Coretrust Capital Partners is a vertically integrated office investor reinventing large assets to serve today's tenants.

Philadelphia White Paper

A Story of a Re-Emerging City

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KEY HEADLINES

1	Urbanization and Density	• Population growth among key target populations from 2012-2017 • Densifying CBD with innovating industries • 54% retention of recent graduates
2	Jobs Growth and Trends	• Global leader in cell and gene therapy research • Forbes Top 10 city for startups • Growing presence of outside investors and accelerators
3	The Comcast Effect	• 2018 opening of $1.5B Comcast Technology Center • Significant spillover impacting local economy and jobs in high paying sectors
4	Tourism and Hospitality	• Visitor spending increased a total 16% since 2014 • Hotel room occupancy increased by 14% since 2014
5	Quality of Life Amenities	• Increased presence of award-winning restaurants • Dining options increased by over 60% since 2008 • In the past five years, nearly 80 new national retailers have entered Downtown
6	Multifamily Market	• Center City inventory increased 25% since 2010 • Stable 5% vacancy rates since 2015 outperforming national averages • Nearly 7,000 units in planning stages
7	Commercial Office Space – Supply	• Approximately 8 million SF of office space conversions since 2000 has removed obsolete inventory from the market • No office buildings are currently under construction in the CBD at the time of this writing
8	Commercial Office Space – Demand	• Asking rent up 24% since 2014 • Trophy office space has a 6% vacancy rate • More than 1.2M SF new tenant inbound demand since 2015 (>50 entrants)
9	Commercial Office Capital Markets	• Today’s Trophy/Class A CBD inventory is owned by well-capitalized, institutional, and/or international • International investors now own 23% of Trophy or Class A CBD inventory[i]

I. Philadelphia Regional Economy Market Context

Philadelphia was once considered the workshop of the world - a global manufacturing giant, producing everything from heavy industrial materials such as steel ships, to consumer goods like Stetson hats, to chemical processing. After decades of post-industrial decline, it has found a place in the modern economy as a powerhouse in communications and technology, healthcare and education, and increasingly as a world-class center for biomedical and life sciences innovation.

Since the first Philadelphia white paper that Coretrust Capital Partners LLC ("Coretrust") produced in 2014, demand drivers have positively impacted the office market in a virtuous loop. To attract and retain young, talented employees, prominent companies have expanded or entered Philadelphia's downtown, offering higher skilled and better paying jobs. With increased opportunity and a preference for urban living, the large number of students educated in Philadelphia have many more reasons to stay in the city. Historically, Philadelphia exported talent that it educated to other US cities.

Mergers and acquisitions activity by industry leaders such as Comcast, Cigna, and the Jefferson Health system have led the employment growth charge. After years of living in the city and commuting to the suburbs (or leaving the MSA), recent graduates now enjoy a growing and more dynamic amenity-base of retail, dining, and housing options. This positive feedback loop has fueled rent growth and has encouraged the reemergence of institutional and international investors over the past years, which vacated the market in the late 1990's. This increased investor interest is further buttressing the strength of the office real estate market.

The largest city in Pennsylvania and sixth largest in the United States, the city of Philadelphia is home to over 1.5 million residents, with population growth of over 135,000 in the last decade (after five decades of decline). Moreover, population forecasts are being revised upward with immigration increasing and net domestic out-migration declining. Employment within Philadelphia grew by 6 percent over the last five years, to 686,000 jobs in 2019, outpacing the rate of growth in New York City, Chicago, and Houston.[ii]

The city of Philadelphia is the economic hub of the nation's 8th largest metropolitan area with 6.1 million people and a Gross Metropolitan Product (GMP) of $387.2 billion. The region's GMP increased 9.9 percent from 2012 to 2017, growing faster than Chicago, Houston, New York, and Washington, DC.[iii] The Philadelphia MSA is home to fifteen Fortune 500 companies, with two located within Center City: Comcast and Aramark. Additionally, three Fortune 1000 companies are based in Philadelphia: FMC (556), Urban Outfitters (634), and Carpenter Technology (940).

