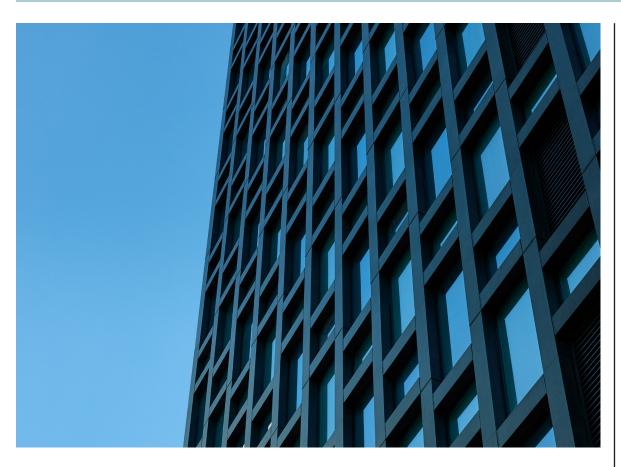


Seoul Prime Office





Office transactions hit record highs

Demand for Seoul's prime offices continued to rise in Q4 after two straight quarters of growth.

- With the domestic economy sustaining a rate of growth that did not diverge significantly from its expected potential, the Bank of Korea's Monetary Policy Board raised the base rate by 25 basis points from 1.50% to 1.75% on 30 November 2018.
- By the end of December 2018, the vacancy rate for Seoul's prime office area was 12.4%, up 0.7%p on the previous quarter. The vacancy rates for GBD and YBD fell in the previous quarter. The CBD's vacancy rate rose, mostly due to new supply coming from the Centropolis, which represented 2% of Seoul prime office area and 4% of the CBD.
- In 2018, demand for prime offices was driven by companies in the information technology, biotechnology, e-commerce, customer services, and coworking space sectors. There were also relocation demands caused by renovation and reconstruction projects as well as M&A deals.
- The net absorption for the year 2018 was 270,000 sq m, 1.8 times the five-year average annual net absorption of 150,000 sq m.

• At the end of December 2018, Seoul's average prime rent rose 1.7% and maintenance fee rose 2.2%, both year-on-year (YoY).

"Total investment volumes in Seoul's office market surged to historical high of KRW11 trillion in 2018. Surpassing the previous year's six transactions, 12 large office deals each valued at more than KRW300 billion were inked."

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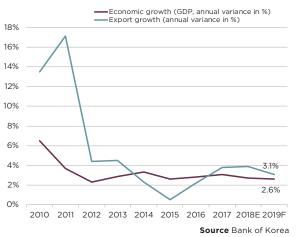
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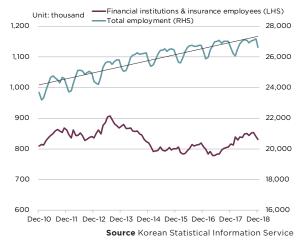
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GRAPH 1: Growth Rate Of Real GDP And Real Exports, 2010-2019(F)



GRAPH 2: Number Of Employees In Finance And Insurance Sectors, December 2009–December 2018



SUPPLY

While four prime offices offering 321,610 sq m were delivered to the three main business districts in 2018, at the end of December, the average vacancy rate of Seoul went down 1% YoY. Moreover, although the growth rate of South Korean economic data and company performances for 2018 were all lower than the previous year, leasing activities for the prime office sector exhibited high net absorption. Driven by the expansion of coworking spaces and upgrade demands from tenants in secondary buildings, net absorption rose 123% at the same point as in 2017 and was 180% up on the five-year average. In 2019, new supply of 38,250 sq m is expected from the CBD's Seosomun 5 district project. The Seosomun project represented 12% of total new supply added in 2018, and would still reach a low level of 57% if Summit Tower (146,660 sq m), located in a non-core area of Euiljiro 4-ga, were considered.

ECONOMIC OUTLOOK

The Bank of Korea lowered its economic outlook to 2.6% for 2019 in January. In November 2018, the Monetary Policy Board raised the BOK base rate from 1.50% to 1.75%, leaving the rate unchanged. According to the board's January announcement, the domestic financial market stablised recently, as volatilities in global financial markets diminished slightly. The Board will maintain its accommodative monetary policy stance, forecasting that inflationary pressures on the demand side will not be high for the time being and that the domestic economy will sustain a rate of growth that does not diverge significantly from its potential level.

