YANGTZE RIVER DELTA’S REGIONAL INTEGRATION DRIVE

Embrace the Opportunities of Hangzhou’s Property Market
The formation of the urban conglomerate of the Yangtze River Delta (YRD) region has become a key driver to China’s economy. What are the opportunities behind the integrations of the YRD region for Hangzhou’s property market? Our recommendations are as follows:

**For landlords:**
- Given the heavy office supply in the emerging areas, we advise landlords to conduct professional asset management by increasing the portions of single-ownership rather than strata-sales to enhance building profiles.
- We recommend office landlords to study flexible workspace sector and select leading operators as potential partners as the latter generally have better brand reputation, service quality, design and community operation capability as well as account acquisition capability.

**For tenants:**
- We recommend Qianjiang New City for flexible workspace operators’ further expansion, where sufficient new supply will provide plenty of choices and ensure favourable rent.
- Technology tenants should focus on the Future Science City for expansion or new leases, given the ample new supply.
- New supply in the Qianjiang New City and the Qianjiang Century City will provide alternatives for financial companies, considering the favourable rent and improved accessibility.

**For investors/developers:**
- Retail premises in emerging areas like Chenxi and Chenbei are preferred where residential population is large and their purchasing power is strong.
- Business park properties in the Future Science City should become attractive to potential investors with continued improvement of infrastructure and accessibility.
- Driven by the flourishing of the e-commerce industry, the warehouse spaces in Xiaoshan and Yuhang districts where new supply is adequate should be a good investment selection.
- Retail large e-commerce enterprises will probably open brick-and-mortar stores with the development of technology+ commerce. Omnichannel retailing, combining an online and offline presence, will be increasingly popular with retailers.
- Business park properties in the Future Science City should become attractive to potential investors with continued improvement of infrastructure and accessibility.
- Technology-driven industries should continue to drive the market demand. The Future Science City area will likely become an attraction in the coming three years.
- Sustained development of Hangzhou’s e-commerce industry coupled with the recovery of manufacturing industry should spur robust demand for warehouse spaces.

As a key city in the south YRD area, Hangzhou is the centre of China’s e-commerce industry and plays a major role in China’s technology and innovation industries. What are the implications for Hangzhou’s property market of the integration of the YRD region and the hosting of the G20 summit in 2016, and of the coming 2022 Asian Games?
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RESEARCH BACKGROUND

Urban agglomerations are becoming one of the most important geographic units for international competition and collaboration. Focusing on the efficient planning, effective management and sustainable development of urban agglomerations will be crucial to competitiveness and economic development in the future.

Urban agglomeration is a phenomenon affecting highly developed and integrated cities. It occurs when the relations among cities shift from mainly competition to both competition and cooperation. An urban agglomeration enhances the urbanisation effect on the basis of interactions among cities in proximity to each other, and generates positive externality referred to as an “urban agglomeration economy”. Such externality is what makes urban agglomerations more efficient than a single city in allocating resources and promoting industries.

An urban agglomeration economy enables a region to attract more capital, information and talent, and participate in high level global collaboration. Looking around the world, regions with the most developed economies and advanced innovative capabilities all have mature urban agglomerations, such as the eastern seaboard urban agglomeration with the core of New York City, the Kanto area urban agglomeration with its core of Tokyo, the Greater London area and the Ile-de-France urban agglomeration with Paris at its core (see Figure 1).

Figure 1: Location Map of Major Global Urban Agglomerations

Source: The Development Plan of Yangtze River Delta Urban Agglomeration

Note: the Development Plan of Yangtze River Delta Urban Agglomeration is using a very broad definition of urban area which includes all major supporting cities.
YRD Urban Agglomeration will set a benchmark for China’s New-type Urbanisation

Global metropolises in China have sprung up in the last 40 years, driven by rapid urbanisation. Meanwhile, the migration of people to cities, drawn by the opportunities offered by the effect of business clustering, has resulted in a development imbalance among regions and between urban and rural areas. As such, it was proposed in the Central Urbanization Conference in 2013, the National New-type Urbanization Plan (2014-2020) in 2014 and the 19th CPC’s National Congress that urban agglomerations should be the primary form that integrates large, medium-sized, and small cities and towns to facilitate the urbanization of agricultural migrants. The formation and growth of urban agglomerations as well as optimization of their spatial structures and overall development quality will have a significant impact on China’s promoting of New-type Urbanization and the transition of its economy.

Located at the convergence of the One Belt, One Road and the Yangtze River Economic Zone (see Figure 2), the YRD urban agglomeration covers a land area of 211,700 square km spanning Shanghai, Jiangsu Province, Zhejiang Province and Anhui Province (see Figure 3). As the only world-class urban agglomeration with an approved development plan, the YRD urban agglomeration will aim for international benchmarks to set a development model for other Chinese urban agglomerations.