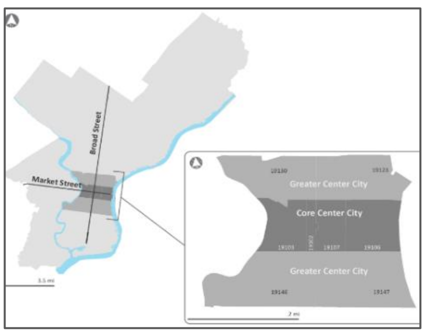
II. Urbanization and Density

The city's recent economic growth has had a significantly positive impact on Center City, the metropolitan area's Central Business District. One of Center City's strengths is its large, growing residential base. Its population increased by 22% since 2000 (with more than 26,195 new housing units delivered, including a record-high of 2,810 units in 2018).[iv] Two major luxury condominiums are currently under construction in Center City—Art Haus and the Laurel, which will add to the inventory. This has strengthened commercial office and retail demand and should continue to support a growing market.

Philadelphia is increasingly regarded as a key place for young professionals to live—in part because of the retention of its college graduates and because of its relative affordability compared to other East Coast cities. Between 2012 and 2017, the main demographic groups that drove population growth in the city were post-secondary degree-holders (25% growth), foreign-born individuals (17.1%), and adults between the ages of 22 and 39 years old (9.7%).[v] The city has also become more densely populated at its core (60 people per acre today versus 55 people per acre in 2010). In 2015, it was ranked as having the second-most densely populated downtown district in the United States, behind Midtown Manhattan.[vi] From an investment perspective, this is particularly compelling because research has shown that population density increases innovation.[vii]

It is important to note that the Philadelphia growth rate has changed over time. From 2000 to 2010 Philadelphia city's growth was a modest 0.6%. The latest ACS 1-year estimate from 2018 estimated growth since 2010 at 3.8%, a 6-fold increase. From 2012 to 2017, the population in Greater Center City (e.g. Philadelphia's CBD) experienced an overall growth of 10.7%. Growth was especially high among both individuals between the ages of 25 and 34 years old (24.9%) and "empty-nesters."[viii]

Figure 1: Greater Center City Boundary



Source: Center City District, Open Data Philly (2019)

While not a new element, it is worth noting that Center City benefits from one of the most effective and efficient urban transit networks in the US, with strong connections to interregional transportation infrastructure such as Amtrak, Philadelphia International Airport, rail yards, and river ports. Moreover, numerous infrastructure improvement projects in the pipeline bode well for Center City's walkability and connectivity.

III. Eds and Meds Infrastructure

A. Eds and Meds as a Talent Source

"Eds and Meds," the higher education and healthcare sectors, are well known as an important piece of Philadelphia's economy—representing 251,000 jobs in 2018 (up from 226,000 jobs in 2014, a growth of 11.2%),.[ix] These institutions have educated and retained highly skilled young professionals, who enhance the local talent pool or create new companies. Each year, more than 100 colleges and universities around Philadelphia enroll more than 400,000 students and grant degrees to roughly 90,000 students.[x]

B. Monetizing Eds and Meds

The monetization of Eds and Meds cannot be understated. In 2018, the city's institutions received nearly $1 billion in NIH grant funding. This represents 21.3% growth since 2009, placing the city third nationally.[xi] Moreover, some traditionally non-commercial institutions have successfully begun to monetize research. In 2017, Drexel University, Temple University, Thomas Jefferson University, University of Pennsylvania, and Children's Hospital of Philadelphia ("CHOP") launched a combined total of 29 startups.[xii]

Philadelphia institutions have made great strides translating that research into innovative new products and companies, further attracting talent and more funding. Developments such as the Schuylkill Yards, a $3.5 billion upcoming innovation hub in University City, the expansion of the University City Science Center, and Pennovation Works, a business incubator and laboratory that fosters the commercialization of research discoveries, reflect how Philadelphia's Eds and Meds have built an ecosystem to grow the inventions and ideas that will become tomorrow's businesses.

