

THE EMERGENCE OF ASIAN SUPERTALLS

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Executive summary

The development of tall office buildings in Asia began relatively recently at the end of the 20th century. However, the pace of construction has been so rapid that by June 2014, the region was home to 55% of the total number of tall office buildings globally.

Within Asia, a high density of tall buildings is viewed as being synonymous with being a successful financial hub. It is widely believed that constructing supertall office buildings can enhance the competitiveness of a city's business environment. Authorities in a number of markets have pursued this strategy as a means to establish their city as a financial centre or to reposition their economies. This "build and they will come" approach has been adopted in several emerging financial markets across the region.

In Asia, occupiers are opting to lease space in supertall office buildings primarily because of the benefits afforded by their positive image and branding, building quality and prime location. These key differentiators enable supertall office buildings to command a rental premium over other Grade A office buildings in the same submarket/market after the first rent review cycle. This rental premium can be as much as 10 - 40% above the average Grade A rent in the same submarket. Rents in supertall office buildings also vary significantly between the upper and lower zones.

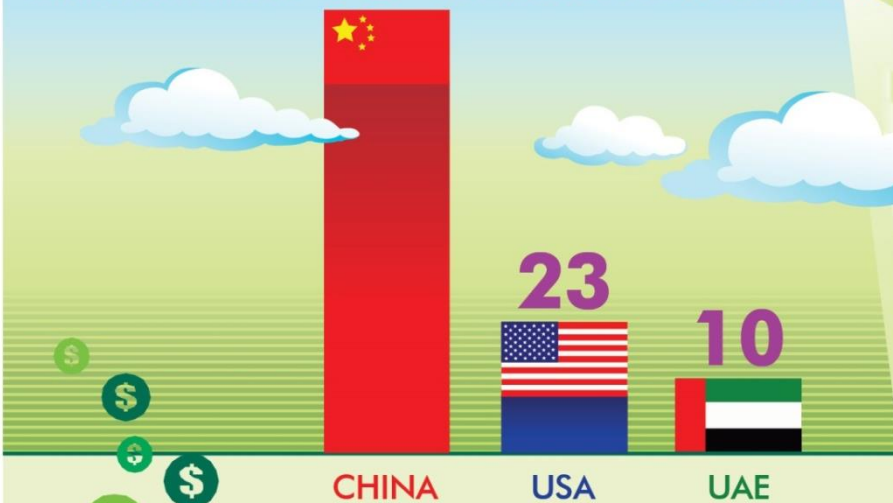
Occupiers in the financial services sector are the key tenants in supertall office buildings across the region, accounting for around 55% of total occupied space. Business services and legal firms are the other major users, accounting for 16% of total occupied space.

The development pipeline of tall office buildings in emerging markets in Asia is significant. Several tier II cities in China account for almost 47% of the total new supply of tall office buildings set to be completed worldwide within the next five years. This is leading to growing concern of oversupply in a number of markets.

The "build and they will come" strategy adopted by many emerging financial centres in Asia in recent years has been largely unsuccessful. The reality is that there are far more important success factors required than the mere construction of supertall office buildings for a city to successfully establish itself as a regional or global financial centre. These factors include the business environment, legal and tax systems, market transparency, political stability, government efficiency, transport and telecommunications infrastructure, capital flows, human capital and reputational factors such as innovation.

THE EMERGENCE OF ASIAN SUPERTALLS

CHINA WILL HAVE **154** SUPERTALL OFFICE BUILDINGS BY 2018



Supertall office buildings command **10-40%** rental premiums

The maximum rental difference between upper and lower zones: **50-100%**

OCCUPIERS OF SUPERTALL OFFICE BUILDINGS



*Business Services includes Accounting, Consulting and Legal.

KEY BENEFITS TO TENANTS



Prestige



Building Quality



Prime Location

Source: CBRE Research, Council on Tall Buildings and Urban Habitat (CTBUH), June 2014.

Introduction

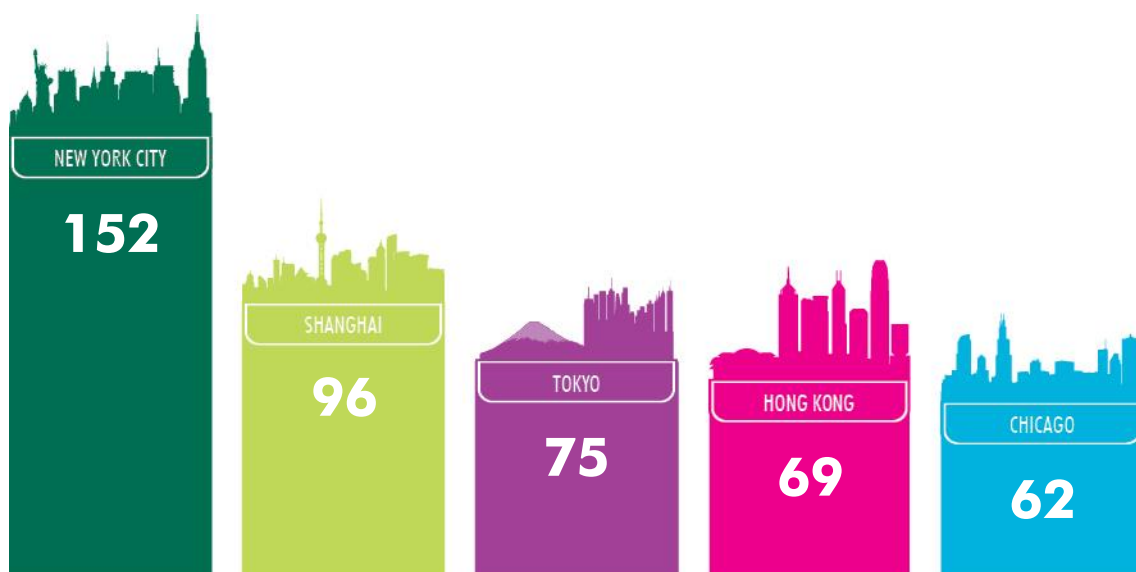
The creation of financial centres has traditionally underpinned the development of tall buildings in major cities worldwide. Prior to the advent of computers and the adoption of the internet, there was a strong need for accounting, auditing, consultancy and law firms to be in close proximity to each other in order to service key clients such as large financial institutions and major corporations in other industries. As the financial sector expanded, the size of supporting industries increased in proportion.

