International Trek: Singapore



PGIM REAL ESTATE AND THE MARINA BAY SANDS

By Wilson Blum

The Cornell Baker Program in Real Estate Class of 2020 kicked off its international trek in Singapore on Monday, January 6, 2020. Singapore's phenomenal urban transformation since its independence in 1965 has been internationally recognized as a case study in the advocacy for and potential of a strong, centrally planned and state-backed guidance of real estate development. The students had spent the prior semester studying Singapore's approach and contrasting it against others both in the region and internationally. The first stop of the trek, PGIM Real Estate, immediately offered students an immersion into the dynamics of the local market and Singapore's importance as a hub through which many in the international community deploy capital across Southeast Asia.

Managing Director David Fassbender welcomed Baker students to PGIM's office for a sit-down discussion of PGIM's Asian business. Mr. Fassbender is primarily responsible for the operations of PGIM's value-add Asia real estate funds. Joined by Cuong Nguyen, Head of Investment Research - Asia Pacific, the pair walked students through current market trends and discussed PGIM's various approaches to investing across the region. The persistence of the longest real estate bull market in recorded history has created an interesting atmosphere for global real estate investors. Asset prices are at levels not seen since prior to the Global Financial Crisis, and Singapore's market is one of the region's most expensive. Investment managers have been challenged to find suitable deals in what has become an increasingly competitive market. Benett Theiseira, Head of Asia Pacific, joined the discussion to provide an overview of PGIM's operations in that region. More money has shifted into real assets as the bull market continues and construction costs have skyrocketed. This has combined to inhibit supply growth amid a red-hot property market that has seen valuations continue to rise ever higher.

While competitive market conditions have made finding suitable investments challenging, opportunities still exist. Su Lin Wee, Head of Asset Management – Southeast Asia, joined students to walk through some of PGIM's re-positioning of Singaporean retail properties. As an island nation with a relatively small manufacturing sector, Singapore's economy is primarily driven by consumption. The same retail trends that students have become familiar with in the United States have been simultaneously

occurring in Asia as well. One advantage that has allowed Singaporean malls to remain strong investments is their frequent location above transit hubs. This deliberate positioning is the result of Singapore's strong urban planning. With this built-in demand, mall owners such as PGIM can confidently invest in property improvements to keep up with a retail environment that is shifting in response to the rise of e-commerce and consumer desire for "experience." The PGIM team accompanied students to one such mall in the Tampines area that is slated to undergo a major renovation to shift tenants around and open more, smaller retail spaces to meet these shifting tastes. After lunch with the PGIM team, students headed back towards downtown for an exclusive tour of the Marina Bay Sands.

Students were greeted at the entrance to the Marina Bay Sands Expo and Convention Center by Maunik Thacker and George William Roe, Senior Vice President of Marketing and Executive Director of Hotel Operations. respectively, at Las Vegas Sands Corporation. Opening in 2010 at a cost of approximately US\$8 billion, the Marina Bay Sands is one of the most ambitious and well-known casino resort and conference properties in the world. The site comprises over 6 million square feet, including the Shoppes at Marina Bay Sands (1 million square feet), The Sands Expo and Convention Center (1.2 million square feet/45,000 attendees), The Marina Bay Sands Casino (160,000 square feet/600 table games/1,500 slots), and the Marina Bay Sands Hotel (2,560 rooms). Mr. Thacker walked students over to the scale model of the property to give a brief history of the site's development before splitting students into groups for a tour.

Starting with the Shoppes at Marina Bay Sands, Mr. Thacker walked his group throughout the mall, pointing to the presence of many high-end retailers. The mall boasts the world's largest Louis Vuitton store, which sits suspended on a floating island in the bay in front of the mall - surely one of the most unique high-end retail boutiques of its kind. Students were then led through a discrete entrance into the ornately decorated interior of the casino. Due to the Singaporean government's view on gambling, the presence of the casino is not well publicized - only a few plaques around the mall indicate the various entrances onto the gambling floors. Though foreigners are allowed in for free. Singaporean citizens must pay hefty fees for the same privilege, typically S\$150 for a one-time entry or S\$3,000 for an annual pass. These fees have not tempered enthusiasm, however, as Singaporean citizens represent approximately one-third of all visitors to the property. After viewing the interior of the casino Mr. Thacker accompanied students into the lobby of the hotel and up for a tour of the Sands SkyPark overlooking the Singapore Coast. At a height of over 650 feet, the park features the world's largest infinity pool, which has quickly become one of the most shared social media posts in the world and has helped cement Marina Bay Sands as one of the world's most iconic resorts.