IV. Talent Retention

As noted above, in decades past, Philadelphia educated and trained human capital and exported it to other US cities. That trend has changed dramatically. Approximately 54% of degree holders who attended Philadelphia-area colleges from 2010 to 2014 remained in the region after graduating (up from 48% of students who attended from 2000-2004), which is higher than Boston's retention rate of 42%.[xiii] A deep talent pool of graduates, as well as university researchers, are a major draw for companies entering the Philadelphia market.[xiv]

V. Research and Innovation

The retention of talent, growth of large corporations like Comcast, a burgeoning start-up community, and the monetization of Eds and Meds-produced research have resulted in 106% increase in the number of patents originating in Philadelphia over the past decade, outpacing patent filing growth of other large US cities, including Phoenix (97.6%), San Jose (96.5%), Los Angeles (73.9%), Dallas (61.2%), and Houston (59.9 %).[xv]

A. Life Sciences

A concentration of human capital and research activity has generated numerous commercial products attracting investment into Philadelphia attracting new research funding, venture capital, and businesses.

Philadelphia's global leadership role in cell and gene therapy research is a major component of this commercialization activity. The region is now home to 30 firms (and more than 3,000 employees) focused on transforming these discoveries into viable treatments and commercial products.

B. Venture Capital

Since 2014, venture capital deals in the Philadelphia MSA have increased in both number and value compared to prior years, securing its place among the top ten most active venture capital regions in the US in 2018. The number of deals has remained stable from 2014 to 2018; however, the total dollar value of deals has increased greatly, with the total deal value in 2018 reaching nearly $1.4 billion from 194 deals, compared to $828 million from 189 deals in 2014. Angel and seed investments, which focus on early stage startups, increased significantly in number and scale beginning in 2014, averaging 88 deals and $94 million a year (see Figure 2).[xvi] This trend is expected to grow as investors are seeing healthy returns on their Philadelphia venture and early stage investments. In 2018, the city ranked fourth in terms of return on capital investments, with a return of 4.7 times invested capital.[xvii]

Figure 2: Investment Activity in Philadelphia MSA, 2009-2018

	Angel & Seed		Venture Capital		Exits	
Year	Count	Deal Value ($M)	Count	Deal Value ($M)	Count	Deal Value ($M)
2009	17	$26.40	100	$526.90	7	$7.50
2010	26	$22.60	113	$551.50	15	$1,905.30
2011	58	$49.40	140	$450.40	18	$667.00
2012	61	$32.20	161	$607.00	18	$1,596.20
2013	71	$41.00	165	$564.90	22	$816.90
2014	94	$108.40	189	$828.20	21	$1,370.00
2015	97	$82.10	186	$920.60	28	$2,652.50
2016	92	$99.20	195	$1,115.40	23	$306.70
2017	86	$78.40	190	$749.60	15	$1,166.40
2018	70	$99.70	194	$1,369.90	12	$908.30

Source: PACT 2018 Philadelphia Venture Report

C. Startups

Five years ago, Philadelphia was not regarded as a place for startups, but in 2018, Forbes ranked it as one of the top ten rising cities for startups.[xviii] Many factors contribute to this increased interest in Philadelphia, such as its relative affordability, large talent pool, and convenient proximity to other major east coast cities.[xix]

1. Medical and Life Science Start-ups

Life sciences companies, specifically pharmaceuticals and biotechnology, received the greatest proportion of VC funding in 2018 (35.2%).[xx] Since 2014, companies in these industries have been recipients of capital investments in 829 deals, with total investments over $2.2 billion. Of the largest deals since 2014, most have been early stage venture capital investments, with seed funding comprising the second most.

2. Technology, Media and Other Startups

While pharmaceuticals and biotechnology received the highest share of capital investments in 2018, the software industry was a close second with 26.9% of capital invested.[xxi] Several innovative technology companies have recently realized significant investment and successful exits as well.

3. Incubators and Accelerators

Startups in Philadelphia are now able to benefit from an increasing number of accelerators and other resources. Since 2016, South Philadelphia-based NextFab has hosted the RAPID accelerator program twice a year for companies working in Artificial Intelligence (AI), medical devices, and other tech areas. Furthermore, Comcast has also recently worked to enhance its support of media and technology startups, launching the Comcast NBCU LIFT Labs in partnership with Techstars, a 13-week mentorship program bringing media-related startups from around the globe to the region.