This led to rapid growth in demand for office space and stimulated the expansion of Central Business Districts (CBDs), vertically and/or horizontally. The adoption of the safety elevator and advent of steel frame construction facilitated the vertical development of office space to accommodate growing demand. Examples of vertical expansion include New York, which is home to the largest number of tall office buildings in the world. Examples of horizontal expansion include London, which has very few tall office buildings but large CBDs spread across the city.

Increasing demand for CBD space combined with the gradual rise in construction costs resulted in higher rents, which only predominantly financial sector tenants were able to afford. This meant that supporting industries had to move out and locate themselves some distance from the clients they served. Financial sector occupiers therefore came to dominate CBDs and financial hubs began to emerge.

The pattern of vertical development is best illustrated by the Manhattan borough of New York City which has been the leading global financial centre since the 1920s. Over the past century, the skyline of the Midtown and Downtown areas has evolved with the completion of numerous tall office buildings (see appendix for definition of tall and supertall buildings) housing large financial institutions and major corporations. New York City continues to have the highest number of tall office buildings in the world followed by Shanghai, Tokyo, Hong Kong and Chicago. With the exception of Shanghai, all of these cities are traditional financial centres.

Chart 1: Cities with the largest number of tall office buildings (+150 meters)

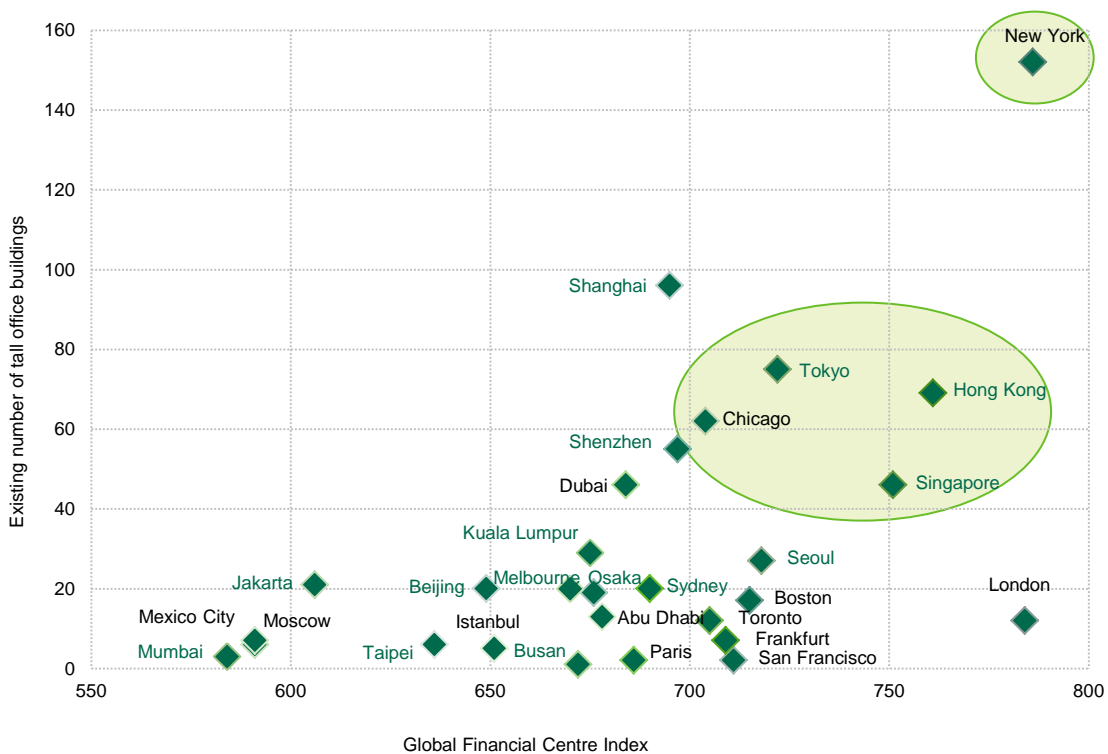


Source: CBRE Research, Council on Tall Buildings and Urban Habitat (CTBUH), June 2014.

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New York, London, Hong Kong, Singapore and Tokyo all rank highly on the Global Financial Centres Index (GFCI)¹, a ranking of the competitiveness of global financial centres. Three out of the top six cities are in Asia, and all these cities have a large number of tall office buildings. The high profile of these cities has created the perception within the region that mature global financial centres are comprised of tall building clusters. Within Asia, a high density of tall buildings is viewed as being synonymous with being a successful financial hub. Authorities in a number of cities across the region are attempting to play catch-up and are seeking to mimic the success of the likes of New York, Hong Kong and Singapore by adopting a “build and they will come” strategy of constructing tall office buildings with high specifications to attract financial sector companies as a means to establish their city as a regional financial centre.

Chart 2: Global financial centres and their number of tall office buildings



Source: CBRE Research, CTBUH, Z/Yen Group, June 2014.



Within Asia, a high density of tall buildings is viewed as being synonymous with being a successful financial hub.

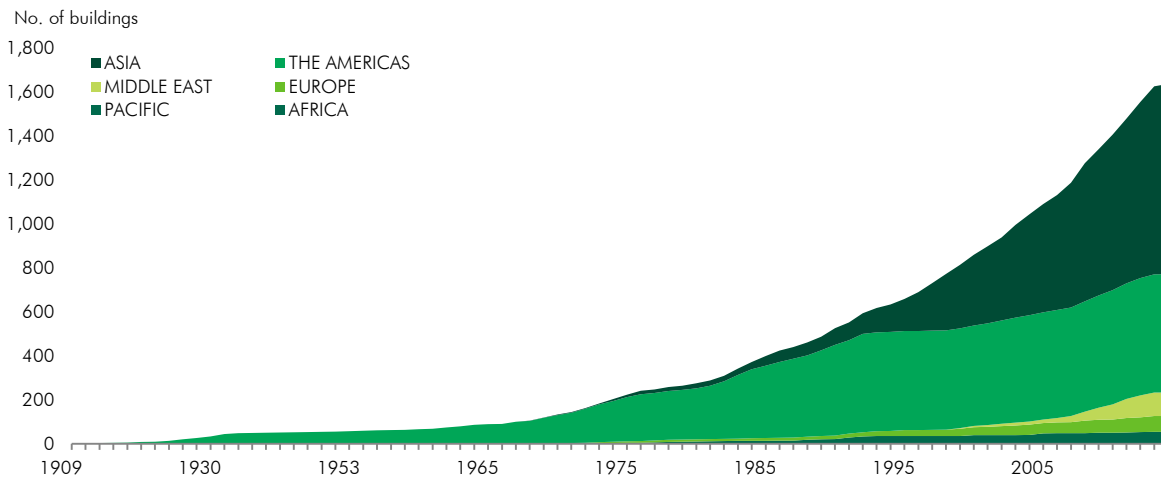
¹The Global Financial Centres Index is a ranking of the competitiveness of 83 financial centres based on over 25,000 financial centre assessments from an online questionnaire together with a total of 103 instrumental factors from organizations such as the World Bank, Economist Intelligence Unit and the United Nations. Ratings in the GFCI 15 range from 423 (Athens) to 786 (New York).