At the conclusion of the tour Messrs. Thacker and Roe sat down with students at the ArtScience Museum for a roundtable discussion of the performance of the hotel, operational challenges, and future development plans. Remarkably, the hotel has run at nearly 100% occupancy since opening and today boasts an average daily rate (ADR) of approximately The resort attracts both high-rollers and VIPs thanks to its gaming operations, which further drive sales at the mall, in addition to the throngs of visitors to Singapore who want to spend a day lounging in the SkyPark. To this point, Mr. Thacker pointed out that the average stay at the hotel was approximately 1.5 nights per guest. Interestingly, the average length of stay for a visitor to Singapore is approximately four days. Therefore, the majority of hotel guests are staying for a night or two at the hotel in order to experience the SkyPark before heading to more affordable hotels for the rest of their stay. From an operational perspective, Mr. Roe elaborated on the challenges of turning over rooms at such a high rate across a 2,500-room hotel. Recent initiatives have significantly improved the room turnover rate by incorporating wireless technologies that provide real-time information to housekeepers so that no extra time is wasted. The result has been the continual customer satisfaction that has sustained Marina Bay Sands' success.

Mr. Thacker continued the discussion by walking students through recently announced plans for expansion of the property. As one of two Integrated Resorts (IRs) in the country, the Singaporean Government granted permission for Las Vegas Sands Corp. to build a fourth luxury hotel tower of approximately 1,000 rooms and a 15,000-seat entertainment arena. The project is expected to cost approximately S\$4.5 billion and will involve connection into the existing underground infrastructure linking the hotels and the conference/mall/casino operations across the street. While high rollers and VIPs enjoy staying at the existing Marina Bay Sands Hotel, Mr. Thacker indicated that these new luxury hotel suites would specifically cater to these types of visitors in order to boost gaming revenue









and provide a more exclusive environment than is currently possible amid the bustle of the existing hotel and SkyPark. These attractions will also soon receive a facelift in order to refresh rooms and provide more exclusive service. Closing out the discussion, Messrs. Thacker and Roe gave students a brief rundown of their career paths and some advice for charting the right path before gathering for a picture with students in the Rainbow Room.

ARA ASSET MANAGEMENT & HOUSING AND DEVELOPMENT BOARD

By John Thompson

On Tuesday, January 7th, Baker students began their day at ARA Asset Management's Singapore headquarters. In just under two decades ARA has become one of the largest money managers in Singapore. Founded in 2002 by CEO John Lim, the firm manages S\$87 billion (\$62.5 billion in USD) across 26 countries and four continents. Students were graciously welcomed by members of ARA's REITs and Research teams.

First to speak was the CEO of REITs and Business Development, Chia Nam Toon. Mr. Toon energetically walked through ARA's various REIT portfolios and explained why these have remained a favorable investment product in Singapore, more so than in other Asia Pacific countries. ARA remains one of the top REIT managers in Asia Pacific, Toon contends, because it has developed a number of pure-play portfolios across various sectors and market areas. Most recently, ARA acquired a collection of 33 upscale, select-service Hyatt hotels and used this as a platform to launch ARA U.S. Hospitality Trust, its first REIT focusing on U.S. lodging assets. Mr. Toon attributed ARA's success to its disciplined approach to asset management and its nimble ability to roll out new investment products. For example, in addition to its U.S. lodging REIT, ARA has

also spent considerable attention on commercial properties in the Asia Pacific region. Prosperity and Suntec REITs are among the firm's only composite REITs and are collectively valued at over S\$11 billion. These vehicles have properties in Singapore, Australia, and Hong Kong, and are comprised of a mix of office, retail, and industrial products. They also have multiple REITs focused on South Korean assets across all of the major asset classes.

The visit was rounded out by Eric Zhiliang, head of ARA's Greater China Research group. Mr. Zhiliang is responsible for constantly modernizing ARA's management practices with ever changing advances in proptech and data mining. In his presentation, Mr. Zhiliang focused on macroeconomic trends facing the Asia Pacific region, such as the rising prosperity of China's middle-class, while only hinting at the more proprietary statistical tools that the company uses to parse the likely troves of user and market data that it is constantly collecting via their properties.