DEMAND AND VACANCY RATES

Demand for Seoul prime office space in the three business districts rose 57,800 sq m in Q4, continuing the growth of the previous two quarters. The YBD recorded the highest net absorption with 43,400 sq m, with CBD and GBD recording 8,100 sq m and 6,300 sq m respectively. The YBD's high vacancy rate fell as further take-up in Q4/2018 rose thanks to aggressive marketing. The net absorption for 2018 was 270,000 sq m, which is 1.8 times higher than the five-year average net absorption of 150,000 sq m.

At the end of December 2018, the Seoul prime office vacancy rate was 12.4%, up 0.7% from the previous quarter. While the vacancy rates for the GBD and YBD fell from their previous quarters, as a whole, Seoul's vacancy rate rose because Centroplis (representing 2% of Seoul prime and 4% of CBD) was added to the analysis from Q4. However, the rise in the vacancy rate was limited to only 0.7%p due to active tenant deals in all three business districts.

In Q4/2018, demand for CBD space from new tenants was notably visible. A local coworking space operator, Fast Five, opened its first CBD branch office at Signature Towers (8,300 sq m) and a newly created entity of the Korean Government moved into Post Tower (4,100 sq m). Meanwhile, despite the addition of new supply in the GBD (Luceen Tower in Q2 and Gangnam N Tower in Q3), and LS and its affiliate companies moving away to Yongsan LS Tower, the vacancy rate remained steady at 7.7%, down 0.3%p from the previous quarter. KB Real Estate Trust and Korbit moved to Gangnam N Tower from GBD secondary buildings, and a biotechnology company, BD Korea, moved to Arc Place. The YBD, which exhibited the most tenant activity among the three business districts, recorded a vacancy rate of 12.1%, down

TABLE 1: New Supply, 2018-2019(F)

(Unit: KRW/3.3058 sq m, GFA)

(Unit: KRW/ 5.5058 Sq m, GFA					
DISTRICT	2018	2019			
CBD	141,480	38,250			
GBD	96,800	-			
YBD	83,330	-			
Total	321,610	38,250			

Source Savills Korea

TABLE 2: Monthly Rents, Maintenance Fees and Vacancy Rates By District, Q4/2018

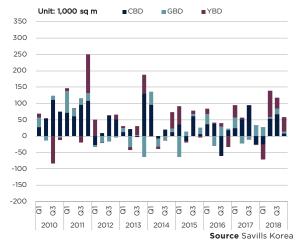
(Unit: KRW/3.3058 sq m, GLA)

	RE	NT	MAINTENANCE FEE		NET	
DISTRICT	AVERAGE RENT	YoY INCREASE (%)	AVERAGE MAINTENANCE FEE	YoY INCREASE (%)	ABSORPTION AREA (sq m)	VACANCY RATE
CBD	107,300	2.6%	42,500	2.4%	8,100	15.7% (12.5%)
GBD	94,000	1.2%	38,800	2.0%	6,300	7.7% (8.0%)
YBD	79,400	0.2%	38,000	2.3%	43,400	12.1% (15.7%)
Overall Seoul Average	97,500	1.7%	40,400	2.2%	57,800	12.4% (11.7%)

Source Savills Korea

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GRAPH 3: Net Absorption, Q1/2010-Q4/2018



GRAPH 4: Seoul Prime Office Vacancy Rate, Q1/2010-Q4/2018



3.6%p from the previous quarter. Novartis, Marsh & McLennan Companies, Quad Asset Management and others based in CBD prime offices relocated to Three IFC. These companies and tenants had pre-committed to YBD prime locations and then relocated in O4. FKI Tower and Three IFC vacancy rates fell 10%p each, leading the drop in the YBD's average vacancy rate.