The emergence of Asia as a hub for tall office buildings

The development of tall office buildings in Asia began relatively recently at the end of the 20th century. Construction accelerated dramatically in the early 2000s, with completions growing at an average of 40 new tall office buildings per year. In comparison, the United States currently sees the completion of an average of six new tall office buildings per year. The current rate of growth in Asia is faster than it was in the United States in the early 1990s, when a construction boom resulted in the completion of an average of 20 new tall office buildings per year. As of June 2014, Asia is home to 55% of the total number of tall office buildings globally.

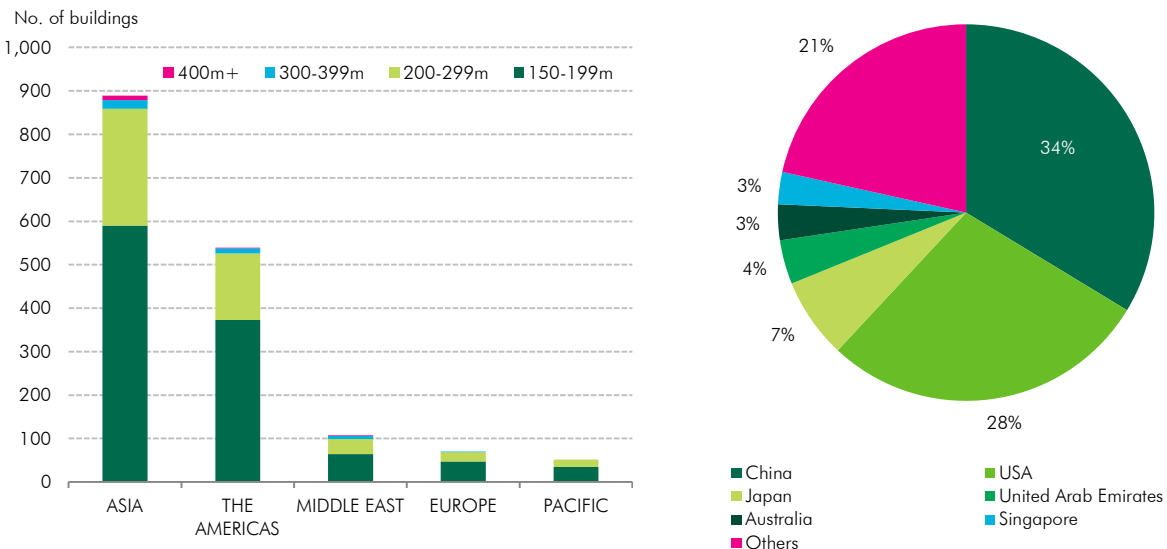
The number, height and pace of construction of skyscrapers is often regarded as a barometer of business and economic prosperity. Indeed, Asia, particularly China, has driven world economic growth over the past ten years. On a country level, China accounts for around one-third of existing tall office buildings worldwide.

Chart 3: History of the construction of tall buildings



Source: CBRE Research, CTBUH, June 2014.

Chart 4: Global distribution of tall office buildings by region and country



Source: CBRE Research, CTBUH, June 2014.

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In recent years, governments in number of countries in Asia have thrown their weight behind the construction of supertall office buildings, defined as a building with a height of over 300 meters. Supertall office buildings are viewed by authorities as a means to enhance the competitiveness of their business environment so their city can establish itself as a financial centre. Shanghai World Finance Centre and Guangzhou IFC were all constructed in accordance with this strategy.

In other countries, the impact of globalisation and the relocation of manufacturing operations to cheaper markets have prompted authorities to reposition their economies and develop the financial sector. The construction of supertall office buildings has been a key component of this strategy. For example, Taipei 101 was constructed as part of a move to grow the financial industry in Taiwan. In Kuala Lumpur, the Petronas Tower was built in accordance with the government's wish to reduce Malaysia's dependence on the oil and gas industry and develop its financial sector. Elsewhere, the Burj Khalifa – the tallest building in the world – was built as part of a United Arab Emirates' government plan to gain more international recognition for Dubai and help support the growth of the country's services sector and reduce its reliance on the oil industry.

Chart 5: Cities with the largest number of supertall office buildings (+300 meters)



Source: CBRE Research, CTBUH, June 2014.

Steps to success: Leverage strong relationships

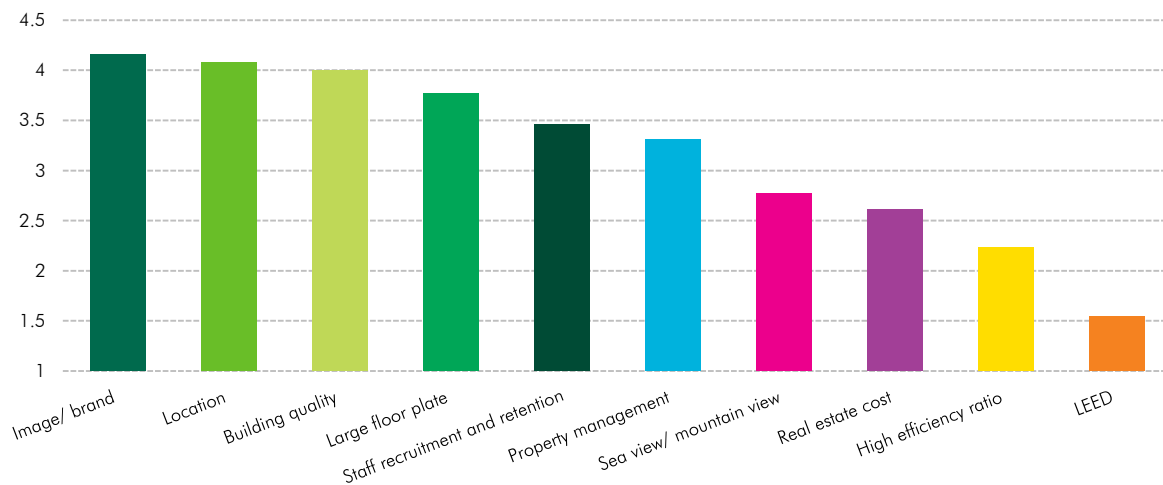
Supertall office buildings in Asia tend to be constructed when local governments in emerging Asian markets adopt a strategy of establishing their city as a financial centre. Developers that win the land tenders for these buildings are invariably either affiliated with local authorities or have a close pre-existing relationship. **Guangzhou IFC** was primarily developed by Yue Xiu Properties, a company which was established by the Guangzhou government to pursue economic and trade development opportunities in Hong Kong. **Shenzhen KK 100** was constructed by Kingkey Real Estate Development Company Limited. Kingkey is a private company but its founder is a high profile member of various civil service organisations such as the Chinese People's Political Consultative Conference (CPPCC) and the Guangdong Political Consultative Conference.