Following the visit with ARA, Baker students headed north out of the CBD and into the "suburb" of Toa Payoh in central Singapore for a meeting with the highly regarded, and often imitated, Housing and Development Board (HDB) administered by Singapore's central government. The HDB has been central to Singapore's rise in the international world of social programming. Students were first given a tour of HDB's public displays consisting of scale models of the entire island as well as interactive exhibits showcasing the agency's efforts to continue to provide relevant, sustainable housing for Singaporean citizens. As is true in the U.S., Singapore's first prime minister, Lee Kuan Yew, recognized the importance of home ownership for each of its citizens in order for them to have a stake in their country. The HDB was set up by Mr. Yew in 1960 in order to achieve this goal and has since housed up to 82% of Singapore's population.







CAPITALAND, GIC, URA, AND CBRE

affordable housing situation in the U.S. market.

By Ryan Sequeira

Halfway through the international trek for 2019-20, the Baker students continued exploring the real estate markets of Singapore and Asia-Pacific. Beginning the day with CapitaLand, one of Asia's largest real estate investment management businesses, the group met with Benjamin Ng and other representatives from its Corporate and Strategic Planning team. CapitaLand's real estate portfolio is well diversified, spanning nearly all asset classes including commercial, retail, office, industrial, logistics, integrated development, urban development, lodging, and residential. With a presence across more than 200 cities in over 30 countries, the company focuses on Singapore and China as its core markets, though it continues to expand into new









markets such as India, Vietnam, Australia, Europe, and the USA.

CapitaLand is considered a REIT pioneer in Singapore, having listed CapitaLand Mall Trust in 2002. Over time, CapitaLand's REITs and business trusts have expanded to include Ascendas Real Estate Investment Trust, CapitaLand Commercial Trust, Ascott Residence Trust, CapitaLand Retail China Trust, Ascendas India Trust, and CapitaLand Malaysia Mall Trust. Among these diversified holdings, retail in Singapore still holds a dominant place in the portfolio. In a market that has per capita retail offerings significantly lower than developed markets like the U.S., Canada, Australia, and Hong Kong, CapitaLand boasted AUM of \$\$19.7 billion in 2019, with a 99% occupancy rate and average tenant sales of over \$\$94 per square foot. Engaging 448.9 million shoppers every year with over 3,000 tenants, the portfolio has Revenue Under Management of \$\$1.31 Billion.

The team presented various success stories including Plaza Singapura, The Atrium at Orchard, and Bugis+. However, the focus of the visit was the Funan Mall where the Baker students were hosted. This is an example true to CapitaLand's vision of enriching people and communities

through high-quality products and services. Unlike most other malls in Singapore that are built on or around transit stations on the principles of Transit Oriented Development, the Funan Mall is relatively distant from transit connectivity. To make up for this and to attract visitors, the mall has been positioned as a destination in and of itself with retail, two office towers, and a serviced apartment tower. In addition to its mixed-use offering, the mall houses an edible rooftop garden and Lyf, a co-living space created to help residents forge connections with the thinkers of tomorrow. Lyf is targeted towards young urban professionals and the transient workforce that is price sensitive and also interested in a communal lifestyle that extends to shared rooms, workspaces, and recreation, with avant-garde interiors to match.

The next stop on the itinerary was GIC, formerly known as the Government of Singapore Investment Corporation. GIC is the sovereign wealth fund of Singapore and invests the over S\$100 billion foreign reserves of Singapore with a long-term focus. The fund is mandated to not invest domestically and is thus diversified across global assets. The group was hosted by Richard Massey and Han Hwee Chin, both Senior Vice Presidents who presented GICs vision for investment and the role of real estate in the portfolio. The real estate portfolio is diversified across asset classes and geographies, skewing towards office (34%) and retail (19%). GIC believes in investing across four quadrants: private real estate, private real estate debt, public real estate debt, and



listed real estate equity.