VI. The "Comcast" Effect

Comcast is a notable homegrown anchor in the city's growth, with substantial expansion over the past two decades. Comcast's Philadelphia employment has increased from 1,500 employees in 2000 to more than 12,000 in 2018.[xxii] A 2014 economic impact analysis of the company reported that Comcast had an indirect or induced role in creating over 7,000 additional jobs outside of the organization in Philadelphia.[xxiii] Of these spillover employment effects, 43% of jobs created were in the Information or Professional, Scientific, and Technical Services sectors, in which the average annual earnings per Philadelphia employee is $80,000 per year (approximately 22% higher than the average annual earnings of Philadelphians overall).[xxiv] It is expected that Comcast's impact will grow in the coming years, with the 2018 opening of the $1.5 billion Comcast Technology Center, which includes new studios for NBC10 and Telemundo62 (which moved from the suburb of Bala Cynwyd). [xxv]

Since 2008, Comcast built[xxvi] two trophy office properties in Center City, fully occupying their 2.5 million SF of office space. Additionally, Comcast also occupies roughly 500,000 SF of office space in neighboring Center City buildings.

VII. Tourism and Hospitality

While the Liberty Bell and Independence Hall remain an important draw, the tourism industry is booming due to expanded offerings in the arts, entertainment, cultural amenities, and a new convention center.

Photo Courtesy of Philadelphia Auto Show

Overall annual visitation to Greater Philadelphia increased from 40.5 million visitors in 2014 to 45.3 million in 2018 (11.7% growth). Direct visitor spending grew at an even faster rate of 15.5% over that time period, from $6.5 million in 2014 to $7.6 million in 2018. This spending helps support a base of amenities—a vibrant restaurant and retail scene as well as a growing variety of hotels, which enhance the experience for Philadelphia residents and office buildings' tenants.[xxvii]

Center City hotels booked 3.5 million rooms in 2018, an increase of 14% since 2014, outpacing growth among peer East Coast cities.[xxviii] The increased room demand has contributed to the growth of the hotel supply by 9.6% over the same period (up to 12,300 rooms in 2018) and 10% growth in the average daily room rate. Further supporting the hospitality industry are four new hotels that recently opened in Center City adding 400 new rooms to the supply, as well as another seven hotels currently under construction that will add 1,895 rooms and two proposed hotel developments that would add 355 rooms to Center City.[xxix]

VIII. Quality of Life Amenities

A. Retail

Center City's retail sector has experienced significant growth in recent years. In Center City, workers, residents, college students, and visitors generate more than $1 billion in retail demand annually. In the past five years, nearly 80 new national retailers have entered Downtown Philadelphia. The City Observatory's

"Storefront Index" ranked Center City Philadelphia fourth among US metropolitan areas for its volume of storefronts within its central business district, with 3,200 downtown storefronts. [xxx] Key Center City shopping areas like Walnut and Chestnut Streets between Broad and 20th Streets boasted 94.6% occupancy in 2018. More consumers are on the streets in this area, with pedestrian traffic increasing by 30-40% since the Great Recession.[xxxi] Due to the increased demand for space in Center City, retailers and other businesses have begun to expand to Center City East, which currently has more than 1.4 million square feet of retail space under construction.

B. Restaurants

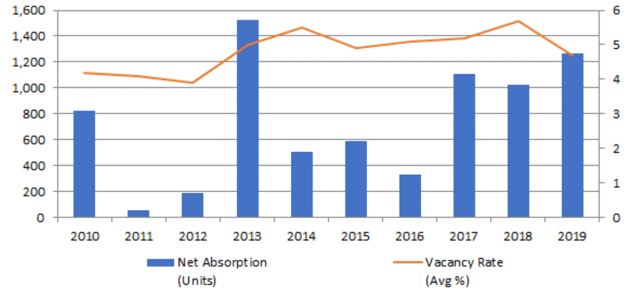
With a vast supply of restaurants and top-rated chefs in the Center City area, Philadelphia has become a well-known "foodie" destination. In 2018, *Travel + Leisure Magazine* ranked the city as one of the best East Coast Food Cities list.[xxxii] Full-service dining options have increased 8% per year between 2008 and 2018 (a 115% overall increase from 217 to 468), while sandwich, take-out and fast food increased 5% per year (a 61% increase from 206 to 331) over the same period.[xxxiii]