That said, the challenges and complexity involved in constructing a supertall office building often necessitate the participation of a more experienced partner from overseas. **China World Tower 3** in Beijing was constructed by a joint venture formed by the Chinese Ministry of Foreign Trade & Economic Cooperation (MoFTEC) and Hong Kong based Kerry Properties Limited, founded by Malaysian Robert Kuok. **Shanghai World Financial Center** was developed by Japanese based Mori Building Company and constructed by the Shanghai State Construction Group, which is currently developing the Shanghai Tower, a new supertall office building in the same city.

Key drivers of leasing office space in supertalls in Asia

CBRE Research recently conducted a survey of CBRE office leasing agents in key markets around the region asking them to rank the various criteria influencing a company’s decision to lease space in a supertall office building.

Chart 6: Factors influencing tenant selection of space in supertall office buildings



Note: 14 of 29 supertall office buildings in Asia were included in the survey
Based on the opinion of CBRE office brokers directly involved in the leasing of space in supertall office buildings
Each factor is independent and maximum score for each factor is 5

Source: CBRE Research, CTBUH, June 2014.

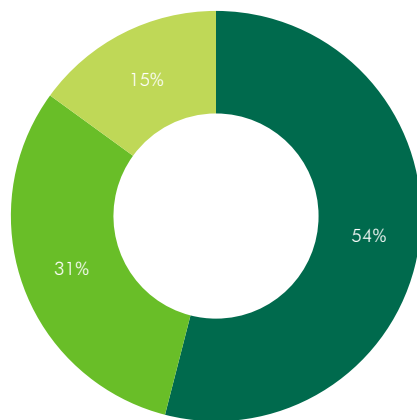
The **positive image and branding** associated with supertall office buildings is often cited by tenants as a key reason behind their leasing decision. The high profile, prestige and visibility of supertall office buildings means occupiers frequently use them as a marketing tool to boost their corporate image and branding.

The **building quality** of supertall office buildings is very high. Planning, designing, constructing and operating a supertall office building is very demanding and must overcome numerous challenges including wind and earthquake resistance, fire separation and elevator connectivity. The standard and quality of power back-up, air-conditioning and water supply systems are generally of a much higher standard than in other Grade A office buildings.

Most supertall office buildings are **very well located** in prime districts or newly developed CBDs. These locations boast high standards of infrastructure and connectivity to transportation networks and other major downtown areas. This is particularly true in a number of major cities in China where local authorities are supporting the creation of new CBDs as means of city redevelopment and infrastructure investment.

Large floorplates are another feature of supertall office buildings. Multinational tenants – particularly those in the financial sector – generally prefer large floorplates.

Chart 7: Distribution of supertall office buildings in Asia



■ CBD ■ New CBD ■ Alternatives

Source: CBRE Research, CTBUH, June 2014.

Many supertall office buildings are mixed-use and include other components in addition to office space. This creates an efficient and integrated vertical community. Tenants of supertall buildings can utilise retail, hospitality and other services within the same building. For example, the Shanghai World Finance Center includes office facilities, the fifteen-floor Park Hyatt hotel, 25 restaurants and three floors of shopping facilities. For occupiers, the ability to offer a range of facilities to their clients and staff is a major draw.

Why do tenants occupy space in supertall office buildings?



Taipei 101

“ Supertall office buildings can improve tenants’ recruitment and retention of staff. Potential employees believe it will be a comfortable and prestigious working location ”



Shanghai World Financial Center

“ Supertall office buildings provide tenants with spectacular views of surrounding areas such as mountains, harbours and cityscapes ”



Kingkey 100

“ The property management of supertall office buildings is performed to a very high standard, particularly maintenance, security and upgrading ”

Steps to success: Enriching the occupier experience

In recent years developers have sought to create vertical communities in supertall office buildings. They have done this by integrating work areas with retail, hospitality, residential and leisure facilities in order to enrich the experience of occupiers and other users, with the ultimate aim of enhancing the image and prestige of the building.

These components can include:

Luxury hotels – Guangzhou IFC, Shanghai World Financial Center and KK 100 all have five-star hotels on their top floors.

Executive Clubs – Occupiers can use executive clubs to host/entertain senior staff and clients.

Observation floors – HK ICC, KK100 and Taipei 101 all have observation decks on high floors with public access. Guangzhou IFC has an observation wheel installed on the top floor.

Fireworks, lights and music shows – Taipei 101, HK ICC and KK100 let off firework displays and light and music shows, particularly during major festivals.

Filming locations – The high profile and iconic look of supertall office buildings means they are often featured in major movies.