Given its global holdings, GIC is extremely cognizant about macroeconomic risks and keep tabs on capital allocation by comparing merits across markets and hedging foreign exchange exposure. In seeking the best risk-adjusted returns across the globe, each investment is scored against a specific risk-adjusted hurdle rate based on the country hurdle rate with added premiums for the market and other risks. Risk factors such as returns, quality, construction, management, and leverage are scored against this investment hurdle rate before investing, and these factors are updated at regular intervals.

A target market allocation of 4-5 countries has the most diversification benefit, beyond which a new market is determined by a resource allocation and resource optimization exercise. Core markets with >5% of the real estate portfolio include the U.S., UK, Germany, Japan, China, and Australia, while opportunistic markets that contribute meaningful alpha commensurate with the resources utilized are India, Indonesia, and Vietnam. In managing the portfolio, GIC uses global insights that include conventional databases, internal data, and alternative data sources such as geo-location, online review and ratings, social media sentiments, consumer credit, and other metrics. The presentation concluded with an investment thesis on the future of student housing with its defensive demand characteristics, positive market fundamentals, attractive financing spreads, and currently abundant acquisition opportunities.

Remaining under the aegis of the Government of Singapore, the next stop on the itinerary was the Urban Redevelopment Authority (URA), the planning agency tasked with making Singapore a great city to live, work, and play. Baker students were hosted by fellow Cornellian Daveen Koh and a colleague who together walked the group through the two-tier strategic planning approach of developing Concept Plans and Master Plans to guide the physical development of Singapore in a sustainable manner. The Concept Plans are designed for a long-term horizon and allow for flexibility in planning while envisioning mega-projects and infrastructure, while Master Plans are designed for shortterm statutory plans of 5-years that are extremely detailed in terms of land use, form, and other requirements while at the same time considering local development needs. The dual nature of this planning allows the private sector to confidently develop specific goals and outcomes while

allowing the government to modulate the plans based on the changing requirements of the city-state.

In addition, these plans do not adopt a top-down methodology but instead adopt a participatory planning approach allowing the government to achieve the vision of all citizens. Uniquely, the participation comes not only from common citizens but also from the industry, a process which allows changes to be made and facilitates ease and flexibility of the system with increased convenience and efficiency. Unlike other planning agencies, the URA is tasked with the sale and leasing of state land to attract and channel private capital investment into development sites supporting economic and social objectives. The students were exposed to the end-to-end processes of planning the current and future of Singapore, including the successful use of policies and taxes to control land prices in the city, thereby avoiding the typical boom and bust cycles of real estate markets.

The last stop of the day was at the Asia-Pacific headquarters of CBRE, specifically its Global Workplace Solutions division, which strives to improve the experience of work and help organizations leverage their real estate





investments to drive business change. Hosted by Peter Andrew, Executive Director of the Workplace Centre of Excellence, the group was exposed to the thought process behind Workplace Strategy, Experience Consulting, Change Management, and Occupancy Management that helps clients identify opportunities to reduce and/or reallocate costs, more effectively manage resources, improve employee engagement, and make decisions faster. The local office was a shining example of the possibilities of leveraging design and technology to deliver an effective work environment that creates an emotional connection between employees and organizations, in turn creating a destination that supports the physical, cognitive, and social needs of the individual.

GUOCOLAND AND THE FAR EAST ORGANIZATIONBy Wilson Blum

Baker students began the fourth day of the trek with an indepth tour of Singapore's tallest building, Guoco Tower. First opened in 2017, the tower was developed by GuocoLand, one of Asia's premier luxury developers. In addition to its location above the Tanjong Pagar MRT station, the property, known in Singapore as an "integrated development," consists of over 100,000 square feet of retail and dining space, 890,000 square feet of office space, a 223-room five-star Sofitel Hotel, and the 181-unit Wallich Residences. British billionaire James Dyson made headlines recently for the purchase of the super-premium penthouse on the top floor of the property for US\$54 million.

Valerie Wong, General Manager of Commercial Assets at GuocoLand, walked students through a scale model of the development prior to the tour. The design is a product of the world-renowned architectural firm Skidmore, Owings, & Merrill, which has completed projects such as the Time Warner Center in New York City, the Burj Khalifa in Dubai, and the Polestar Tower in Sweden. Ms. Wong then answered students' questions about the challenges and complications of the development. Located in a historic district and above an operating subway line, construction had to be carried out incredibly carefully to address the needs of both commuters and local residents. The project's geotechnical firm, ARUP Singapore Pte Ltd, received the 2019 Geotechnical Engineering Award for its excellence in managing the phased construction of such a complex project.