IX. Multifamily Market

A. Absorption and Vacancy

An increase in jobs, residents that want to live in Philadelphia, and better retail and dining amenities have driven more housing. Vacancy rates have remained stable at around 5% since 2015, despite the high volume of deliveries. The vacancy rates in Center City have outperformed national averages, where vacancy rates hovered between 6% and 7% over the last year.[xxxiv]

Figure 3: Center City Multifamily Absorption and Vacancy

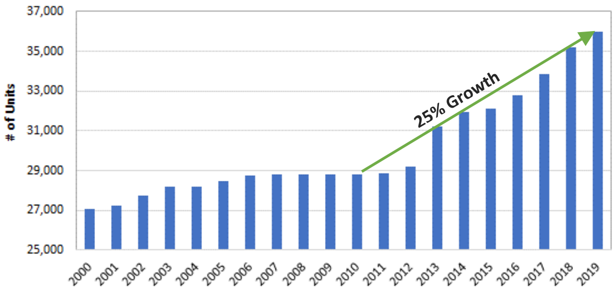


Source: CBRE, Q4 2019

B. A Growing Inventory of Multifamily Units

As a result of Center City Philadelphia's multifamily boom over the last decade, the market has seen a significant rise in the quality and amount of its apartment inventory. Through 2010, the volume of multifamily units in Center City Philadelphia remained relatively steady. Since 2010, however, new unit completions of more than 7,000 units increased the inventory by approximately 25%. Furthermore, new developments in 2019 should continue to support consumers' demand and bolster the live-work-play dynamics Center City has realized over the last decade.

Figure 4: Center City Multifamily Inventory Growth 2000-2019



Source: CBRE, Q4 2019

C. Center City Apartment Rents Continue to Grow, Have More Room

Average effective rent rates for multifamily housing in Center City reached a new high as of Q4 2019—a 10-year growth of 20.1%.[xxxv] It is also noteworthy that the Philadelphia region remains, one of the top markets for anticipated multifamily rent growth in the US over the next two years, with higher projected growth than its East Coast peers, including Boston, Baltimore, Washington, and New York.[xxxvi]

X. Commercial Office Overview

Four factors drive Philadelphia's favorable commercial real estate climate: greater demand drivers, improved supply and development pipeline, stronger market fundamentals and trends, and more institutional (including international) ownership.

A. Greater Demand Drivers

1. Net New Demand – Tenant In-migration

The Philadelphia CBD has seen more than 1.2 million SF of inbound demand since 2015, attracting tenants from the suburbs and outside the region, compared with 1.0 million SF of new market entrants from 2000 - 2014. Traditionally suburban firms such as FreedomPay (from Radnor), Vanguard (from Valley Forge), Entercom (from Bala Cynwyd), and Brandywine Realty Trust (from Radnor) have moved or established a new presence in Center City.[xxxvii] New-to-market businesses such as Amicus Therapeutics (from North Jersey) and Iovance (from California) reinforce Philadelphia's draw for life sciences firms. Collectively, these new entrants bolster the market's real estate fundamentals.

2. Net New Demand – Organic Growth

In addition to in-migration, existing tenants continue to grow their space requirements. Comcast is the largest occupier of CBD office space, with 3.0 million square feet total, of which 500,000 square feet is in buildings other than its own two towers. Other major occupiers of office space in the CBD such as Children's Hospital, the Jefferson Health System and the University of Pennsylvania continue to expand their footprint beyond their traditional locations. For example, Jefferson notably filled the 360,000 square feet vacancy that Aramark left when it moved from East Market to West Market. In total, the Eds and Meds sector currently occupies 1.4 million square feet of CBD office space and is expected to continue growing.