The Development Plan of YRD Urban Agglomeration (hereinafter referred to as the Development Plan) has established an overall development position of “becoming a world-class urban agglomeration leading China and connecting Asia and the world” and set up goals of “developing the most active resource allocation centre, creating a scientific and technological innovation centre with world influence, building a world-class centre for modern service and advanced manufacturing sectors, and creating a gateway of Asia Pacific”. Obviously, cities in YRD urban agglomeration are ushering the best development opportunity with the approval of the Development Plan.
A Comparative study of Hangzhou’s competitive forces in YRD Urban Agglomeration

Colliers selected four core cities, Nanjing, Hangzhou, Suzhou and Hefei in the YRD Urban Agglomeration as research targets, and established a rating system to evaluate their respective competitive advantages in five aspects: economic dynamics, openness, creativity, talent and quality of life (see Figure 4). The perceptions of the differences in the cities’ competitive advantages will serve to synergize their strengths, eliminate competition, enhance the development quality of the YRD Urban Agglomeration and increase its influence in the world.

**Figure 4: Competitive Forces Rating System for YRD Core Cities**

![Figure 4: Competitive Forces Rating System for YRD Core Cities](source: Colliers International Research)

**Economic dynamics**

This is a key indicator to reflect urban development and industry changes. From the perspective of GDP volume, Hangzhou’s GDP hit RMB1.26 trillion (USD194.56 billion) in 2017, second only to Suzhou. From the aspect of industry structure, Hangzhou’s services sector grew rapidly at a CAGR of approximately 15% between 2012 and 2017, ranking first among all four cities. Its outputs of the service sector represented 63% of the total GDP in 2017, higher than that of Nanjing and Suzhou. Underpinned by the e-commerce development, its total retail sales expanded rapidly and ranked the first. Stimulated by the upcoming 2022 Asian Games and improved infrastructure, developers tend to increase their land acquisitions in Hangzhou. As a result, higher land price premiums boost the real estate investment in Hangzhou.
Openness

This is a key measurement of a city’s attractiveness to foreign investment. Suzhou’s trade volume totalled USD329.2 billion in 2017, far beyond that of Hangzhou and Nanjing. This is primarily due to international trade of machinery and electronic products. Notably, the volume of Hangzhou’s services trade and cross-border e-commerce trade outperformed that of Suzhou, partly due to Hangzhou’s development of cross-border e-commerce comprehensive pilot area. Affected by the G20 Summit, Hangzhou’s utilised Foreign Direct Investment (FDI) has been greatly enhanced, achieving a record high of USD6.6 billion in 2017 and outperforming the other three cities.

Creativity

This is a crucial indicator to reflect a city’s innovation capability. Hangzhou’s R&D expenditure represented 3.2% of its total GDP, the highest of its peers. Besides, Hangzhou’s patents per 10,000 people took the lead among all four cities in 2017. In addition, the economic outputs of Hangzhou’s high-tech industry represented over half of total industrial outputs in 2017, indicating an upgraded industrial structure.

Talent

This is a fundamental element reflecting the development of a city’s intellectual capital and its development potential. Hangzhou’s education expenditure accounted for 2.0% of its total GDP in 2017, the highest of its peers, though its total amount of education expenditure is second only to Suzhou at RMB25.3 billion (USD3.9 billion). Hangzhou has stepped up its efforts to increase its expenditure in education and talent cultivation though the number of schools of higher education is lower than Nanjing and Hefei. This is evidenced by that Hangzhou has pressed forward to its establishment of world-class education facilities such as Hupan University, West Lake University, and is building a talent base integrated with industry, academia and research in the fields of IT and cross-border e-commerce. The overall development of the city should gain constant momentum as a result of the improving talent base.

Quality of Life

This is an indicator reflecting city’s liveability. In order to attract talent, it is essential to enhance citizen’s living condition. Hangzhou’s disposable income per capita and propensity to consume topped the list. Its efforts to the construction of subsidized housing are well-intensified. To attract employees and solve their housing problems, also boosted by the central government’s initiatives of promoting the development of rental housing and ensuring tenants to enjoy the same rights as landlords, Hangzhou are scheduled to offer subsidised housing of different types such as talent apartments and public housing, and the total GFA will reach 21.37 million sq m (230 million sq ft) by 2020.

It can be concluded that Hangzhou is endowed with remarkable comparative advantages on its creative power and openness, which is in line with its aspiration to become an innovative and dynamic city in its 13th Five Year Plan.
CITYPROFILEOFHANGZHOU

Hangzhou has a thriving service economy led by technology and cultural & creative sectors.

During 2008-2017, the GDP of services sector surged from RMB221.3 billion (USD34.0 billion) to RMB785.7 billion (USD120.9 billion) with a compound growth rate of 15.1% (see Figure 6). Its added value accounted for 62.6% of the total GDP in 2017, only lower than Shanghai to be the second among all cities in the YRD. Among all sectors of the services sector, information technology and cultural & creative industry are major drivers. The former had a GDP of RMB321.6 billion (USD49.5 billion) in 2017, accounting for 25.6% of the total GDP, and its growth rate exceeded 20% for the third consecutive year since 2014 when the municipal government of Hangzhou adopted the “No. 1 project” which gave the development of information technology the highest priority (see Figure 7). The latter achieved a compound growth rate of 23.8% during 2011-2017 and realized a GDP of RMB304.1 billion (USD46.8 billion) in 2017, accounting for 24% of the total GDP (see Figure 8).