For Q4/2018, secondary-to-prime relocations accounted for 41% of take-up. For the year as a whole, take-up due to newly-created organisations and expansions accounted for 40% of take-up. By district and for Q4/2018, take-up for CBD, YBD and GBD was 41%, 34% and 25%, respectively. In the whole of 2018, CBD and YBD accounted for 43% and 40%, and GBD accounted for 17% of take-up.

At the end of December 2018, the face rent in Seoul prime office buildings averaged KRW97,500/3.3 m², up 1.7% YoY. Maintenance fees showed higher increase rate rising higher than the prime rents which averaged KRW40,000/3.3 m², up 2.2% YoY. As a result of declining vacancy rates in some buildings, incentives such as rent free, tenant improvements and other inducements lessened.

MAIN DRIVERS OF DEMAND FOR **OFFICES IN 2018**

The main drivers of demand for prime office space in 2018 were 1) coworking spaces; 2) high-growth companies in information technology, biotechnology, e-commerce, and customer services; 3) relocation due to renovation and reconstruction projects; and 4) relocation resulting from M&A deals.

1) COWORKING SPACES

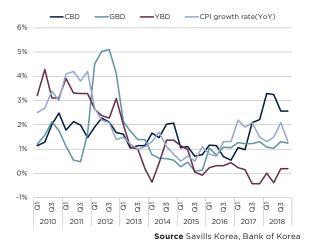
As of late December 2018, the volume of

coworking spaces, representing approximately 2.0% of Seoul prime offices, doubled in one year to 151,300 sq m. Twelve coworking-space companies are operating 31 coworking sites in prime buildings. By district, these represent 57% of CBD, 30% of GBD, and 13% of YBD. In 2018, 25% of total prime office net absorption was taken up by coworking sites. Among the three business districts, CBD in particular saw occupancy for coworking spaces rise to 2.3 times YoY, accounting for half of the CBD's annual net absorption of 103,000 sq m. Global giant WeWork opened branches at the K-Twin Towers, Seoul Square and Jongro Tower, and local coworkingspace company Fast Five opened a branch at Signature Towers. Coworking spaces took up an average of three-to-four floors at Seoul Square, Jongro Tower and Signature Towers, leading the decline in the CBD's vacancy rate. However, given that the occupancy rate within coworking spaces is difficult to measure, full occupancy of coworking spaces cannot be certain. As such, actual vacancy rates of the building may differ based on the occupancy rate of the coworking spaces in the buildings.

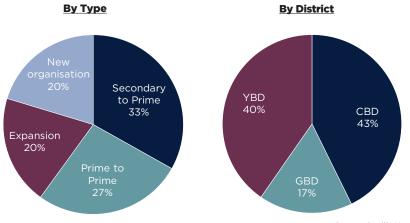
In the coworking space market, WeWork and Fast Five are expanding the most, while Korean conglomerates are also entering the coworking space market. After entering the Korean market in 2016, WeWork built brand awareness by moving into prime buildings and improved its negotiation position by signing long-term tenancy agreements as anchor tenants. As a local company, Fast Five sought to lease affordable buildings with high accessibility primarily within the GBD. Recently, Fast Five expanded to the Hongdae and Seongsu areas in addition to the three business districts.

Coworking spaces operated by Hanwha Life Insurance, Lotte Property & Develop-

GRAPH 5: YoY Rental Increase Rate By District, Q1/2010-Q4/2018



GRAPH 6: Take-up, 2018



Source Savills Korea

savills.com/research 3 ment, Shinsegae International and other large companies are rapidly expanding alongside market leaders WeWork and Fast Five. Using their in-house specialists, the property management arms of these large companies are building out coworking spaces within their headquarter buildings. Dreamplus by Hanwha Life Insurance opened in Hanwha 63 Building and Hanwha Life Insurance Seocho building while LG Group's S&I Corporation (formerly Serveone) opened Flagone Gangnam Camp in Serveone Gangnam Building. Competition among co-working operators are becoming fiercer, as large companies are opening co-working branches not only in their own headquarters, but also in the leasable buildings. Some landlords are intending to provide similar services as those provided by co-working operators, considering the potential competition with them. For example, IFC offer public meeting and seminar rooms, and SFC and the recently-completed Centropolis are expected to offer common lounge facilities to their tenants.

