Bldg SF | Vacancy | Sale Date | Price | Price/SF | Cap Rate | | |
| • | 62 Imlay St | **** | 1913 | 223,300 | 0% | 2/27/2019 | \$100,000,000 | \$448 | 5.0% | | |
| 2 | Fresh Direct Building 23-30 Borden Ave | **** | 1960 | 276,705 | 0% | 1/24/2019 | \$75,000,000 | \$271 | | | |
| 3 | 48-49 35th St | **** | 1949 | 250,000 | 59.9% | 12/18/2018 | \$71,741,730 | \$287 | 250 | | |
| • | 83-15 24th Ave | **** | 1955 | 110,000 | 0% | 10/10/2018 | \$55,525,000 | \$505 | 145 | | |
| 5 | 333 Johnson Ave | **** | 1945 | 161,000 | 100% | 12/27/2018 | \$48,497,923 | \$301 | 16 | | |
| 6 | 105 Evergreen Ave | **** | 1955 | 152,788 | 0% | 12/21/2018 | \$47,000,000 | \$308 | i.e. | | |
| P | 58-30 Grand Ave | **** | 1930 | 151,500 | 0% | 10/16/2018 | \$42,000,000 | \$277 | 3.3% | | |
| 8 | 58-95 Maurice Ave | **** | 1988 | 127,000 | 0% | 7/18/2019 | \$39,500,000 | \$311 | 82 | | |
| 9 | 47-50 30th St | **** | 1942 | 52,500 | 0% | 7/11/2019 | \$25,000,000 | \$476 | | | |
| 10 | 1 Railroad PI | **** | 1958 | 19,560 | 0% | 2/12/2019 | \$24,000,000 | \$1,227 | 5.3% | | |
| • | 1250-1266 Atlantic Ave | **** | 1955 | 92,500 | 100% | 1/29/2019 | \$23,500,000 | \$254 | 189 | | |
| 12 | 96 N 10th St | **** | 1920 | 38,934 | 0% | 2/14/2019 | \$23,000,000 | \$591 | | | |
| 13 | 62-35 30th Ave | **** | 1960 | 41,000 | 0% | 12/11/2018 | \$22,750,000 | \$555 | 52 | | |
| • | The Atlite Bldg 5747 47th St | **** | 1960 | 75,000 | 0% | 1/25/2019 | \$22,125,000 | \$295 | 20 | | |
| 15 | 4401-4423 Second Ave | **** | 1913 | 60,000 | 0% | 6/25/2019 | \$18,500,000 | \$308 | 120 | | |
| 16 | 1236 Atlantic Ave | **** | 1931 | 41,600 | 0% | 12/12/2018 | \$17,100,000 | \$411 | 18 | | |
| 1 | 274,000 SF Buildable 2840 Atlantic Ave | **** | 1914 | 76,375 | 0% | 9/6/2018 | \$16,750,000 | \$219 | 25 | | |
| 18 | 74-16 Grand Ave | **** | 1952 | 70,000 | 0% | 7/11/2019 | \$16,500,000 | \$236 | 148 | | |
| 1 | 66-35 Otto Rd | **** | 1970 | 102,500 | 0% | 1/31/2019 | \$15,640,020 | \$153 | 12 | | |
| | The Atlite Bldg 5747 47th St | **** | 1960 | 75,000 | 0% | 1/25/2019 | \$15,070,127 | \$201 | 18 | | |



2Q19 Submarkets

| Inv | entory | | Inver | ntory | | | 12 Month | Deliveries | ; | Under Construction | | | |
|-----|------------------|--------|----------|----------|------|--------|----------|------------|------|--------------------|---------|---------|------|
| No. | Submarket | Bldgs. | SF (000) | % Market | Rank | Bldgs. | SF (000) | Precent | Rank | Bldgs. | SF(000) | Percent | Rank |
| 1 | Bronx | 1,224 | 28,558 | 3.5% | 10 | 1 | 424 | 1.5% | 5 | 0 | - | - | - |
| 2 | Central Queens | 766 | 23,333 | 2.8% | 13 | 1 | 12 | 0.1% | 19 | 2 | 30 | 0.1% | 15 |
| 3 | Chelsea | 15 | 970 | 0.1% | 44 | 0 | 0 | 0% | - | 0 | - | - | - |
| 4 | North Brooklyn | 3,300 | 60,731 | 7.4% | 2 | 1 | 35 | 0.1% | 15 | 3 | 684 | 1.1% | 2 |
| 5 | Northeast Queens | 649 | 12,699 | 1.5% | 28 | 0 | 0 | 0% | - | 1 | 9 | 0.1% | 16 |
| 6 | Northwest Queens | 1,560 | 34,064 | 4.1% | 6 | 3 | 17 | 0% | 18 | 4 | 283 | 0.8% | 6 |
| 7 | South Brooklyn | 1,619 | 36,187 | 4.4% | 5 | 0 | 0 | 0% | - | 2 | 68 | 0.2% | 13 |
| 8 | South Queens | 699 | 14,759 | 1.8% | 23 | 2 | 5 | 0% | 20 | 0 | - | - | - |
| 9 | Staten Island | 385 | 7,454 | 0.9% | 33 | 5 | 603 | 8.1% | 3 | 3 | 1,431 | 19.2% | 1 |
| 10 | White Plains CBD | 27 | 566 | 0.1% | 46 | 0 | 0 | 0% | - | 0 | - | - | - |