Figure 6: GDP of Services Sector, Growth Rate and % of GDP, Hangzhou

Figure 7: GDP of Information Technology Sector, Growth Rate and % of GDP, Hangzhou

Figure 8: GDP of Cultural and Creative Sector, Growth Rate and % of GDP, Hangzhou

Source: Hangzhou Statistics Bureau
Hangzhou also has a prosperous private economy that enhances the city’s regional competitiveness

The environment for private investment is favorable due to the improved business environment. Both the number of private enterprises and GDP of private sector grew steadily over 2012-2017 (see Figure 9 and 10). In 2017, Hangzhou’s 481,000 private enterprises accounted for 60.2% of the total GDP. According to the China Federation of Industry and Commerce (ACFIC), Hangzhou had 44 of the “top 500 private enterprises of 2017,” or 8% of the total. This ranked first among all Chinese cities for the fifteenth consecutive year, far ahead of Beijing and Shanghai. Zhejiang province had 120 enterprises on the list, and this was the nineteenth consecutive year that Zhejiang had ranked the top among all provinces and province-level municipalities (see Figure 11).

Figure 9: Number of Private Enterprises and Its Growth Rate, Hangzhou

Figure 10: GDP of Private Sector and % of GDP, Hangzhou

Figure 11: Regional Distribution of China’s Top 500 Largest Private Enterprises in 2017

Source: Hangzhou Statistics Bureau
Current conditions of transportation infrastructure and urban development

Hangzhou is a key transportation hub in east China. Hangzhou Xiaoshan International Airport is one of the top ten largest airports in mainland China and a top-100-airport of the world. In 2017, its passenger throughput increased 12.6% to rank 57th globally and its cargo and mail throughput increased 20.8% to rank 47th in the world. These growth rates were the second and the first respectively among the ten largest airports in mainland China. Hangzhou has more than 170 trains a day to Shanghai, connecting Shanghai with Maritime Silk Road gateway cities like Ningbo, Wenzhou, Fuzhou, and Xiamen (see Figure 12). In addition to East Hangzhou Station, Hangzhou has a new high-speed rail station, South Hangzhou Station, completed in 2017. Planning will likely soon start on West Hangzhou Station which should enhance access to the northern part of Zhejiang province.

Hangzhou invested heavily in development of the metro in recent years. Since 2012 when the first metro line opened, it has expanded rapidly to include three lines with a length of 117.6 kilometres by the end of 2017. Supported by the growing metro network, urban development spilled over from the mature development area, the traditional city center and Qianjiang New Town, to emerging neighborhoods including Qianjiang Century Town, the Future Science and Technology City, the East Hangzhou Station Business District, the North Canal City and Xiasha High Tech City. These emerging areas are seeing rapid commercial and residential development, which will further expand to potential development area in the outskirts of the city, especially across the Qiantang River in the next three years before the Asian Games 2022 (see Figure 13).
Hangzhou’s Development Goal 1: to optimise innovation ecosystem to support start-ups

Looking forward, innovation will still be one of the major engines for Hangzhou’s economic growth. To enhance the city’s capability of innovation, Hangzhou’s Thirteenth Five-year Plan proposed supportive strategies to facilitate development of innovation and entrepreneurship carriers, cultivation of innovative talents and optimization of innovation ecosystem (see Table 1). Hangzhou will implement a series of talent plans and accelerates the development of the Lakeside University and the West Lake University to cultivate talents, and promote services to better support start-ups and reduce their cost (see Table 2). With the implementation of these strategies, Hangzhou will achieve its goal of becoming an “internet+” innovation hub with global influence.

Table 1: Talent Plan Set by Hangzhou’s Thirteenth Five-year Plan

<table>
<thead>
<tr>
<th>Items</th>
<th>Goals</th>
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<tbody>
<tr>
<td>“521” talent plan</td>
<td>Import 20 innovation teams and over 100 top-tier professionals or entrepreneurs from overseas</td>
</tr>
<tr>
<td>Westlake “double stars” talent plan</td>
<td>Import or cultivate 30 top-tier talents for innovation and entrepreneurship</td>
</tr>
<tr>
<td>leading innovation teams development program</td>
<td>Import or cultivate 30 leading teams for innovation and entrepreneurship</td>
</tr>
<tr>
<td>IT talent development program</td>
<td>Cultivate 10 leading teams and 100 top-tier professionals in information technology industry</td>
</tr>
<tr>
<td>Cross-border ecommerce talent development program</td>
<td>Cultivate teams of cross-border ecommerce talent with at least 30 top-tier experts and professionals with diverse backgrounds</td>
</tr>
<tr>
<td>Qianjiang Financial Harbour talent plan</td>
<td>Import 300 top-tier finance professionals from overseas, and import or cultivate 5,000 finance professionals with interdisciplinary backgrounds</td>
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Table 2: Innovation Action Plan Set by Hangzhou’s Thirteenth Five-Year Plan