2) HIGH-GROWTH COMPANIES

In 2018, demand for prime offices was driven by companies in information technology, biotechnology and e-commerce sectors as well as customer service providers. With digital technology transforming not only internet-based and mobile-first companies but also financial, lodging, travel, distribution and many other industries, demand for offices from a variety of sectors is rising. Banks, insurance and securities companies from the finance sector are cutting sales branches and face-to-face customer support services while adding call centers and strengthening online-only customer services. KEB Hana Bank and Hana Card combined their call centers and moved to Centerplace to manage and serve customers. Companies such as Agoda (lodging) and C-Trip (travel) moved their new customer service units to Pine Avenue and Jongro Tower, respectively. Moreover, as consumers change their buying habits from offline to online shopping, e-commerce companies are also growing. SK Planet (11th Street) expanded its presence at Seoul Square, where it had moved in 2017. Parts of Amazon's Korea headquarters and its newly-established business units moved into Pine Avenue, increasing the occupancy rate in this prime office space.

RELOCATION DEMAND by 3) RENOVATION, RECONSTRUC-TION PROJECTS AND 4) M&A DEALS

Relocation demand from tenants needing to move out of their existing offices to surrounding prime office space ahead of renovation and reconstruction projects increased in 2018. SK Innovation and some SK affiliates moved to D Tower from SK headquarters in the SK Seorin Building, as the building is being renovated into a smart office. IFC and FKI Tower also received new tenants from the Teachers' Pension Building, which is to be rebuilt. In some cases, companies moved because of their involvement in M&A transactions. CJ Healthcare and SK Shipping moved to Pine Avenue A and Seoul Square, respectively. SK Encar changed its name and moved to Signature Towers after being acquired by a private equity firm.

OUTLOOK

Deutsche Asset & Wealth Management changed the name of Kumho Asiana HQ to the Concordian. Offering 60,690 sq m of space, this building is expected to appear on the leasing market in 2019, raising the CBD's vacancy rate. In 2019, Kumho Asiana Group and SKT are relocating to Centropolis, and law firm Shin & Kim is relocating to D Tower. But their impact on the vacancy rate is expected to be minimal because they are prime-to-prime movements within the CBD.

No new supply is expected for the GBD in 2019. With the current vacancy rate below 8%, the GBD is the most stable performing district of the three business districts. Gangnam N Tower and Luceen Tower, both completed in 2018, had vacancy rates of 73% and 100%, respectively, at the end of December. But GBD vacancy rate is expected to fall below 6% by the end of the year as pre-committed tenants will move in the newly-built buildings.

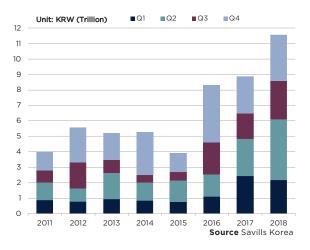
The YBD's vacancy rate fell 5.5%p YoY following aggressive lease-marketing efforts and tenant movement to IFC and FKI Tower ahead of the reconstruction of the Teachers' Pension headquarters. An increase in leasing transactions caused by relocations from other districts and upgrading relocations from secondary buildings within the YBD resulted in net absorption for the year of 111,500 sq m, representing 41% of Seoul's net absorption. In addition to financial institutions and IT companies related to the financial sector, foreign pharmaceutical, biotechnology, medical and consumer companies are expect-