| Ren | nt | Gross Ask | ing Rent | 12 Month | Asking Rent | Annualized Qu | arterly Rent |
|-----|------------------|-----------|----------|----------|-------------|---------------|--------------|
| No. | Submarket | Per SF | Rank | Growth | Rank | Growth | Rank |
| 1 | Bronx | \$17.81 | 24 | 4.0% | 29 | 1.6% | 30 |
| 2 | Central Queens | \$20.06 | 17 | 4.5% | 21 | 2.2% | 16 |
| 3 | Chelsea | \$39.31 | 3 | 3.3% | 54 | -2.3% | 55 |
| 4 | North Brooklyn | \$24.70 | 9 | 4.0% | 31 | 1.3% | 37 |
| 5 | Northeast Queens | \$22.90 | 13 | 4.0% | 30 | 1.8% | 25 |
| 6 | Northwest Queens | \$22.20 | 14 | 4.0% | 27 | 1.7% | 27 |
| 7 | South Brooklyn | \$18.84 | 20 | 3.7% | 36 | -0.2% | 52 |
| 8 | South Queens | \$20.90 | 15 | 4.6% | 17 | 1.6% | 29 |
| 9 | Staten Island | \$13.83 | 33 | 4.5% | 18 | 2.1% | 18 |
| 10 | White Plains CBD | \$16.51 | 27 | 4.0% | 28 | 1.9% | 21 |

| Vaca | ancy & Net Absorp. | | Vacancy | | | 12 Month Net A | Absorption | |
|------|--------------------|-----------|---------|------|-----------|----------------|------------|------------------|
| No. | Submarket | SF | Percent | Rank | SF | % of Inv. | Rank | Construct. Ratio |
| 1 | Bronx | 1,413,418 | 4.9% | 31 | 383,332 | 1.3% | 7 | 1.2 |
| 2 | Central Queens | 1,244,824 | 5.3% | 33 | (317,115) | -1.4% | 52 | - |
| 3 | Chelsea | 8,434 | 0.9% | 2 | (6,761) | -0.7% | 37 | - |
| 4 | North Brooklyn | 2,670,588 | 4.4% | 26 | (150,923) | -0.2% | 48 | - |
| 5 | Northeast Queens | 408,452 | 3.2% | 17 | (50,361) | -0.4% | 42 | - |
| 6 | Northwest Queens | 2,381,426 | 7.0% | 39 | (574,632) | -1.7% | 57 | - |
| 7 | South Brooklyn | 1,740,875 | 4.8% | 28 | 780,123 | 2.2% | 3 | - |
| 8 | South Queens | 409,536 | 2.8% | 13 | 322,986 | 2.2% | 8 | - |
| 9 | Staten Island | 240,837 | 3.2% | 19 | 608,779 | 8.2% | 4 | 0.1 |
| 10 | White Plains CBD | 1,082 | 0.2% | 1 | (1,082) | -0.2% | 34 | - |







2Q19 Overview

1.4M Inventory Units

56,771
Under Construction Units

24,79112 Mo. Absorp. Units

2.0% Vacancy Rate

\$2,856
Market Rent/Unit

\$397k
Market Sale Price/Unit

Fundamentals are red-hot in the New York apartment market. Vacancies are at a cyclical low, despite the delivery of more than 60,000 units since the start of 2016. New luxury communities are popping up across the metro, with development particularly focused on the periphery of Manhattan. Submarkets in Brooklyn, Queens, and New Jersey have rapidly expanded their inventory in this cycle. New projects have been met with outstanding demand and development will be maintaining its busy pace in the near term.

More than 50,000 units are under construction as of 19Q3, with many more projects in the proposal stages. Development is concentrated in the same areas as recent deliveries. Thousands of units are underway in Long Island City, Williamsburg, Jersey City, and Greater Hudson County. New York has more units underway than any other metro, but as a percentage of existing inventory, upcoming supply additions are less daunting. New York ranks 11th in this metric out of the 20 largest apartment markets in the country by inventory.