<table>
<thead>
<tr>
<th>Actions</th>
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<tbody>
<tr>
<td>Action to accelerate the development of start-up carriers</td>
<td>Establish more than 100 start-up carriers and 500 incubators, with a total office GFA of 28 million sq m (301 million sq ft)</td>
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<tr>
<td>Action to guide entrepreneurs</td>
<td>Create college with more than 2,000 mentors to coach entrepreneurs by 2020</td>
</tr>
<tr>
<td>Action to encourage entrepreneurship</td>
<td>Hangzhou should have more than 300,000 tech entrepreneurs and 2 million SMEs by 2020</td>
</tr>
<tr>
<td>Action to promote services for start-ups</td>
<td>By 2020, Hangzhou should have 1,500 service providers and 50 service planforms for start-ups, and provide free internet access to start-ups</td>
</tr>
<tr>
<td>Action to provide financial support to start-ups</td>
<td>Establish various types of guiding funds with a total amount of RMB4 billion (USD606 million). The private and venture capital invested in SMEs should exceed RMB200 billion (USD30 billion)</td>
</tr>
<tr>
<td>Action to branding start-ups</td>
<td>Host high-level innovation and entrepreneurship competition, and build Hangzhou roadshow center</td>
</tr>
<tr>
<td>Action to protect Intellectual property rights</td>
<td>Promote the use of intellectual property rights and devote great efforts to protecting intellectual property rights. Accelerate the establishment of pro-bono legal centers for the protection of intellectual property rights</td>
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Source: Hangzhou’s Thirteenth Five-year Plan
Hangzhou’s Development Goal 2: to elevate Hangzhou’s status as a gateway city and extend metro services to the entire metropolitan area

Taking the Asian Games 2022 as an opportunity, Hangzhou will promote its status as an international gateway city and regional transportation hub (see Figure 14). Accordingly, the constructions of key infrastructure, including West Hangzhou Station and the fourth terminal of Xiaoshan International Airport, are scheduled to strengthen Hangzhou’s connection with the world and upgrade its ability to serve the south side of the YRD. Hangzhou is planning on expanding its metro system. According to the Five-Year Action Plan of Metro Development, 364 kilometres of metro line are scheduled to be completed before the Asian Games 2022, expanding Hangzhou’s metro network to 10 metro lines and two intercity express lines with a total track length of 446 kilometres (see Figure 15). In the meantime, Hangzhou plans to mitigate traffic congestions, increase the coverage of bus services, and apply the second edition of the urban data brain system to improve road traffic conditions.
Hangzhou’s Development Goal 3: to establish an urban spatial structure with two centres and multi hubs

Hangzhou’s Thirteenth Five-year Plan of Skyscraper Economy proposed the future urban spatial structure with two main centres, seven sub-centres and multiple hubs. The two main centres are the traditional city centre by West Lake and a new centre consisting of Qianjiang New City and Qianjiang Century City.

The traditional city centre is positioned as a recreational business district exhibiting Hangzhou’s image as both a historical and cultural hub and international, modern city. It accommodates industries like commercial trade, tourism, cultural and entertainment activities.

The new city centre is focused on political and economic activities and the core of the Qiantang financial zone. As one part of it, Qianjiang New City will be a high-end business service centre combining functions like administration, commerce, finance, exhibition, cultural tourism and living, and the other part of it, Qianjiang Century City, will attract modern service industries and accommodate headquarters of large local or international enterprises, regional branches of multinational companies, financial and insurance institutions, conferences & exhibitions, and modern logistics and consulting intermediaries to create a CBD with distinctive features of headquarter economy and financial & trading activities.

The seven sub-centres include Jiangnan, Xiasha, Great Jiangdong, Innovation City, North City and Fuyang (see Figure 16). These are the future development hotspots that attract population and industries from mature development areas of Hangzhou to relieve the pressure on city centres.

Figure 16: Urban Spatial Structure by Thirteenth Five-year Plan of Hangzhou’s Skyscraper Economy

Source: Hangzhou’s Thirteenth Five-year Plan of Skyscraper Economy
Buoyed by sound economic fundamentals, especially the rapid growth of services sector, Hangzhou’s prime office market stays healthy with the overall vacancy rate of 14.6% in H1 2018, down 9.9 percentage points YOY and 3.1 percentage points HOH. Leasing demand from the finance, TMT, real estate and professional services sectors remains robust. Since 2017, flexible workspace operators have become another key driver of Hangzhou’s office market. This is partly due to the occupier strategy from the TMT sector, which appreciates the flexibility offered. The local government’s support for innovative entrepreneurship should support the development of the flexible workspaces market.