TABLE 3: Major Tenant Relocations, Q4/2018

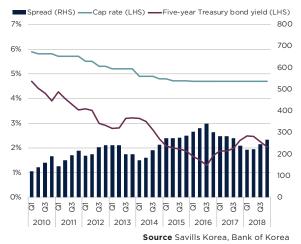
то					FROM	
DISTRICT	BUILDING	TENANT	AREA (sq m)	DISTRICT	BUILDING	
	Signature Towers Seoul	Fast Five	8,360	New		
	Heungkuk Life Insurance Building	Kumho Tire	6,930	CBD	Concordian Building (former Kumho Asiana Main Tower)	
CBD	Seoul Square	SK Shipping	5,370	CBD	SK Namsan Green Building	
	Post Tower	Presidential Truth Commission on Deaths in the Military	4,110	New		
	Samsung Main Building	LG CNS	3,010	New		
	Gangnam N Tower	KB Real Estate Trust	6,020	GBD	Poonglim Building	
	Arc Place (former Capital Tower)	BD Korea	5,640	GBD	Limsung Building	
GBD	Gangnam N Tower	Korbit	5,330	GBD	Gangnam 8258 Building	
	Samsung Life Insurance Daechi Tower	Samsung Life Insurance	3,130	Expansion		
	Arc Place (former Capital Tower)	eBay Korea	2,820	New		
	FKI Tower	KB Kookmin Bank	13,180	YBD	Kookmin Bank Yeouido IT Center	
YBD	IFC 3	Novartis	6,590	CBD	Yonsei Severance Foundation Building	
	IFC 3	MMC (Marsh & McLennan Companies)	3,320	CBD, GBD	SFC, Gangnam 358 Tower	

Source Savills Korea

GRAPH 7: Office Transaction Volumes, Q1/2011 - Q4/2018



GRAPH 8: Prime Office Building Cap Rate Trend, Q1/2010 - Q4/2018



ed to relocate to the YBD. Diversification of tenant sectors is expected to continue. In Q2/2019, Meritz Securities is expected to sell its headquarters building and take up 16,500 sq m of space at Three IFC, thereby lowering the YBD's average vacancy rate to closer to 10%. However, KB Finance Town, Parc.1 and the Yeouido Post Office reconstruction project are all expected to be completed in 2020. With 527,000 sq m or 23% of YBD prime office area entering the market within a year or two, higher vacancy rates are inevitable.

Expansion of coworking spaces in prime locations is expected to continue into 2019 but fall short of its 2018 growth levels. With new entrants preparing for the coworking space market, leasing demand in prime locations is expected to be sustained. However, market leader WeWork and runner-up Fast Five are expected to expand their presence to non-prime locations with high accessibility, and as such, the growth we saw in 2018 may not be possible.

In Q1/2019, face rents are expected to rise less than 1% YoY. Maintenance fees are expected to rise around 2%, driven by a higher real estate tax and increase in minimum wages, which in turn have increased labour costs and maintenance fees.

TRANSACTIONS AND INVESTMENT MARKET

A new record was set in 2018 in terms of total office investment volume. The record high of KRW11 trillion exceeds the figure posted in 2017, a previous high point. In 2017, there were six major office transactions worth over KRW300 billion, but by 2018, there were twelve deals of the same magnitude. Domestic investors have been very active. More capital is chasing deals in the real estate market such as balance sheet cash from securities

companies, public REITS, and blind funds from Korean investors.

In Q4/2018, total transaction volume reached KRW2.9 trillion. CTCORE sold the Centropolis, recently completed in the CBD, to LB Asset Management for KRW1.1 trillion. M&G Real Estate, KTCU (Korean Teachers' Credit Union) and POBA (Public Officials Benefit Association) all invested in the two-tower office complex. SK Telecom (Tower A), Haevichi (Tower A) and Kumho Asiana (Tower B) will move into the offices in Q1/2019.

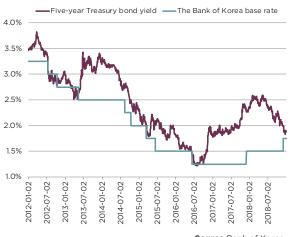
A value-added fund with investment from NPS and Korea Post, and operated by IGIS Asset Management, purchased the HP Building for KRW212 billion. In 2017, HPE moved to the SK Securities Building, leaving a large vacancy in the HP building that was filled when WeWork moved into the building in Q2/2018. In 2019, the conversion of the lower floors (B1 – 3F) into retail is expected to be completed.

The SK U Tower in Bundang was purchased by SK Hynix, the existing tenant, from SK Corporation for KRW308 billion. After the purchase, more than half of the space was leased back to SK Corporation for two years.