Rent growth rebounded in 2018 after feeling the effects of increased competition from new supply. Rent growth reached a three-year high last year, at about 2.5%. Luxury assets led the way

with 3% growth, after recording the slowest gains across 2016 and 2017. Strong performance has continued in 2019, with more than 2% growth recorded in the first half of the year. Outstanding demand led to recent deliveries quickly reaching stabilization and provided landlords with room to boost rents again at the top of the market. The recently passed rent regulation overhaul could actually have a positive effect on same-store market-rate rent growth going forward, as it will effectively limit marketrate inventory growth.

A low-interest-rate environment and global uncertainty are supporting lofty valuations across the metro. The market's average price tops \$300,000/unit, and cap rates have compressed to below 5%. Still, returns on residential investment in New York don't look too shabby compared with yields on government-issued bonds both here and in countries like Germany and Japan. Instability stemming from Brexit, coupled with other global weaknesses, should further drive demand for residential assets in the metro as New York residential assets continue to be viewed as a global safe haven. Sales volume increased in 2018 from the year before, and 4 & 5 Star transaction volume reached a peak. Trading volume this year is on its slowest pace since 2011, however, with about \$4 billion exchanged in the first half of 2019.

Key Indicators:

| Current Quarter | Units | Vacancy Rate | Asking Rent | Effective Rent | Absorption Units | Deliveries Units | Under Construction Units |
|-----------------|-----------|--------------|-------------|-------------------|---------------------|---------------------|-----------------------------|
| 4 & 5 Star | 211,399 | 3.9% | \$3,921 | \$3,888 | 874 | 546 | 43,239 |
| 3 Star | 498,757 | 1.6% | \$2,684 | \$2,672 | (21) | 373 | 13,346 |
| 1 & 2 Star | 662,517 | 1.6% | \$1,916 | \$1,907 | (282) | 0 | 186 |
| Market | 1,372,673 | 2.0% | \$2,847 | \$2,829 | 571 | 919 | 56,771 |





2Q19 Vacancy

Despite new supply, the market remains tight and vacancies are below their historical average. The pipeline will test occupancies in the near term, as underconstruction units remain near a record high. Rapid development has not dented occupancies so far in this cycle, however, as New York has seemingly been able to capture an endless run of demand. More than 60,000 units have opened since the start of 2016 and occupancies have improved by about 100 basis points in this time.

Leasing velocity at newly delivered assets speaks to robust demand. Net absorption peaked last year, at more than 25,000 units, and exceeded net supply by more than 5,000 units. Demand exceeded supply in 12 of the 15 most heavily supplied submarkets last year. The only submarkets where that was not the case were the Financial District, Yonkers/Mt. Vernon/New Rochelle, and Greater Hudson County. Outstanding demand has continued in 2019, with net absorption topping 11,000 units in the first half of the year. This exceeded net supply additions by about 3,000 units.

Net Absorption, Net Deliveries & Vacancy



Demand boomed in Long Island City last year, with net absorption topping 3,000 units. Projects such as the 789-unit Eagle Lofts, the 658-unit 3 Jackson Park, and the 550-unit One Jackson Park opened last year and each was near full occupancy in 19Q2. Although Amazon's decision to back out of opening HQ2 in the neighborhood hurts, Long Island City is still poised for continued demand growth. The area's office market added large locations from WeWork, Macy's, and Bloomingdale's in recent years. The submarket also offers a convenient commute to Lower Manhattan and Midtown, and direct access to the burgeoning Hudson Yards office market through the 7 Train.

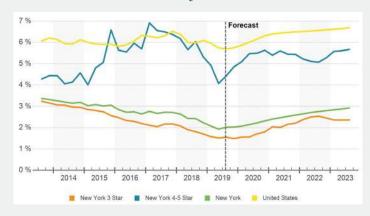
Midtown West was the top performing Manhattan submarket for net absorption in 2018. Demand was robust at new projects, including TF Cornerstone's 1022-unit 606W57. The high-rise opened last summer and was 99% occupied in 19Q2. Midtown West offers quick access to Hudson Yards, and as that emerging office market poaches demand from other parts of the borough, a similar effect

could take route on the residential side. With an average condo price now topping \$1,700/SF, the exorbitant cost of owning in Manhattan is helping drive demand for luxury rentals. Even high-earning residents who can afford to rent in the toniest submarkets may be pressed to purchase apartments of comparable quality in the same neighborhoods.