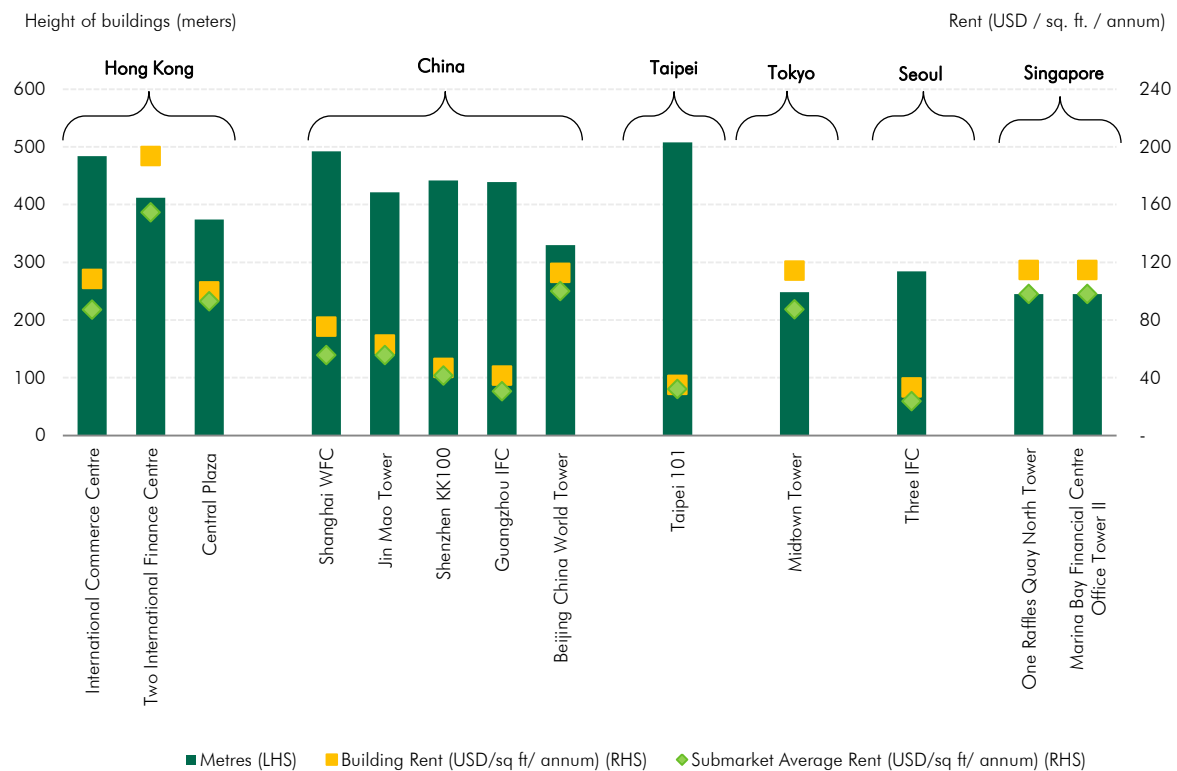


Do supertall office buildings command a rental premium?

The completion of supertall office buildings sometimes initially results in a slight market supply imbalance. However, the key differentiators identified above enable supertall office buildings to command a rental premium over other Grade A office buildings in the same submarket/market after the first rent review cycle. This rental premium is between 10 - 40% above the average Grade A rent in the same submarket. However, the key differentiators of supertall office buildings vary by market, meaning that the rental premium can also vary. For example, rents in Taipei 101 are only 5-10% higher than in other Grade A buildings in the Xinyi CBD in Taipei. In Shanghai, however, the Shanghai World Finance Centre commands an average rental premium of over 30% compared to other Grade A office buildings in the Pudong submarket where it is located.

Rents in supertall office buildings also vary significantly between the upper and lower zones. CBRE Research data indicates that this rental differential is usually between 50-100%. This is partly explained by the fact that large occupiers or anchor tenants are frequently offered reduced rents to fill in vacant space on lower floors during the pre-leasing stage, whilst upper floors are reserved for tenants willing to pay higher rents for the most prestigious space in the building.

Chart 8: Rental differential between supertall office buildings and their submarkets



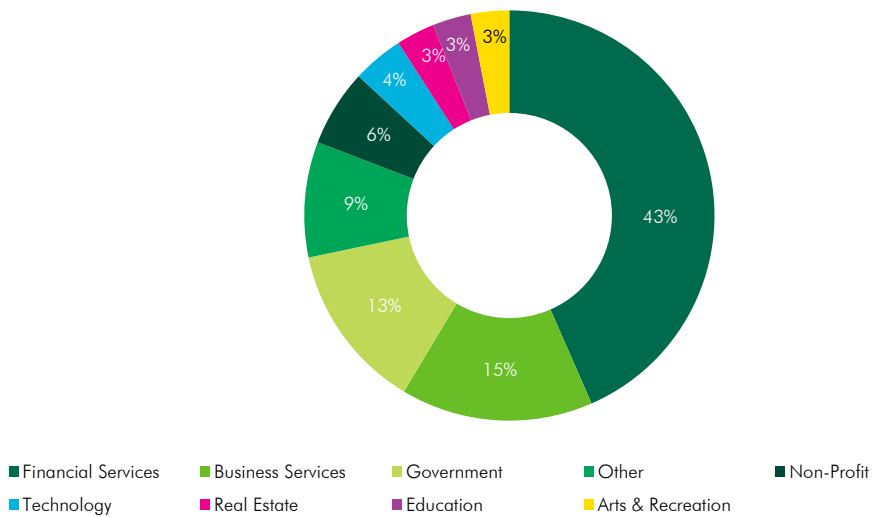
Source: CBRE Research, June 2014.

The tenant mix of supertall office buildings

As mentioned previously, authorities in number of cities in Asia are supporting the construction of supertall office buildings as they believe it will help them establish their market as a financial centre. One straightforward way to assess whether this objective has been achieved is to look at the tenant mix of supertall office buildings.

The Downtown district of Manhattan - home to Wall Street – is regarded as one of the world’s leading financial centres. In this market, tenants in the financial services, business services and legal sectors occupy the bulk of space, accounting for 58% of total tenants. Occupiers in the real estate and Technology, Media and Telecommunications (TMT) sectors are also increasing their footprint in the area.

Chart 9: Tenant mix of office buildings in Downtown Manhattan, New York



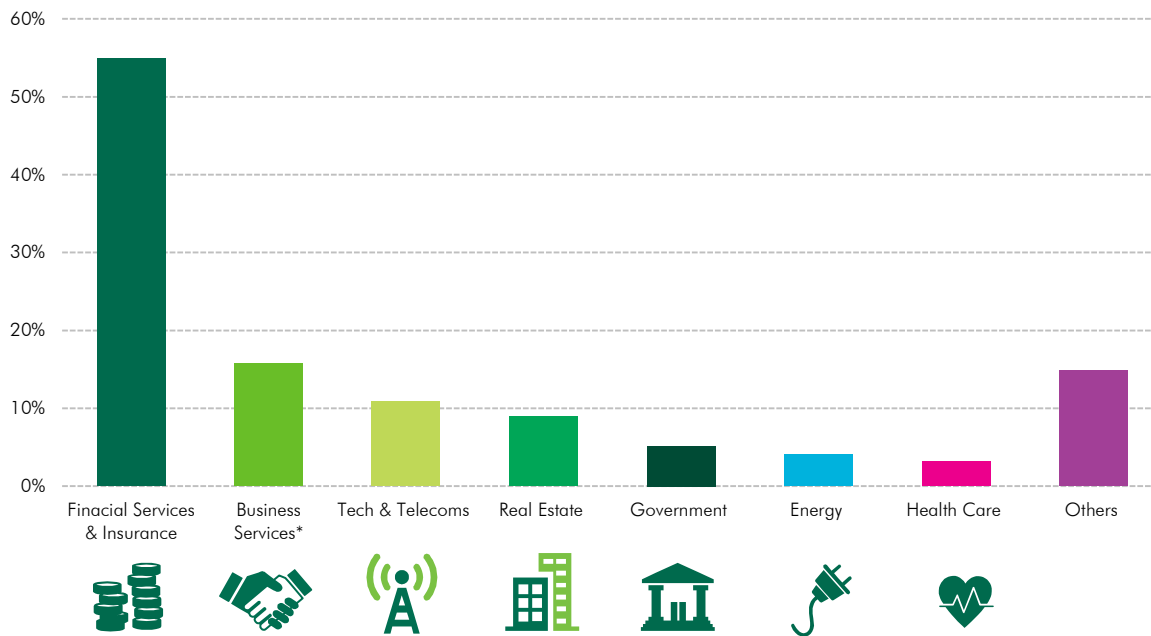
Source: CBRE Research, CTBUH, June 2014.