There are four submarkets in Hangzhou’s prime office market, namely Huanglong, Wulin, Qinchun and Qianjiang New City. The first three are the most established areas with limited future supply. As a newly developed submarket, Qianjiang New City’s stock accounts for half of the city’s total stock (see Figure 17).

The financial service sector is a key demand driver, added value has a positive correlation coefficient of 0.83 with the net absorption of prime office spaces. Between 2014 and 1H18, the financial service industry accounted for 43% of total leased area, followed by TMT (16%), real estate (11%) and flexible workspace operators (10%) (see Figure 18).
OFFICE SECTOR

Information technology industry and cultural and creative industry have become the most important industries in Hangzhou in 2017, contributing 50% of the city’s total GDP and 79% of the services sector outputs. As a result, they are the key drivers to Hangzhou’s office leasing market. Notably, the leasing transactions of flexible workspaces represented only 1% of total leased area between 2014 and 2016 and saw a significant expansion in 2017 with its aggregated leased area accounting for 10% of the total leased area between 2014 and 2017.

Real estate industry is also a key driver to Hangzhou’s office leasing market, whose leasing transactions represented 11% of the total, right after TMT.

An aggregate of 730,000 sq m (7.9 million sq ft) of new supply will be added to the market between 2018 and 2022. Supported by healthy demand, the vacancy rate will drop gradually from 14.6% in H1 2018 to around 9.4% by 2022 (see Figure 19). Given the sustained new supply in Qianjiang New City, landlords will face higher leasing pressure from the competitions of nearby areas. As a result, the bargaining power of tenants will be enhanced notably. Leasing incentives such as the increase of the rent-free or fit-out periods will be offered while the face rent will not be reduced remarkably.

In terms of rental performance, despite the sustained new supplies during the next five years, landlords are confident about the leasing market, given Hangzhou’s sound economic fundamentals and the steady growth of technology and cultural & creative industries in recent years. As a result, the average rent should continue to rise at a compound annual growth rate of 4.8% between 2018 and 2022 (see Figure 20).
BUSINESS PARK SECTOR

In 2017, the IT industry and the cultural and creative industries are the most important pillars in Hangzhou’s modern services industry, contributing 50% of the city’s total GDP, with the annual growth rates as high as 22% and 19% respectively. The flourishing of the IT and cultural and creative industries will boost the establishment of the R&D centres in e-commerce, big data, mobile internet and AI industries, which will effectively prop up the leasing demand in Hangzhou’s business park market. With the development of Future Science City and West Hangzhou Railway Station and the improvement of the metro, Hangzhou’s business park market will extend westwards and the western areas will house a large quantity of supply.

There are five submarkets in Hangzhou’s business park market, namely Gongshu, Hangzhou Economic Development Area (HEDA), Hangzhou High-tech Zone (HHZ), West Lake and Future Science City. West Lake and Gongshu are the well-established areas, accounting for 30% of Hangzhou’s total business park market. West Lake and Gongshu are close to the city centre with limited supply coming online in the future. With the development of Future Science City, such area should become the largest submarket in Hangzhou (see Figure 21).

Gongshu is targeted at software outsourcing, e-commerce and the cultural and creative industries, with anchor tenants such as Jindong Financial Research Centre and Pansafe. HEDA is characterized by telecommunication, biomedicine, mechanical manufacturing and the food beverage industries, with anchor tenants including Motorola, Panasonic and Wahaha. The Yuhang district (including the Future Science City) focuses on electronic information, biomedicine and clean energy industries with typical companies including: Zhijiang Lab and Tongdun Technology. HHZ is aimed at e-commerce and internet information technology industries, and is home to Alibaba and HIK vision.
BUSINESS PARK SECTOR

From the perspective of leasing demand, software and the cultural and creative industries are the key drivers to Hangzhou’s business park market, whose added values show a relatively higher correlation with the net absorption of business park spaces at 0.72 and 0.74 respectively. Additionally, Hangzhou’s R&D industry accounts for 3.2% of the city’s total GDP in 2017. The correlation coefficient between R&D expenditures and the net absorption of business park spaces is up to 0.87. By the end of 2017, the number of provincial R&D centres and technology industry incubators reached 835 and 113 respectively in Hangzhou with the CAGR of 32% and 18% respectively between 2014 and 2017. The expansion of the R&D centres should become a key driver of business park leasing demand.

Hangzhou’s local government is scheduled to enhance the opportunity for innovation by means of capacity building, capital injections and intellectual property rights protection. By the end of 2020, there should be more than 300,000 technical entrepreneurs and 20,000 small-sized technology companies in Hangzhou. We expect the boom of technology companies to prop up the continued demand for business park space.