The allure of the Brooklyn brand continues to draw residents en masse, with submarkets like Downtown Brooklyn and Williamsburg ranking near the top of the metro for demand in 2018. Downtown Brooklyn and the surrounding area continues to grow as an office market. WeWork continues to expand, and will anchor Dock 72 at the Brooklyn Navy Yard. The coworking space provider leased six other blocks larger than 50,000 SF in Brooklyn over the last five years. Etsy took more than 170,000 SF at Dumbo Heights earlier in this cycle, and according to the NYCEDC, that company's recent headcount expansions were among the largest in the city. Williamsburg, the first hip Brooklyn neighborhood, continues to be popular with renters and net demand exceeded 1,000 units in 2018. The neighborhood recorded the largest delta between net absorption and net supply last year out of any submarket in the metro.

The Bronx is also emerging as a viable market-rate multifamily market. Although some of the borough's more beleaguered areas have yet to fully establish a proof-ofconcept for market-rate developers, signs are encouraging. In the South Bronx—which offers a relatively convenient commute to Midtown and easy access to Harlem's 125th Street corridor—population and income grew by 11% in the past five years, adding roughly 8,000 households earning at least \$50,000. Meanwhile, retail options in the submarket are expanding: Somerset Partners and Chetrit brought new vendors to the storefronts near their project straddling the Third Avenue Bridge, and Somerset even invested in a recently opened coffee vendor, Filtered. The Penn Station Access Project, which will add four stops along the New Haven Line, in Hunts Point, Parkchester, Morris Park, and Co-Op City, should also bode well for longterm demand.

Vacancy Rate







2Q19 Rent

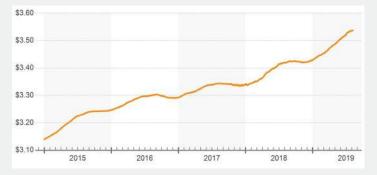
percentage of inventory added in this cycle and the rash of new deliveries stunted rent growth across 2016 and 2017. Robust demand has kept occupancies near record levels in these emerging markets, however, and translated into sizable gains last year.

Value-seeking renters are driving growth trends Downtown. The East Village Submarket—arguably the last bastion of relative affordability below 14th Street—continually posts one of the largest rent gains of any Manhattan submarket. In particular, renters in this submarket are ponying up (on a per-SF basis) for unit configurations conducive to living with roommates. At Stuy Town—Peter Cooper Village, flex units command rents more than 10% above those at comparably sized non-partitioned units.

New rent regulation laws created much buzz and controversy when passed in June 2019. The legislation will surely limit rent growth potential in rent controlled units, but might have the opposite effect on CoStar's same-store market-rate rent series. By making it more difficult to bring units out of rent stabilization, the new laws will effectively limit the market-rate inventory and decrease competition. This could bode well for owners of market-rate properties.



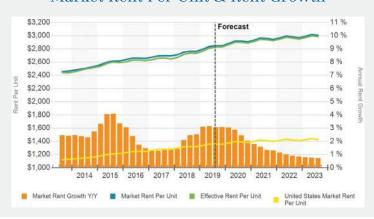
Daily Asking Rent Per Square Foot



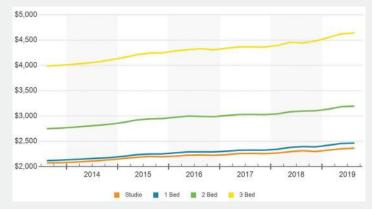
for 4 & 5 Star units.

Heavily supplied submarkets were among the top performers in rent growth over the last year and a half. Rent growth topped 10% during this stretch in Long Island City and Downtown Brooklyn. These submarkets also rank near the top of the metro in

Market Rent Per Unit & Rent Growth



Market Rent Per Unit by Bedroom







2Q19 Construction

Developers are out in full force. The current pipeline is unlike any the metro has faced in at least 30 years, with more than 50,000 units under construction and set to deliver over the next few years. Development is concentrated on the periphery of Manhattan, in emerging submarkets in Brooklyn and Queens, and sections of New Jersey with strong transit options.

Long Island City is the centerpiece of the supply wave, with more than 4,000 units under construction. Threequarters of these apartments are concentrated within a half-mile radius of the Queensboro Plaza station, which offers a 15-minute commute to Midtown, a 20-minute commute to the new 7 line terminus at Hudson Yards, and a 25-minute commute to Lower Manhattan. Given the velocity of office leasing at Hudson Yards, Long Island City's ease of access to the Far West Side and relatively affordable rents should help support demand at forthcoming deliveries.

Development has also spread to many parts of New Jersey in this cycle. The Jersey City Waterfront is benefiting from peak rents in Manhattan and TAMI relocations south of Chambers Street. TAMI expansions/relocations in Lower Manhattan also bode well for the area, which offers a 10–30-minute commute to Lower Manhattan via the PATH train. Not surprisingly, recent developments like 90 Columbus in Jersey City are mere steps from public transit.