CBRE Research analysis reveals that, perhaps unsurprisingly, the tenant mix in supertall office buildings in Asia is similar to that in the Downtown district of Manhattan. The banking and financial services sector accounts for around 55% of the total occupied space in supertall office buildings across the region. Occupiers in this sector lease space in supertall office buildings because of the key differentiators outlined above and also because many of them receive incentives from authorities keen to expedite the development of their markets or specific district into a financial centre.

Business services and legal firms are another key occupier of supertall office buildings in the region, accounting for 16% of total occupied space. As mentioned previously, supporting business units such as accounting, consulting and legal firms need to be in close proximity to the companies they serve in the banking and financial services sector.

The technology and telecommunications (TMT) sector is an up-and-coming user of supertall office buildings and now accounts for 11% of total occupied space in such buildings in the region. Occupiers in this sector have been increasingly active in leasing prime space in recent years and are upgrading from decentralised areas offering cheaper rents.

Chart 10: Tenant mix of supertall office buildings in Asia



* Business Services includes Accounting, Consulting and Legal.
Source: CBRE Research, June 2014.

Within Asia, certain cities and certain buildings have been more successful in attracting financial sector tenants. Supertall office buildings such as Two International Finance Centre and the International Commerce Centre in Hong Kong – an established financial hub – understandably have a high proportion of financial sector tenants. However, a look at the tenant mix of individual buildings in emerging financial hubs in the region presents a different picture. One success is the Shanghai World Finance Centre in the Pudong submarket. More than half of the space in the building is occupied by tenants from the financial services sector. The Shanghai government has provided attractive tax incentives to banking and financial services firms for them to take up space.

The performance of other supertall office buildings in emerging financial centres in Asia has been mixed. The likes of KK100 in Shenzhen, Guangzhou IFC in Guangzhou, China World Tower 3 in Beijing and Taipei 101 in Taipei all have a relatively lower proportion of financial sector tenants. Nevertheless, although the Caiwuwei submarket of Shenzhen caters mostly to the technology and telecommunications sector, KK100 has still managed to attract a higher proportion of finance sector tenants compared to other Grade A buildings in the district.

In other cities, the industry specification of the local market has impacted the tenant mix of supertall office buildings. This partly underlines why the “build and they will come” strategy is often not as successful as expected. It takes time for the local market to refocus and adapt. For example, a number of major real estate companies are headquartered in Guangzhou. Several of these firms have taken space in Guangzhou IFC for self-use and the proportion of space occupied by tenants in this sector is therefore similar to the proportion of space occupied by financial services firms. Another example is Beijing, where oil and energy companies are one of the major drivers of office demand. Many large oil and energy companies have leased space in China World Tower 3 as their headquarters.

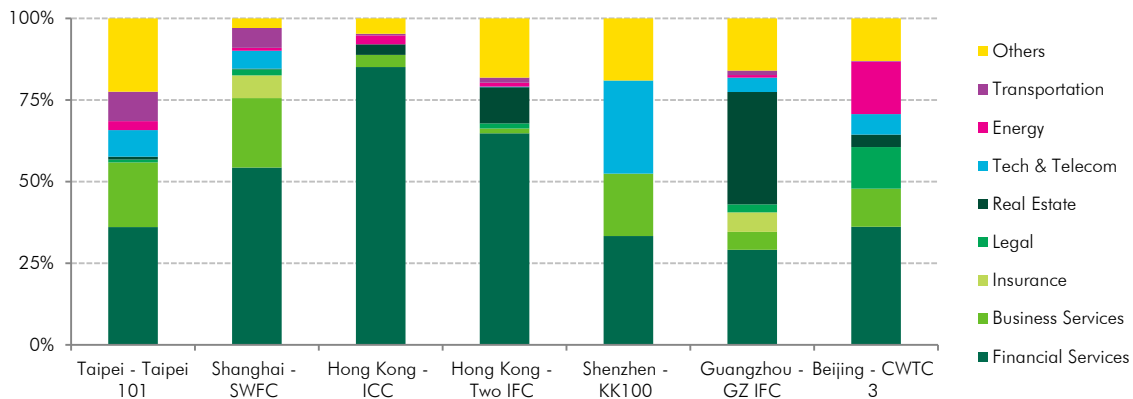
In Seoul, the local government planned the creation of the Yeuiudo Business District (YBD) submarket as a new financial hub. The area is home to a number of tall and supertall office buildings but has so far failed to attract a critical mass of financial and related sector tenants.

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These examples underline the fact that attempts to develop cities into a national or international financial centre by constructing supertall office buildings to attract the finance sector have been largely unsuccessful. The “build and they will come” strategy adopted by emerging financial centres in Asia has not worked. Whilst Shanghai has attracted a steady flow of financial sector occupiers and is making gradual progress towards establishing itself as a financial hub, other cities have been unable to attract the same calibre and volume of tenants, despite constructing high quality supertall office buildings.

This reflects the reality that there are far more important success factors required than the mere construction of supertall office buildings for a city to establish itself as a regional or global financial centre. These factors include the business environment, legal and tax systems, market transparency, political stability, government efficiency, transport and telecommunications infrastructure, capital flows, human capital and reputational factors such as innovation. Cities such as Zurich, Geneva, Luxembourg and Washington DC are all ranked in the top 20 of the Global Financial Centre Index but do not have any office buildings taller than 150 meters.