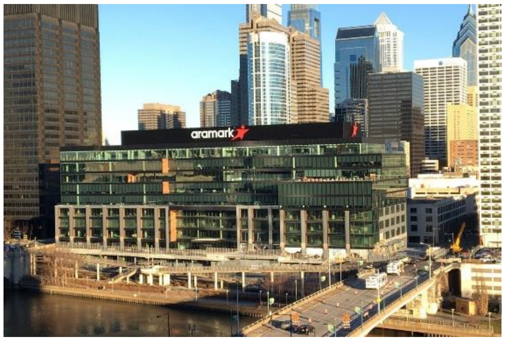
3. Eds and Meds' Impact on Traditional Office Space

The Eds and Meds sector generate meaningful activity with 61,000 jobs (20% of Center City employment). It is important to note that Eds and Meds directly occupy 1.4 million SF of traditional office space in Center City. It is expected that this demand driver will continue to grow as University City research tenants send non-research staff to Center City. According to the Center City District's 2019 *State of Center City* report, University City anchor institutions have been steadily moving toward Center City and occupying both office and medical space in the CBD (for example CHOP's Roberts Center). In addition, the Thomas Jefferson University Hospitals group is the largest private employer in Center City, accounting for nearly one quarter of the Eds and Meds jobs in Philadelphia. For the past five years, Jefferson has been expanding significantly, increasing its footprint around Center City and growing its annual budget by over 350%.[xxxviii]

B. Improved Supply Fundamentals and Development Pipeline

1. Inventory

Center City Philadelphia's overall office inventory hovered just under 40 million square feet for nearly two decades. Major new additions in the past several years have increased the overall footprint of CBD office space, which now totals approximately 44 million square feet in Market East and Market West. Newer office supply has been able to fully or near-fully pre-lease prior to delivery, including both Comcast towers and 2400 Market. Furthermore, properties that have lost tenants to new developments have been quickly backfilled or converted as adaptive re-use projects.



Aramark Corp. Photo from Jan 30, 2019 Philadelphia Inquirer

Notably, 8.3 million square feet of obsolete Center City office space has been converted to residential and/or retail uses since 2000, with 2 million square feet converted since Coretrust last produced a Philadelphia white paper in 2014. Meanwhile, sophisticated new ownership groups made capital upgrades to the existing stock, thereby improving the overall quality of product inventory and supporting higher office rents. Previously, there was an oversupply of space and a significant amount of supply that was obsolete and restraining rents.

2. Development Pipeline

No new office developments are currently under construction at the time of this writing. Several commercial office developments, however, are in various stages of planning in Center City. Two potential build-to-suit opportunities in Center City are being contemplated by parking operator/developer Parkway Corporation. The first is a proposed 308,000 square foot building at 2222 Market Street for law firm Morgan Lewis, which would move out of one or both of its aging Center City buildings. Additionally, Parkway is in talks with potential lead tenant Chubb Insurance for a 400,000 square foot building at 20th and Arch, which would consolidate its employees from its buildings in Market East. One or more of the buildings that will be vacated represents a potential conversion opportunity, which may further mitigate any vacancy impact. Separately, Brandywine (NYSE: BDN) is contemplating a mixed-use development that would add 326,000 square feet to Market West but press reports prior to this writing indicated that BDN will wait for a lead tenant.

In University City, Brandywine Realty Trust's Schuylkill Yards has kicked off with the substantial renovation of the Bulletin Building for Spark Therapeutics; a 770,000 square foot office tower is slated to break ground by early 2020. Other office activity in University City includes Wexford Science and Technology's speculative 1 uCity Square (389,000 square feet), slated to deliver by 2021; University Place Associates' 230,000 University Place 3.0, which has secured the Wistar Institute and Ben Franklin Technology Partners as tenants; and Republic Properties Group has leased land from SEPTA to build a 125,000 office/lab building.

C. Stronger Real Estate Market Fundamentals

1. Growing Rental Rates

The impact of improved building stock and increased tenant demand has strengthened the Philadelphia office market. Center City's office market, which remains relatively affordable compared to other East Coast cities, experienced an increase of 30.7% in asking rents since 2010. While there are potential built-to-suit developments in the pipeline, supply remains relatively constrained, meaning the upward pressure on rental rates is likely to continue.