Construction is also picking up in more inland parts of New Jersey. The Jersey City/Journal Square Submarket leads the metro in underway construction as a percentage of existing inventory. The 538-unit Journal Squared, located at 615 Pavonia Ave. in Downtown Jersey City, stabilized within a year of opening, leasing almost 40 units a month. Additionally, the 240-unit 3 Journal Square opened in May 2017 and stabilized by October 2017, also leasing about 40 units/month. Meanwhile, roughly 4,000 units are under construction in Greater Hudson County. Underway and recent developments have been clustered

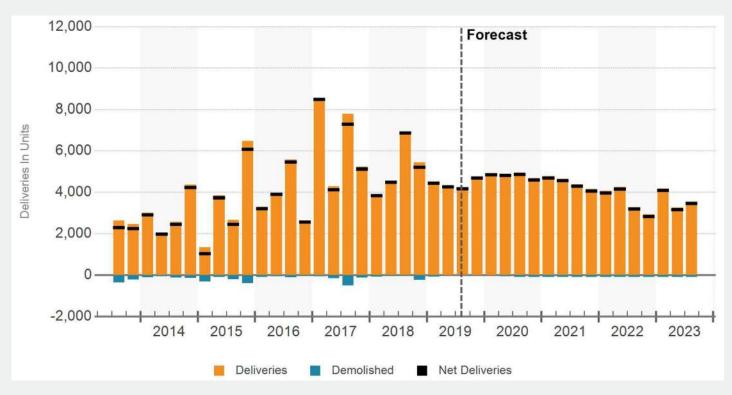
around the PATH station in Harrison.

Robust demand will keep developers busy in the near term, but a high-tariff and constricted lending environment could further limit supply growth in the outer years of the forecast. The replacement for 421-a, "Affordable New York," passed its final steps of the legislative process in April 2017. Although very similar to 421-a, the controversial new bill increases the minimum wages for construction workers, provides more flexibility, and altered the application process. Construction timelines have increased in recent years, with the average project taking about two to three months longer to complete compared with three years ago

In conjunction with a lending environment hampered by Basel III regulations, the expiration of 421-a limited ground-up construction and permitting over the past few years, which could cause a break in the pipeline after the current wave of deliveries completes. Just as new HVCRE capital requirements have induced caution on the lending side, developers were grappling with the expiration of the tax abatement, which they have long relied on to make ground-up rental development feasible. According to a Furman Center study, around 94% of market-rate rental buildings constructed outside the GEA from 2011-14 took advantage of the 421-a abatement.

The study also found that, assuming zero land costs, rents would need to surpass \$5.40/SF to incentivize high-rise residential construction in Manhattan below 110th Street, while in Bed-Stuy and Astoria they would need to rise above \$4.67/SF. Currently, rents at properties built in 2012 or later below 110th Street in Manhattan average around \$6–\$7/SF, while those in Bed-Stuy and Astoria average around \$3–\$4.

Deliveries & Demolitions







2Q19 Construction

Properties Units Percent of Inventory Preleased

305 23,792 1.7% 78



Selection of Under Construction Properties:

| Pro | pperty Name/Address | Rating | Units | Stories | Start | Complete | Developer/Owner |
|-----|--|-----------|-------|---------|----------|----------|---|
| 1 | 5Pointz Apartments 22-44 Jackson Ave | * * * * * | 1,116 | 48 | Mar-2015 | Sep-2019 | Heartland Development |
| 2 | Hunter's Point South - P 52-03 Center Blvd | * * * * * | 800 | 56 | May-2019 | Nov-2021 | TF Cornerstone, Inc. / New York City Economic Development |
| 3 | 29-55 Northern Blvd. | * * * * * | 763 | 63 | Oct-2018 | Jan-2020 | The Durst Organization |
| 4 | Crossing at Jamaica Stat 93-01 Sutphin Blvd | * * * * * | 669 | 25 | May-2017 | Jan-2020 | BRP Development Corp. |
| 5 | Halletts Point - Buildings 26-02 1st St | * * * * * | 634 | 10 | Oct-2017 | Oct-2019 | Lincoln Equities Group LLC / The Durst Organization |
| 6 | Building II 420 Kent Ave | * * * * * | 605 | 24 | Jun-2016 | Oct-2019 | Spitzer Enterprises LLC |
| 7 | 9 Dekalb Ave | * * * * * | 575 | 72 | Apr-2019 | Dec-2022 | JDS Development Group |





Institutional assets are commanding prices roughly 40% above the market's prerecession peak, and average cap rates have compressed to about 4% in the 4 & 5 Star segment. After two years of declines, overall sales volume increased last year. Despite the robust trading volume that has occurred throughout this cycle, 4 & 5 Star volume managed to reach a new peak in 2018. Investment is off to a slower start in 2019, however, with about \$4 billion exchanged in the first half of the year.