Chart 11: Tenant mix of major supertall office buildings in Asia



Source: CBRE Research, June 2014.

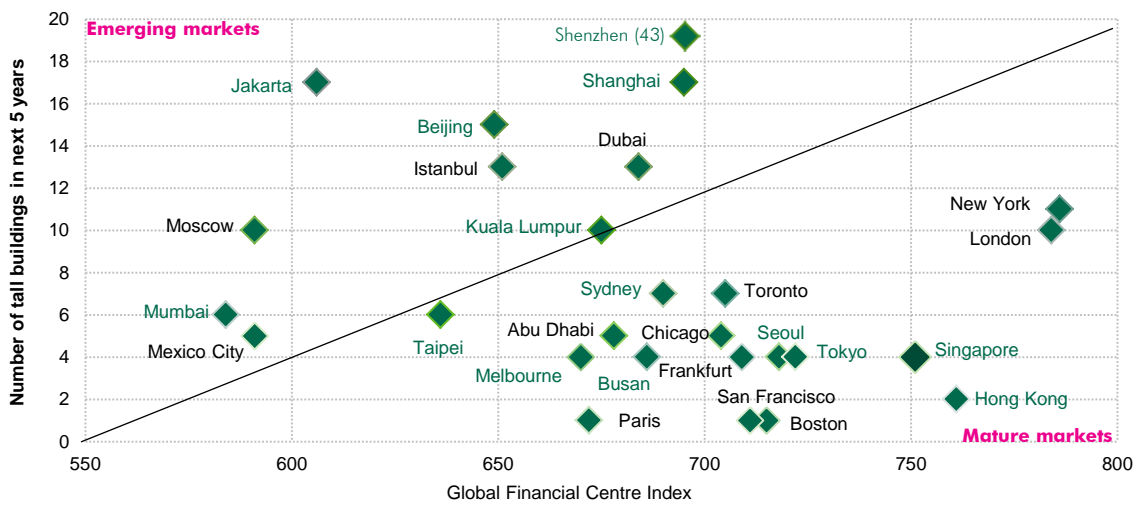


The “build and they will come” strategy adopted by emerging financial centres in Asia has been largely unsuccessful.

The future supply of tall and supertall office buildings in Asia

Most attempts by emerging cities to establish themselves as financial centres via the construction of supertall office buildings in order to attract financial sector tenants have so far been unsuccessful. However, the development pipeline of tall office buildings in emerging markets such as China, Indonesia, Malaysia and India remains significant.

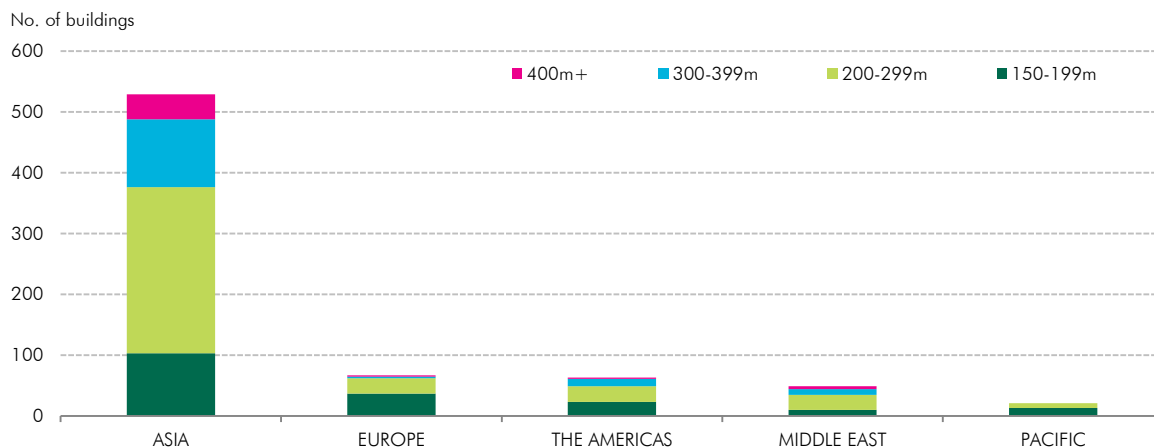
Chart 12: Global financial centres and the new supply of tall office buildings



Source: CBRE Research, CTBUH, Z/Yen Group, June 2014.

Markets in China account for almost 60% of the total new supply of tall office buildings set to be completed worldwide within the next five years. Several tier II cities in China aspire to establish themselves as a national or international financial centre. This has resulted in government master planning to allocate and encourage developers to build tall office buildings in new and existing CBDs. Tier II cities comprise around 80% of the total supply of tall office buildings in China scheduled to be completed within the next five years, or roughly 47% of total new supply of tall office buildings globally.

Chart 13: Distribution of tall office buildings by 2018



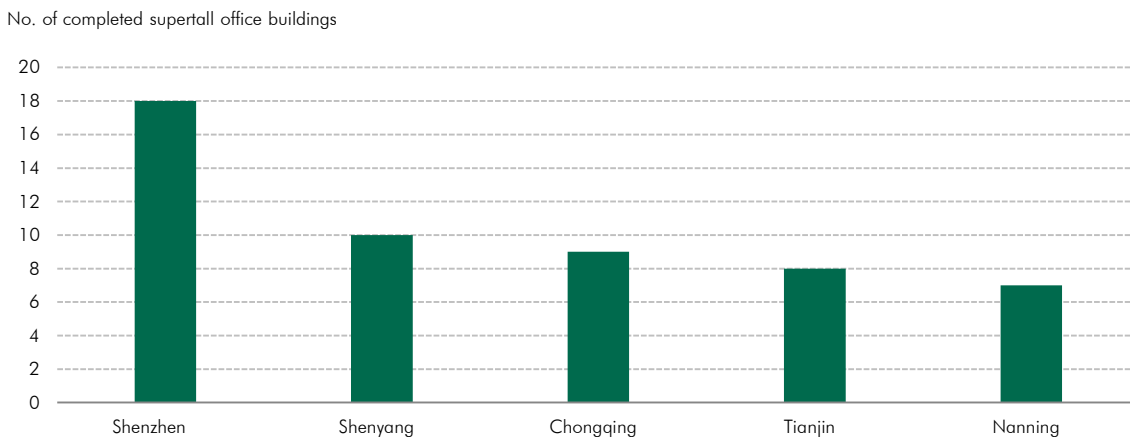
Source: CBRE Research, CTBUH, June 2014.