In terms of rental performance, despite the sustained new supply between 2018 and 2019, the bargaining power of tenants with landlords will still be limited, given the strong fundamentals of technology industry. As a result, the average rent will rise steadily at approximately 3% per annum between 2018 and 2019 (see Figure 24). A total of about 1.83 million sq m (19.7 million sq ft) of new supply is scheduled to be launched in between H2 2018 and 2019. Of that figure, the HEDA and Future Science City areas will represent 76%. Buoyed by robust demand from the information technology, cultural and creative industries and R&D centres, the vacancy rate is likely to decrease from 15.5% in 2017 to 15% by end of 2019 (see Figure 23).
RETAIL SECTOR

Supported by sound economic fundamentals, Hangzhou’s retail property market continues to be healthy. Boosted by the large amount of newly launched projects, retailers’ leasing demand remains strong from the F&B, entertainment, casual luxury and fast fashion sectors. Most of the newly launched projects secure a higher occupancy rate of more than 95%. With the improvement of the metro, Hangzhou’s business boundaries have expanded from the traditional West Lake area to the Qiantangjiang area with the retail areas extending from the prime areas to the decentralized areas. Decentralized retail catchments such as Western city, Northern city, Xiasha and Jianggan should become a major source of supply in the next five years.

There are two prime areas (Wulin and Hubin) and six regional areas (Northern city, Western city, Qianjiang New City, Wushan, Xiasha and Binjiang) in Hangzhou’s retail property market. The combined stock of Northern city and Western city is the largest, accounting for about half of the city’s total stock. Nearly 80% of the new supply will be launched in the decentralized areas in the future, indicating a notable decentralized trend (see Figure 25).

Looking at what urban residents spent their money on, education, culture and entertainment saw a notable increase between 2013 and 2016, with a three-year cumulative growth rate of 30%. This was followed by food, tobacco and alcohol whose cumulative growth rate reached 25.4% during the same period (See Figure 16).

Underpinned by the solid retail sales, the education, entertainment and catering sectors continue to seek space to expand. Fast fashion retailers remain prudent towards expansion, as according to Hangzhou’s Statistics Bureau, the proportion of urban residents’ expenditures on clothing dropped from 6.9% in 2013 to 6.5% in 2016.
RETAIL SECTOR

Above all, Hangzhou’s consumption patterns and preferences have shifted from traditional commodity-type necessities to culture and education. On the back of mobile internet and technology, the "new retail" concept, which combines online retailing with offline stores, is evolving rapidly, and customers' acceptance of new retail modes such as Alibaba’s Fresh Hema and YH’s super species will be gradually enhanced. We expect shoppers’ experience and satisfaction to be enhanced, as well as retailers’ sales revenue, landlords’ rental income, and capital gains of investment properties when AI and big data, among other technologies, are successfully integrated into traditional shopping malls.

A total of nearly 1.9 million sq m (20.4 million sq ft) of new supply will be added to the market between H2 2018 and 2022. Of that figure, about 1.26 million sq m (13.6 million sq ft) of new launches are scheduled for H2 2018. As a result, the overall vacancy rate should rise from 2.3% in H1 2018 to 9.7% by end of 2018. From 2019 onwards, with the continued slowdown of new supply, customers’ increasing purchasing power and robust demand from retailers, the vacancy rate will likely post a downward trend to around 4% by 2022 (see Figure 27).

In terms of rental performance, given a large amount of new supply in decentralized areas in the second half of 2018, the average rent is likely to drop slightly from RMB15.4 (USD2.30) psm per day in H1 2018 to RMB15.1 (USD2.29) psm per day as at end of 2018. However, with the continued slowdown of new supply after 2018, the rental rate should start to grow gradually with a compound annual growth rate of 3.1% between 2019 and 2022 (see Figure 28).
LOGISTICS SECTOR

As the leader of China’s e-commerce industry, Hangzhou’s e-commerce industry has developed rapidly in recent 15 years. According to the China Electronic Commerce Centre, Hangzhou’s online retail sales hit RMB430.2 billion in 2017 with a CAGR of 29.6% from 2013-2017. This has pushed the third-party logistics industry to also develop rapidly. In 2017, the total volume of express service reached approximately 2.3 billion pieces with CAGR as high as 49.3% (2013-2017). In addition, Hangzhou’s Producer Price Index (PPI) has rebounded since 2016 and the prosperity index of manufacturing industry, a gauge to measure the development of manufacturing industry, started to rise in recent years.

Supported by the healthy fundamentals, the leasing demand from e-commerce, third-party logistics and manufacturing industries remained active in Hangzhou’s logistics property market. Despite the sustained new supply in H1 2018, robust demand quickly absorbed new projects and drove down the overall vacancy rate to merely 2% by end of H1 2018.