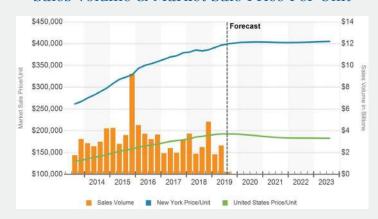
The new rent regulation laws, passed in early June, is expected to dampen liquidity in the market. The controversial legislation will almost certainly lead to a reduction in value-add plays for assets with stabilized units in their mix. Landlords will now face significant hurdles in order to destabilize units and the investment market is already feeling the effects. In one example, cited in a June Wall Street Journal article, the asking price on an East Village property was slashed by 17% after the legislation passed. The listing brokers had been advertising the opportunity to double the building's monthly rental income through destabilization, but that is no longer a realistic goal.

Nonetheless, New York will always attract investment, and \$4 billion traded in the first half of 2019 still easily led the nation. This cycle's supply wave has added plenty of attractive assets that do not need to deal with rent regulations. The metro's largest single-asset transaction in the first half of 2019 was the April sale of Soho Lofts in Jersey City for \$263.8 million. Mack-Cali acquired the 377-unit high-rise from AEW Capital Management at a 4.6% cap rate. Soho Lofts delivered in November 2017 and consists entirely of market-rate units. The asset was 99% occupied at the time of closing. Another notable deal was HUBB NYC's March acquisition of Astoria Central from Mega Contracting Group and The Treeline Companies for \$75 million. The Queens property delivered in March 2017 and also consists entirely of market-rate units. Astoria Central was 99% occupied at the time of the sale.

Repeat sales indicate that the trend toward sky-high pricing and cap-rate compression is a metrowide phenomenon. In March 2018, Equity Residential sold the 155-unit Ashford on 420 80th St. for \$86 million at a 3.18% cap rate to local buyer, Hampshire Properties. This is \$24 million more than the price Equity Residential paid for the property at the height of last cycle in 2006. Even more indicative of the pricing increase was the sale of the 53 units on 1274 5th Ave. Akelius US purchased the asset in 2018 for \$44.1 million at a 2.71% cap rate. Just back in 2003, Stonehenge Capital purchased the apartments for \$11.9 million at a 6.34% cap rate. Furthermore, the asset traded for \$1.375 million in 1995, nearly an \$800,000/unit discount from the 2018 price.

Although average cap rates are typically the lowest in Manhattan, they are also getting squeezed in New Jersey and the outer boroughs. In May 2018, Equity Residential picked up The Rivington, a 240-unit asset in Hoboken, for \$146 million at a 4.2% cap rate. Just four years prior, the seller, J.P. Morgan Asset Management purchased the same property for \$125.5 million. In January 2016, a joint venture of GreenOak Real Estate and Slate Property Group purchased the 4 Star, 311- unit RiverTower Apartments on East 54th Street for \$390 million, or more than \$1.25 million/unit. This more than doubled the property's valuation in 2010, when Equity Residential picked it up as part of a portfolio. Also, in January 2016, AvalonBay Communities picked up a 217- unit asset in Hoboken for about \$130 million at a 4.7% cap rate. Just over two years prior, the sellers had purchased the property for less than \$108 million at a 5.3% cap.

Sales Volume & Market Sale Price Per Unit







Sale Comparables

Avg. Price/Unit (thous.)

Avg. Price (mil.)

Avg. Vacancy at Sale

594

\$370

\$7.1

2.8%



Sale Comparables Summary Statistics:

| Sales Attributes | Low | Average | Median | High |
|---------------------------|-----------|-------------|-------------|---------------|
| Sale Price | \$140,000 | \$7,133,572 | \$2,150,000 | \$463,360,599 |
| Price Per Unit | \$8,719 | \$370,396 | \$293,750 | \$1,725,000 |
| Cap Rate | 2.0% | 5.3% | 5.0% | 12.0% |
| Vacancy Rate at Sale | 0% | 2.8% | 0% | 100% |
| Time Since Sale in Months | 0.3 | 6.6 | 6.9 | 12.0 |
| Property Attributes | Low | Average | Median | High |
| Property Size in Units | 1 | 18 | 6 | 1,308 |
| Number of Floors | 2 | 3 | 3 | 44 |
| Average Unit SF | 0 | 655 | 721 | 1,500 |
| Year Built | 1840 | 1933 | 1930 | 2020 |