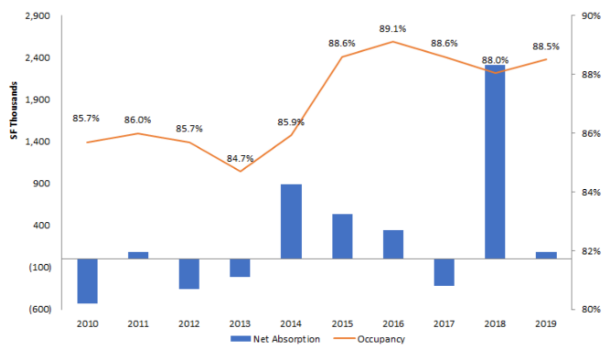
Figure 5: Center City Asking Rent by Annual Q3 Data

Source: CBRE (2019)

2. Historical Absorption and Occupancy Trends

The Comcast Technology Center (CTC) opened in 2018, contributing over 1 million square feet of positive absorption to the market. In total, the CBD experienced a net positive absorption of 2.3 million square feet over the course of 2018, a particularly high number even without the CTC activity. While 2018 was atypically strong, the CBD has generally experienced positive absorption since 2014 and is projected to continue along the same trajectory.[xxxix] The CBD has also had an average occupancy rate of 88.1% since 2014, with little fluctuation even as absorption has continued to trend positively and new inventory has come to market.

Figure 6: Net Absorption & Vacancy in Center City, 2010 - Q3 2019

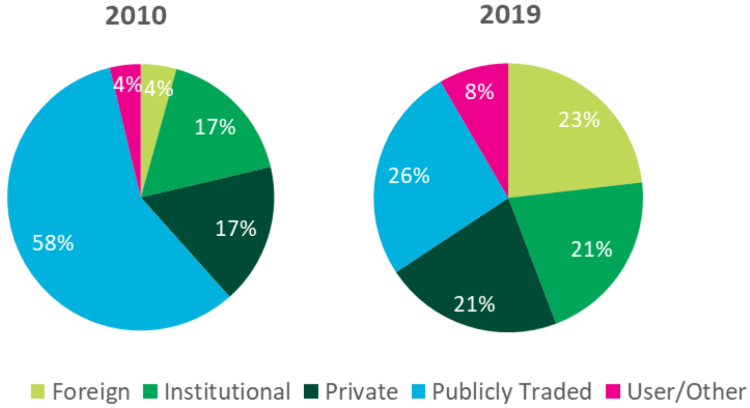


Source: CBRE (2019)

D. More Institutional and International Capital Flows

A notable change in Philadelphia is that the ownership base has become more diverse and includes larger domestic and international institutional investors. Today, 6.3 million square feet of the Philadelphia CBD's Class A and Trophy properties are owned by international investors, accounting for 23% of the Class A and Trophy square footage, compared to 2010, when international ownership was approximately 1.2 million square feet, or 4%, of the Class A and Trophy properties' square footage in the CBD.[i]

Figure 7: International vs. National Ownership of CBD Class A and Trophy Office Buildings[xl]



Source: Real Capital Analytics, CoStar, Econsult Solutions, and CBRE

Regional names have taken a less prominent ownership role in the market's leading buildings, while well capitalized and active REITs such as Brandywine and Piedmont have been joined by national institutional investors including Silverstein, Goldman Sachs, Oaktree, Shorenstein, Carlyle, and Coretrust as well as foreign investors.

International investors that have entered the market include investors from Chile, Israel, Kuwait, and South Korea. These groups include Korea Investment Management, Chile-based Independencia Asset Management, Wafra (founded in Kuwait), and Harel Group and Migdal Group (based in Israel).

Institutional and international investors have come to Philadelphia because they can achieve relatively superior yields, on favorable risk-reward metrics, in a growing market. As the chart to the right demonstrates, since Coretrust's 2014 white paper, Philadelphia went from being ranked tenth in cap rate change to fourth.