Students then toured the retail, office, and hotel properties, receiving an inside look at Sofitel's unique room designs

and guest and meeting areas before proceeding to the Wallich Residences. The residences are among the most expensive in Singapore and comprise floors 39 to 64 directly above the office space. Amenities are spread out over four different floors, with a concierge service and infinity pool on floor 39, a private library and theatre or floor 52, and a glass cantilevered observation deck on floor 62. Students were able to walk through one unit currently on the market for S\$10 million and were impressed with the finishes and panoramic views of Downtown Singapore and the coast.

After lunch, Baker students ventured into the Holland Village area for a meeting with the Far East Organization. Owned by the Ng family, one of Singapore's wealthiest, the company is the largest private property developer in Singapore, having developed over 750 properties across the country since its





founding in 1960. In 2018, the company led a consortium that was successful in acquiring the development rights to a highly sought-after land site in Holland Village for S\$1.21 billion. The consortium has plans for a S\$1.8 billion integrated development that will have two towers of 33 and 25 stories, respectively. The two towers will house over 400 apartments, a 10-story serviced apartment tower, and five levels consisting of approximately 80,000 square feet of office space situated above an additional 145,000 square feet of retail space. The project is yet another example of Singapore's unique ability to foster transit-oriented development that offers live-work-play components in areas that need more of such uses. Developers, with the support of the government's able central planning, have embraced the types of mixed-use projects that have been slower to catch-on in other areas. The result has been a responsible increase in the density of key areas around the country. As urban cores continue to densify, the importance of these kinds of developments providing a balance of uses - and open space - will substantially increase.

The students were excited to have a chance to sit down for a one-on-one conversation with Jonathan Ng, grandson of the company's founder and currently Executive Director, CEO's Office. Jonathan graciously answered student questions about the challenges of private development in Singapore. The Holland Village site, due to its varying uses, was awarded a 99-year ground lease by the Singaporean Government, a major advantage not always enjoyed by other projects. One key difference in how developers in Singapore seem to approach value differently than a typical U.S. investor is the concept of reversion. In general, in the U.S. an investor expects to receive a large portion of their return upon the sale of an asset. The existence of the ground lease, which in some cases can be for as little as 30-45 years, forces developers in Singapore to view this potential reversion as a zero-sum game. Therefore, in

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pricing the value of bids at government auctions, companies must ensure that they are achieving target returns through income alone, with the assumption that the reversionary interest in the property will be discounted and eventually be zero. For companies such as the Far East Organization, Ng indicated, this is not a major problem as they are extremely long-term, if not indefinite, holders of assets and therefore they usually are able to achieve these types of returns. Students concluded the visit with a networking reception set against the backdrop of the various full-scale models of for-sale apartments, which, since going on the market in December of 2019, are approximately 50% sold.

ASIA PACIFIC REAL ESTATE ASSOCIATION, MAPLETREE INVESTMENTS, KEPPEL REIT, AND FRASERS PROPERTY

By John Thompson

On the last and busiest day of the trek, Friday, January 10th, Baker students visited five different real estate firms and rounded out the trip with a reception for Cornell alumni from around the island as well as the executives of the companies visited throughout the week. Cornell alumna Sigrid Zialcita, CEO of the Asia Pacific Real Estate Association (APREA), welcomed students for the first morning session. Zialcita handily navigated the students' questions concerning





macroeconomic trends in the Asia Pacific region, with a particular emphasis on the growing demand for REITS as investment vehicles.

Ms. Zialcita pointed out that the Asia Pacific region has, rather quietly, enjoyed decades of growth with very few setbacks. When asked what factors have been responsible for such sustained growth, she pointed, without hesitation, to China. It is no secret that the Chinese economy has enjoyed a long period of continued growth, and the rising tide of China's economy has raised all other Asia Pacific countries, as over 50% of the region's GDP is tied in some way to the country. Moreover, the growing affluence of the Chinese middle class and their tastes and habits have bolstered the surrounding region's growth. As in developed economies, Chinese consumers enjoy travel and are heavy



consumers, and much of that spending stays in the region. Even as low wage work has left China in the wake of this economic shift, it has shifted to other Southeast Asian nations like Vietnam and Indonesia rather than leaving the region for other parts of the globe.