China also dominates the development pipeline in the supertall building category over the next five years. The country accounts for 71% of the total future supply of supertall office buildings to be completed during the period, with tier II cities accounting for 51%.

Whilst new supply of supertall office buildings continues to increase, the recent slowdown in the Chinese economy combined with tighter controls on the shadow banking industry has resulted in weaker demand from the financial sector. This has led to growing concerns of oversupply in a number of markets. Some observers argue that oversupply is not an issue in the long-term as they expect demand to gradually catch up with supply in tier II locations as these cities mature, pointing to the pattern of office development witnessed in Beijing and Shanghai in recent years. Although office demand in China will continue to rise in the long term as the country continues to transition to a tertiary industry-driven economy, the level of demand in tier II cities will remain relatively weak compared to Beijing and Shanghai as these two markets are already firmly established as the country's political, economic and financial hubs.

CBRE Research believes that the existence and future completion of a large number of supertall office buildings in tier II cities such as Shenyang, Chongqing and Tianjin undoubtedly creates a risk of oversupply, as discussed in the recent CBRE China Research special report, *China Offices: Reality Check*. These cities are merely regional hubs within China - not national or international financial centres – and lack the means to attract a significant volume of financial sector occupiers to their market. Local governments should therefore be more realistic when forecasting office demand and planning land supply in order to ensure their city's stable economic development.

Chart 14: Markets with the largest pipeline of supertall office buildings worldwide



Source: CBRE Research, CTBUH, June 2014.

Steps to success: Begin pre-leasing early

Most development in Asia is speculative, meaning that landlords often find their building becomes exposed to the risk of low occupancy during a market downturn. Major new office projects typically begin pre-leasing one year ahead of completion. Supertall office buildings usually begin pre-leasing two years ahead of completion as they have such a large volume of space to fill.

Beginning pre-leasing early is a crucial part of the process in establishing a supertall office building's credentials as a viable business location. A sizeable early letting to a reputable anchor tenant can also stimulate interest from other occupiers. The likes of Shanghai World Financial Center, Ping An Financial Center in Shenzhen and Guangzhou IFC all began pre-leasing two years ahead of completion.

Conclusion

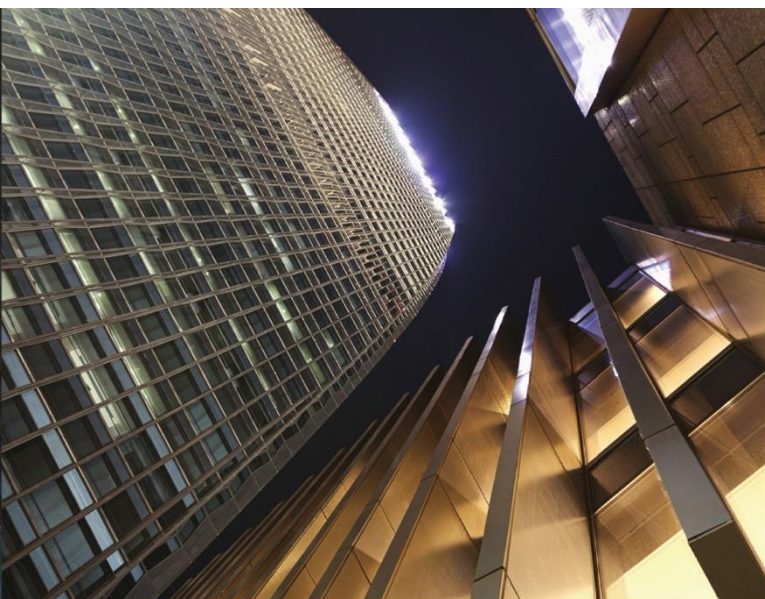
Over the next five years the number of supertall office buildings in China (Shenzhen, Shenyang, Chongqing, Tianjin and Nanning) and South Korea (Seoul and Busan) will surge whilst Indonesia (Jakarta) will see the completion of its first supertall office building in 2015. Financial sector demand will be insufficient to fill the large volume of new supply but this could provide opportunities for multinational occupiers in other sectors to secure high quality and prestigious office space in good locations for relatively cheap rents.

CBRE Research's *Asia Pacific Office Market Outlook 2014* published in February 2014 identified all these markets as having a high risk of oversupply in the short term. This pressure is unlikely to diminish in the medium term and rental growth in these cities is likely to lag behind other Asia Pacific markets.

Tall and supertall office buildings nevertheless provide a number of significant benefits for landlords and occupiers. Landlords of tall and supertall office buildings can command a rental premium; gain international recognition from their high profile projects and raise industry standards and expectations related to construction and property management.

Occupiers can benefit from the positive image and branding associated with being a tenant in a tall or supertall office building. They also gain from being located in close proximity to supporting industries or services; being situated in a prime district or newly developed CBD and the flexibility and convenience afforded by large floorplates. Other benefits include enhanced staff recruitment and retention, high standards of property management, spectacular views, sustainability and access to services such as retail and hospitality in the same buildings.

Attempts by cities to establish themselves as financial centres via the construction of supertall office buildings in order to attract financial sector tenants have largely been unsuccessful to date. For such an approach to succeed it must be implemented in tandem with various other measures such as creating a healthy business environment, ensuring political stability, establishing effective legal and tax systems and investing in hardware and software infrastructure.



The “build and they will come” approach should be implemented alongside various other measures such as creating a healthy business environment, maintaining political stability and investing in hardware and software infrastructure.

Appendix

Definition of tall buildings

For this study CBRE Research adopted the definition of tall buildings issued by the Council on Tall Buildings and Urban Habitat (CTBUH), one of the key authorities on the subject.

Any building with a height of more than 150 meters and usable floor area of at least 50% meets the tall building classification.

Within the tall buildings classification there are two sub-types of tall buildings: **supertall buildings** and **mega tall buildings**. These are defined as buildings that are **over 300** and **over 600 meters** in height respectively.

Height is measured starting from the level of the lowest, significant, open air, pedestrian entrance to the highest point. The recognition of the highest point is further divided to three categories.

- a. Height to architectural top: the architectural top includes spires but does not include antennae, signage, flag poles or other functional-technical equipment. This is the typical measure CTBUH uses;
- b. The highest occupied floor within a building;
- c. Height to tip irrespective of material or function of the highest elements, i.e. including antennae, signage, flag poles or other functional-technical equipment.

The primary usage of a tall building may be as an office, residence and hotel or it could be mixed-use comprising office, retail, residential and hotel components.

The focus of this report is on tall and supertall buildings with office components, regardless of single usage or mixed use. The height measurement is based on the architectural top.

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