There are three submarkets in Hangzhou’s logistics property market, namely Yuhang, Jianggan and Xiaoshan. Prior to 2016, the supply of logistics properties was mainly clustered in Jianggan district, though between 2016 and 2017, a large amount of new supply came online in Xiaoshan and Yuhang districts. As of end of 1H18, Xiaoshan was the largest submarket in Hangzhou, accounting for 54% of the total stock, and the total stock of Jianggan will stabilise with limited new supply coming online (see Figure 29).
LOGISTICS SECTOR

From the perspective of leasing demand, the e-commerce and third-party logistics industries remain the two largest demand drivers. The correlation of logistics net absorption with online retail sales and express service volume reached high at 0.83 and 0.85 respectively. With the integration of omnichannel retailing in brick-and-mortar commercial developments, online consumption will continue to develop, facilitating the development of e-commerce and third-party logistics industries. As a result, sustained leasing demand will be generated for warehouse spaces. Additionally, the recovery of manufacturing industries has also played a key role in the increased leasing demand. The correlation of warehouse’s net absorption with the Producer Price Index (PPI) is highly related at 0.96.

A total of 562,000 sq m (6 million sq ft) of new supply is scheduled to be launched between H2 2018 and 2019. Driven by the flourishing e-commerce, third-party logistics and manufacturing industries, leasing demand will continue to remain strong, and will quickly absorb out the new supply. As a result, the market risk for property developers will be reduced significantly, and the vacancy rate will likely remain at 2% by 2019 (see Figure 31). In terms of the breakdown of future supply, Xiaoshan and Yuhang districts will become the two largest sources of supply.

In terms of rental performance, the average rent of Hangzhou’s logistics properties grew steadily at a CAGR of 3.4% p.a. between 2007 and 2016. In 2017, the rental rate decreased slightly to RMB1.0 (USD0.15) psm per day due to the new launches in Yuhang district. The average rent in the area was below the city average, and as a result, the city-wide average rent was driven down. Despite the sustained new supply between H2 2018 and 2019, the rental rate should continue to rise during the period. We predict the rental growth rate should hold at 4%-5% bolstered by the solid demand (see Figure 32).
PREDICTIONS

As a leading city in the southern area of the YRD Region, Hangzhou will play an important role in the development of the region and the enhancement of the YRD’s global presence, capitalising on its strategic position as China’s leading e-commerce centre and a pioneer in the innovation-driven technology sector. The integration of the YRD region will exert a significant impact on Hangzhou’s commercial and logistics property market.

Office and business parks:

- Buoyed by sound economic fundamentals, especially from the services sector, office leasing demand from the finance, TMT, real estate and professional services sectors will remain robust.
- Supported by healthy demand, office vacancy rates in Hangzhou will drop by about 5 pps from 2018 to 9.4% by 2022, while average rent should continue to rise at a compound annual growth rate of 4.8% over the same time span.
- For business parks, leasing demand from software and cultural and creative industries is the key driver. By the end of 2020, more than 300,000 technical entrepreneurs and 20,000 small-sized technology companies will be established in Hangzhou.
- The average business park rent in Hangzhou will rise steadily at 3% per year between 2018 and 2019, while the vacancy rate will decline from 15.5% to 15.0%.

Retail space:

- Hangzhou retailers’ leasing demand remains strong, as evidenced by a 95% occupancy rate for most of the newly launched projects.
- Apart from the traditional F&B, entertainment, casual luxury and fast fashion sectors, retail space is also taken up by new retail modes such as self-service stores, as consumption patterns and preferences have shifted and adapted more to mobile internet and technology.
- With increasing purchasing power and robust demand from retailers, overall vacancy rate should decrease from 9.7% at 2018 year-end to 4.0% by 2022. For rents, with the continued slowdown of new supply after 2018, the rental rate should grow gradually at a compound annual growth rate of 3.1% between 2019 and 2022.

Logistics and warehouse:

- As the leader of China’s e-commerce industry, Hangzhou’s online retail sales hit RMB430.2 billion in 2017 with a CAGR of 29.6% from 2013-2017. This has also pushed the third-party logistics industry to develop rapidly.
- With the integration of omnichannel retailing in brick-and-mortar commercial developments, online consumption will continue to develop, facilitating the development of e-commerce and third-party logistics industries.
- Despite a total of 562,000 sq m of new supply that is scheduled to be launched between H2 2018 and 2019, strong demand from e-commerce, third-party logistics and manufacturing industries, should quickly absorb the new space. As a result, the vacancy rate will likely remain at 2.0% by 2019, while rents will see a 4%-5% growth over the same time span.
APPENDIX-Major Indicators for Urban Competitive Forces Analysis

I. Economic dynamics

- Population (‘000 people)
  - Suzhou: 10,580
  - Hangzhou: 9,470
  - Nanjing: 8,340
  - Hefei: 7,070

- GDP (RMB billion)
  - Suzhou: 1,731.0
  - Hangzhou: 1,255.6
  - Nanjing: 1,171.5
  - Hefei: 721.9

- Per capita GDP (RMB '000)
  - Suzhou: 160
  - Nanjing: 141
  - Hangzhou: 135
  - Hefei: 91