Ms. Zialcita closed the discussion with a conversation on Singapore's REIT structure, and the growing popularity of REITs in the region. Singapore, which APREA has duly chosen as its home base, has had a long-established marketplace for REITs that has been incredibly successful. As a result, other players in the region have looked to her and APREA for guidance on how to establish a REIT structure on their own exchanges. The largest of these potential players happens to be the Chinese government, which is making strides to introduce the investment structure into its own marketplace.

Following the visit with APREA, the group headed to the Harbourfront area to visit with a handful of fund managers. The first stop was with Mapletree Investments, where Regional CEO of Europe and USA Michael Smith walked the students through Mapletree's current investments as well as its plans for growth in those regions.

Mapletree Investments, Smith explained, is a wholly owned subsidiary of Temasek Holdings, which in turn is a holding company for the Government of Singapore's state-owned investment companies. Unlike CapitaLand, which is only 51% state-owned, and GIC, which invests across all different types of assets, Mapletree operates with complete autonomy and has a global presence of direct investment in real estate projects ranging from core office in Singapore to ground-up development in the Americas. In addition to its more traditional asset types, Mr. Smith noted that the firm has taken an increasing interest in alternative assets, like data centers, and the firm now has the industry's fourth largest global logistics portfolio.

Mapletree's investment strategy seemed to align closely with Keppel REIT, which was the next stop of the day. Keppel REIT is headed by CEO Paul Tham, another Cornell alumnus, and is listed on the Singapore Exchange. The company is the publicly traded real estate owner for Keppel Capital, and its assets are managed by Keppel REIT Management, so much of Mr. Tham's responsibility it related to acquisitions and strategic growth of the portfolio.

Similar to Mapletree and others in the region, Keppel has taken a favorable view on data centers. This alternative

asset class has emerged as a valuable niche for those who understand its quirks, as tech giants continue to expand their global footprint and as the requirements for technology infrastructure continue to increase throughout the world. For its part, Keppel has established the only pure-play data center REIT in Asia, and Mr. Tham explained some of the challenges facing owners of such assets. Not only do these facilities require an immense amount of energy to operate, but their components are also in need of constant upgrading lest they become obsolete. Perhaps the biggest challenge, however, is the fact that owners have very little pricing power, as their main tenants are constantly pressuring them for lower rents in order to curb their own soaring costs. All of these factors place owners of data centers in the unenviable position of managing the investors' demand for such products with the inherent difficulties of their business model.

The second-to-last stop of the day was with Frasers Property, which was directly across the street from Keppel. Wanshi Zheng, Group Chief Strategy & Planning Officer, greeted students with a brief history of the firm and its surprising roots. The company has been in existence for well over a century but was founded initially as a beverage company by the manufacturers of Chang beer. In the 1960s the company began building retail and manufacturing facilities in strategic locations and began to realize the profitability of real estate. In 1983, Frasers developed the CenterPoint Mall and has since grown to become one of the largest

commercial property owners and managers in the region, controlling multiple REITS in the retail and office sectors.

Students were given a tour of a formerly maligned office campus that Frasers brought back to life. Alexandra Technopark (ATP) features a group of office towers connected by a series of underground tunnels. It has been marketed towards tech companies, particularly those coming out of Silicon Valley and hoping to establish a foothold in Asia, and has recently secured Google as its major anchor tenant. Ms. Zheng cited the campus-like environment as a major selling point since it is a rarity in Singapore, where land is often too expensive for such an arrangement.

Finally, as the culmination of a whirlwind week, the students moved to the laid-back atmosphere of the Warehouse Hotel. The property was developed within a former 19th century warehouse built a few hundred meters inland of Clarke Quay. As the scarcity of land demands buildings in the CBD go more and more vertical, it is difficult to secure historic properties such as this one in Singapore. The Warehouse Hotel proved to be an able shepherd of this property's history and charm, paying careful attention to original details and found artifacts and delivering a tasteful collection of just under 40 rooms. The hotel, owned and operated by the Lo and Behold hospitality group, served as a gracious venue where the Baker students capped off the trek with a reception featuring familiar faces from the week's meetings.