Office Transactions >$25M: Average Cap Rates					
	2004	2014	2019	Change '04 - '14	Change '14 - '19
DC	7.2%	5.6%	6.2%	-1.6%	0.6%
Philadelphia	6.8%	7.1%	6.9%	0.3%	-0.2%
Chicago	7.6%	6.6%	5.6%	-1.0%	-0.9%
Boston	7.6%	5.8%	5.2%	-1.8%	-0.6%
Manhattan	7.0%	4.5%	4.7%	-2.4%	0.2%
Atlanta	6.6%	6.7%	7.0%	0.1%	0.3%
Miami/Dade	7.3%	5.3%	5.8%	-2.0%	0.5%
Dallas	7.9%	6.3%	6.1%	-1.6%	-0.2%
Houston	7.6%	6.7%	7.1%	-0.9%	0.4%
Los Angeles	7.3%	6.2%	5.8%	-1.2%	-0.4%

Source: Real Capital Analytics Q3-2019

The added benefit to institutional investors concentrating in the market is that they are well-capitalized and are investing in their buildings; two critical components that were previously missing and therefore holding down rents and values. Additionally, increased institutional and international capital provides additional institutional investors more potential exits.

XI. Conclusion

The Philadelphia office market was largely ignored from the late 1990s through the early 2010s due to uninspiring investment results. While the market dynamics historically merited this lack of attention, they have been improving for the last decade and merit revisiting the market as an investment opportunity. While prominent recent entrants demonstrate that Philadelphia has reemerged on the radars of some within the institutional (and international) investment community, it is our view that the positive dynamics in the market are not widely known or appreciated, creating value for select opportunities that should compel investors to revisit interest in the market.

XII. Disclaimer

This white paper expresses the views of Coretrust as of the date indicated and are subject to change without notice. The information herein is being made available for educational purposes only and should not be used for any other purpose. Nothing presented herein is intended to constitute investment advice, nor sales material, and no investment decision should be made based on any information provided. While Coretrust has used reasonable efforts to obtain information from reliable sources, we cannot guarantee the accuracy of such information and have not independently verified the accuracy or completeness of such information or the assumptions on which such information is based. Any forward-looking statements or forecasts are based on assumptions and actual results are expected to vary from any such statements or forecasts. There can be no guarantee that any investment strategy employed by Coretrust will be successful. This memorandum, including the information contained herein, may not be copied, reproduced, republished, or posted in whole or in part, in any form without the prior written consent of Coretrust.

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[i] Coretrust obtained a list of 43 Class A and Trophy properties totaling 31 million SF in the CBD from CBRE in 2019 and added Cira Square to the list. To qualify as an international-owned property, investor must have a material interest in property.

[ii] Bureau of Labor Statistics (BLS), Local Area Unemployment Statistics. (2014-2018).

[iii] Bureau of Economic Analysis (BEA), Metropolitan Area Gross Domestic Product. (2012-2015).

[iv] *Center City District.* State of Center City 2019. (2019).

[v] American Community Survey (ACS) five-year estimates were used for the years 2012 and 2017 to avoid overlap in the comparison, as the 2017 data are estimated based on 2013-2017 surveys and the 2012 data are estimated based on 2008-2012 surveys.

[vi] *Philly Voice*. Maps: How Does Philly's Population Density Compare to Other Cities? (2017). https://www.phillyvoice.com/maps-how-does-phillys-population-density-compare-other-cities/

[vii] *The Atlantic.* The Power of Density. (2010). https://www.theatlantic.com/business/archive/2010/09/the-power-of-density/62569/

[viii] ACS Five-Year Estimates, (2012 & 2017).

[ix] BLS, Quarterly Census of Employment and Wages. (2014-2018).

[x] The Integrated Postsecondary Education Data System (IPEDS). (2017).

[xi] National Institutes of Health (NIH) Research Portfolio Online Reporting Tools (RePORT), NIH Awards by Location & Organization. (2009-2018).

[xii] *Center City District.* State of Center City 2019. (2019).

[xiii] *Campus Philly*. Philadelphia Renaissance: College Student Retention Drives Growth in City and Region. (2019). https://campusphilly.org/wp-content/uploads/2019/04/CampusPhilly-PhiladelphiaRenaissance2019-web.pdf

[xiv] *Bisnow.* New-to-Philly Biotech Company to Build 136k SF Lab/Office Building in Navy Yard. (2019). https://www.bisnow.com/philadelphia/news/office/biotech-company-new-building-lab-office-navy-yard-99183

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