Recent Significant Sales

| | | Pro | operty Infor | mation | | 1 | Sale Informa | tion | |
|----------|--|--------|--------------|--------|---------|------------|---------------|------------|---------|
| Prop | erty Name/Address | Rating | Yr Built | Units | Vacancy | Sale Date | Price | Price/Unit | Price/S |
| • | Parker Towers 104-20-104-60 Queens Blvd | **** | 1960 | 1308 | 1.1% | 11/8/2018 | \$463,360,599 | \$354,251 | \$266 |
| 2 | ALTA+ 2922 Northern Blvd | **** | 2018 | 467 | 25.7% | 10/22/2018 | \$313,195,194 | \$670,653 | \$614 |
| 3 | Queens Plaza South 2310 Queens Plz S | **** | 2017 | 390 | 0.3% | 11/29/2018 | \$284,000,000 | \$728,205 | \$727 |
| • | Leonard Pointe 395 Leonard St | **** | 2015 | 188 | 0% | 2/14/2019 | \$130,442,500 | \$693,843 | \$698 |
| 5 | The Frederick 564 Saint Johns PI | **** | 2018 | 193 | 1.6% | 6/28/2019 | \$117,000,000 | \$606,217 | \$749 |
| 6 | Astoria Central 3157 31st St | **** | 2017 | 114 | 0% | 3/14/2019 | \$75,000,000 | \$657,894 | \$735 |
| V | The Kestrel 33 Caton PI | **** | 2014 | 126 | 3.2% | 10/29/2018 | \$74,700,000 | \$592,857 | \$619 |
| 8 | Rocket Factory Lofts 100 S 4th St | **** | 1910 | 79 | 2.5% | 6/20/2019 | \$60,950,000 | \$771,518 | \$776 |
| 9 | Zazza Williamsburg 424 Bedford Ave | **** | 2007 | 66 | 0% | 1/15/2019 | \$43,800,000 | \$663,636 | \$686 |
| 10 | 140-30-140-50 Ash Ave | **** | 1939 | 142 | 1.4% | 5/31/2019 | \$42,500,000 | \$299,295 | \$280 |
| 1 | 151 Kent Ave | **** | 1910 | 46 | 2.2% | 4/11/2019 | \$41,250,000 | \$896,739 | \$729 |
| 12 | 140-60 Beech Ave | **** | 1959 | 124 | 0% | 5/31/2019 | \$37,500,000 | \$302,419 | \$388 |
| 13 | 2355 E 12th St | *** | 1963 | 121 | 0% | 9/20/2018 | \$31,900,000 | \$263,636 | \$279 |
| 1 | 1701 W 3rd St | **** | 1940 | 107 | 0% | 1/10/2019 | \$28,028,095 | \$261,944 | \$230 |
| 1 | 1775 E 18th St | **** | 1941 | 96 | 1.0% | 8/20/2018 | \$27,700,000 | \$288,541 | \$253 |
| 16 | 28-15 34th St | **** | 1928 | 60 | 1.6% | 1/22/2019 | \$25,000,000 | \$416,666 | \$478 |
| • | 97-101 Joralemon St | **** | 1922 | 32 | 3.1% | 12/5/2018 | \$21,900,000 | \$684,375 | \$719 |
| 18 | 864 49th St | **** | 1930 | 64 | 1.6% | 11/29/2018 | \$20,717,534 | \$323,711 | \$306 |
| 19 | 150 Prospect Park W | **** | 1921 | 30 | 0% | 7/11/2019 | \$20,282,609 | \$676,086 | \$575 |
| 20 | 242 Broadway | **** | 1910 | 24 | 3.9% | 5/6/2019 | \$20,100,000 | \$837,500 | \$594 |





2Q19 Submarkets

| Inv | entory | | Inve | ntory | | 12 Month Deliveries | | | ι | Under Construction | | | |
|-----|---------------------|--------|--------|----------|------|---------------------|-------|---------|------|--------------------|-------|---------|------|
| No. | Submarket | Bldgs. | Units | % Market | Rank | Bldgs. | Units | Precent | Rank | Bldgs. | Units | Percent | Rank |
| 1 | Bushwick | 2,954 | 37,666 | 2.7% | 10 | 23 | 1,843 | 4.9% | 3 | 52 | 2,234 | 5.9% | 8 |
| 2 | Central Queens | 1,606 | 43,310 | 3.2% | 8 | 6 | 134 | 0.3% | 28 | 25 | 1,301 | 3.0% | 17 |
| 3 | Chelsea | 581 | 22,606 | 1.6% | 24 | 2 | 130 | 0.6% | 29 | 4 | 488 | 2.2% | 32 |
| 4 | Downtown Brooklyn | 696 | 20,869 | 1.5% | 28 | 3 | 504 | 2.4% | 14 | 10 | 1,477 | 7.1% | 14 |
| 5 | Northeast Queens | 561 | 26,860 | 2.0% | 19 | 1 | 8 | 0% | 49 | 19 | 1,319 | 4.9% | 16 |
| 6 | Northwestern Queens | 1,754 | 37,326 | 2.7% | 11 | 9 | 704 | 1.9% | 6 | 22 | 1,663 | 4.5% | 12 |
| 7 | Southwest Brooklyn | 1,769 | 35,581 | 2.6% | 12 | 3 | 63 | 0.2% | 39 | 13 | 608 | 1.7% | 26 |
| 8 | Southeast Queens | 543 | 23,278 | 1.7% | 23 | 2 | 70 | 0.3% | 38 | 18 | 2,939 | 12.6% | 5 |
| 9 | Staten Island | 307 | 8,764 | 0.6% | 47 | (1) | 8 | 0.1% | 49 | 2 | 121 | 1.4% | 50 |
| 10 | Williamsburg | 1,918 | 29,345 | 2.1% | 17 | 24 | 2,206 | 7.5% | 1 | 35 | 2,410 | 8.2% | 6 |