- CAGR of tertiary industry
  - Hangzhou: 15%
  - Hefei: 14%
  - Suzhou: 13%
  - Nanjing: 12%

- Tertiary output as a % of GDP
  - Hangzhou: 53%
  - Nanjing: 60%
  - Suzhou: 59%
  - Hefei: 46%

- Fixed assets investment (RMB billion)
  - Hefei: 635.1
  - Nanjing: 621.5
  - Hangzhou: 585.7
  - Suzhou: 560.0

- Real estate investment (RMB billion)
  - Hangzhou: 273.4
  - Nanjing: 228.8
  - Hefei: 155.7

- Total retail sales (RMB billion)
  - Nanjing: 560.5
  - Suzhou: 543.0
  - Hangzhou: 517.6
  - Hefei: 272.9

II. Openness

- Total trade volume (USD billion)
  - Suzhou: 329.2
  - Hangzhou: 109.7
  - Nanjing: 61.2
  - Hefei: 25

- Actual utilized FDI (USD billion)
  - Hangzhou: 66
  - Suzhou: 61
  - Nanjing: 37
  - Hefei: 30

- Contracted utilized FDI (USD billion)
  - Hangzhou: 15
  - Suzhou: 9
  - Nanjing: 6
  - Hefei: 3

Legend:
- Services
- Cross-border e-commerce
- Cargo
III. Creativity

- **R&D expenditure as a % of GDP**
  - Hangzhou: 3.2%
  - Hefei: 3.15%
  - Nanjing: 3.05%
  - Suzhou: 2.82%

- **# of invention patent in 10,000 people**
  - Hangzhou: 46.3
  - Suzhou: 45.5
  - Nanjing: 40.6
  - Hefei: 21.6

- **Hi-tech industry output as % of industrial outputs**
  - Hangzhou: 50.1%
  - Suzhou: 47.8%
  - Nanjing: 45.9%
  - Hefei: 42.7%

IV. Talent

- **# of colleges and universities**
  - Nanjing: 53
  - Hefei: 50
  - Hangzhou: 39
  - Suzhou: 26

- **Education expenditure (RMB billion)**
  - Suzhou: 26.2
  - Hangzhou: 25.3
  - Nanjing: 21.8
  - Hefei: 11.8

- **Education expenditure as a % of GDP**
  - Hangzhou: 2.0%
  - Nanjing: 1.9%
  - Hefei: 1.6%
  - Suzhou: 1.5%
## V. Quality of life

### Metro lines in operation

<table>
<thead>
<tr>
<th>City</th>
<th>Metro Lines</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nanjing</td>
<td>0</td>
</tr>
<tr>
<td>Hangzhou</td>
<td>3</td>
</tr>
<tr>
<td>Suzhou</td>
<td>4</td>
</tr>
<tr>
<td>Hefei</td>
<td>2</td>
</tr>
</tbody>
</table>

### Home price to household income

<table>
<thead>
<tr>
<th>City</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suzhou</td>
<td>11.50x</td>
</tr>
<tr>
<td>Hefei</td>
<td>12.21x</td>
</tr>
<tr>
<td>Nanjing</td>
<td>14.5x</td>
</tr>
<tr>
<td>Hangzhou</td>
<td>14.05x</td>
</tr>
</tbody>
</table>

### Per capita disposable income (RMB)

<table>
<thead>
<tr>
<th>City</th>
<th>Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suzhou</td>
<td>50,050</td>
</tr>
<tr>
<td>Hangzhou</td>
<td>49,032</td>
</tr>
<tr>
<td>Nanjing</td>
<td>48,104</td>
</tr>
<tr>
<td>Hefei</td>
<td>31,850</td>
</tr>
</tbody>
</table>

### Per capital consumption expenditure (RMB)

<table>
<thead>
<tr>
<th>City</th>
<th>Expenditure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suzhou</td>
<td>25,104</td>
</tr>
<tr>
<td>Hangzhou</td>
<td>24,146</td>
</tr>
<tr>
<td>Nanjing</td>
<td>29,470</td>
</tr>
<tr>
<td>Hefei</td>
<td>19,693</td>
</tr>
</tbody>
</table>

### Subsidized housing supply (13th five year, sq m)

<table>
<thead>
<tr>
<th>City</th>
<th>Supply</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suzhou</td>
<td>2,037</td>
</tr>
<tr>
<td>Hangzhou</td>
<td>2,137</td>
</tr>
<tr>
<td>Nanjing</td>
<td>1,502</td>
</tr>
<tr>
<td>Hefei</td>
<td>1,500</td>
</tr>
</tbody>
</table>

### Average propensity to consume

<table>
<thead>
<tr>
<th>City</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suzhou</td>
<td>70%</td>
</tr>
<tr>
<td>Hangzhou</td>
<td>69%</td>
</tr>
<tr>
<td>Hefei</td>
<td>62%</td>
</tr>
<tr>
<td>Nanjing</td>
<td>59%</td>
</tr>
</tbody>
</table>
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