Shinhan REITs management acquired Yongsan The Prime Tower for KRW165 billion through a paid-in capital increase of Shinhan Alpha REITs, which was listed on the KOSPI. The occupancy rate was 99% at the time of sale, and the main tenants were Shinhan Life Insurance and U Base.

Nomura RIFA Asset Management bought the Dream Tower in DMC for KRW150 billion. A leading credit card company is known to be the major equity holder, while major tenants are CJ Hello Vision and Daewon Broadcasting. At the time of the sale, the occupancy rate was 95%, and the WALE was

GRAPH 9: Five-year Treasury Bond Yield And The BOK Base Rate Trend, January 2012 – December 2018



Source Bank of Korea

TABLE 4: Major Investment Transactions, Q4/2018

	DISTRICT	BUILDING NAME	SELLER	BUYER	TRANSACTED AREA (sq m)	TRANSACTION PRICE (KRW BIL)
	CBD	Centropolis	CTCORE	LB AMC (M&G, KTCU, POBA)	134,393	1,122
	YBD	HP Building	CBRE GI	IGIS AMC (NPS, Korea Post)	43,835	212
	Yongsan	Yongsan The Prime Tower	KORAMCO AMC	Shinhan REITs	39,010	165
	DMC	Dream Tower	Mastern AMC (Angelo Gordon)	Nomura RIFA AMC	38,076	150
	Bundang	SK U Tower	SK C&C	SK Hynix	86,804	308

Source Savills Korea

known to be over ten years old.

KORAMCO REITs & Trust purchased the KG Tower in the GBD for KRW94 billion and then signed lease agreements with WeWork and the seller, KOTITI Testing & Research Institute. The Research Institute, which used the building as its headquarters, invested in common stocks in the new funds set up by KORAMCO after the sale. The remaining balance was acquired by KB Securities and Samsung Securities.

In Q4/2018, the average prime office cap rate stood at 4.7%, calculated using face rent and 90% occupancy. However, considering leasing concessions (such as rent-free periods and tenant-improvement incentives) and actual occupancy rates, the effective cap rate is in the low- to mid-4% range. The average five-year Treasury yield in Q4/2018 decreased to 2.0%, yielding a prime office cap-rate spread of approximately 260 bps. The borrowing rate on core assets is 3.5-3.6%, and the average LTV is 55%.

Overview of the Seoul office market and Savills Korea office survey

Table 5: Summary of surveyed buildings, December 2018

		CBD	GBD	YBD	Total
	Number of buildings	24	12	10	46
Α	Average GFA (sq m)	87,000	99,000	99,000	93,000
	Average year of completion	2003	2004	2005	2004
	Number of buildings	23	20	8	51
В	Average GFA (sq m)	54,000	48,000	45,000	50,000
	Average year of completion	2000	2001	1996	2000
Total	number of buildings	47	32	18	97
Total area (sq m)		3,340,000	2,140,000	1,350,000	6,830,000

Source Savills Korea Research & Consultancy

Close to 60% of large office buildings (30,000 sq m or more) in Seoul are located in three major business districts – the CBD (30%), GBD (17%) and YBD (13%). The CBD is the largest of these districts and is home to major government and multinational institutions. The GBD also houses many multinational companies and is an information technology centre, while YBD, the "Wall Street" of South Korea, includes the headquarters of major securities firms and broadcasting companies.

The Savills Korea Quarterly Office survey is the longest running survey of prime office stock in Seoul. Established in 1997, it currently comprises 95 of the 122 buildings in Seoul classified as "prime" buildings.

Prime buildings: Buildings with a GFA greater than 30,000 sq m with good accessibility and facilities, a high level of finish, and creditworthy blue-chip

tenants.

Monthly rent: Surveyed rents are "face rents", the asking rents reported by landlords for mid-level floors. These rents are standardised by Savills Korea to account for variations in the security deposits required by different landlords to produce an effective rental figure for NLA.

Cap rate calculation method

Cap rate: (income from interest on security deposit (5%) + face rent of a standard floor + residual income from maintenance fee) × occupancy rate $(90\%) \times 12$ / transaction amount.

For comparison of cap rates of each transaction case, a 5% interest rate on security deposit and 90% occupancy rate were uniformly applied.

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