| Ren | nt | | Asking | Rents | | | | Effec | tive Rents | | |
|-----|---------------------|----------|--------|-------|------------|----------|--------|-------|------------|------------|------|
| No. | Submarket | Per Unit | Per SF | Rank | Yr. Growth | Per Unit | Per SF | Rank | Yr. Growth | Concession | Rank |
| 1 | Bushwick | \$2,498 | \$3.53 | 21 | 1.7% | \$2,467 | \$3.51 | 21 | 2.1% | 1.2% | 4 |
| 2 | Central Queens | \$1,963 | \$2.63 | 32 | 1.2% | \$1,956 | \$2.62 | 31 | 1.6% | 0.3% | 50 |
| 3 | Chelsea | \$4,451 | \$6.31 | 3 | 4.3% | \$4,423 | \$6.27 | 3 | 5.8% | 0.6% | 19 |
| 4 | Downtown Brooklyn | \$3,919 | \$5.29 | 12 | 4.8% | \$3,873 | \$5.23 | 13 | 6.4% | 1.2% | 5 |
| 5 | Northeast Queens | \$1,905 | \$2.53 | 33 | 1.4% | \$1,895 | \$2.51 | 34 | 1.7% | 0.5% | 29 |
| 6 | Northwestern Queens | \$2,192 | \$3.10 | 26 | 0.9% | \$2,183 | \$3.09 | 25 | 0.9% | 0.4% | 36 |
| 7 | Southwest Brooklyn | \$1,662 | \$2.37 | 40 | 1.6% | \$1,657 | \$2.36 | 40 | 1.6% | 0.3% | 57 |
| 8 | Southeast Queens | \$1,775 | \$2.46 | 35 | 1.9% | \$1,768 | \$2.45 | 35 | 1.9% | 0.4% | 46 |
| 9 | Staten Island | \$1,724 | \$2.41 | 36 | 5.6% | \$1,704 | \$2.38 | 37 | 7.2% | 1.1% | 6 |
| 10 | Williamsburg | \$3,653 | \$5.01 | 16 | 4.8% | \$3,595 | \$4.94 | 16 | 5.5% | 1.6% | 1 |

| Vac | ancy & Net Absorp. | | Vacancy | | | 12 Month Net A | Absorption | |
|-----|---------------------|-------|---------|------|-------|----------------|------------|------------------|
| No. | Submarket | Units | Percent | Rank | Units | % of Inv. | Rank | Construct. Ratio |
| 1 | Bushwick | 773 | 2.1% | 34 | 2,178 | 5.8% | 2 | 0.5 |
| 2 | Central Queens | 470 | 1.1% | 12 | 123 | 0.3% | 41 | 1.1 |
| 3 | Cheslea | 403 | 1.8% | 24 | 336 | 1.5% | 25 | 0.4 |
| 4 | Downtown Brooklyn | 722 | 3.5% | 47 | 784 | 3.8% | 7 | 0.3 |
| 5 | Northeast Queens | 376 | 1.4% | 16 | 56 | 0.2% | 50 | 0.1 |
| 6 | Northwestern Queens | 374 | 1.0% | 10 | 772 | 2.1% | 8 | 0.9 |
| 7 | Southwest Brooklyn | 268 | 0.8% | 6 | 185 | 0.5% | 37 | 0.3 |
| 8 | Southeast Queens | 306 | 1.3% | 15 | 80 | 0.3% | 48 | 0.4 |
| 9 | Staten Island | 101 | 1.2% | 13 | (67) | -0.8% | 61 | - |
| 10 | Williamsburg | 1,235 | 4.2% | 55 | 1,920 | 6.5% | 3 | 1.1 |







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