AEW RESEARCH

Asia Pacific Market Perspective

Q3 2022

AEW

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Prepared by AEW Research, November 2022

Investment Markets Shifting

WE BELIEVE ASIA PACIFIC GROWTH TO OUTPERFORM OTHER REGIONS

- Economic momentum is slowing globally after a strong 2021 and we believe Asia Pacific will not be immune to this. Still, as it stands, the region has had the strongest short-term growth outlook compared to the U.S. and Europe.
- Positive factors in Asia Pacific today include the reopening of some economies (Japan and Hong Kong have lowered entry restrictions for foreigners), healthy retail sales and improved labor markets; however, these could also add to inflation pressures.
- Risks are skewed toward China where zero-COVID policies have been reiterated, and may continue to discourage international institutional investment.

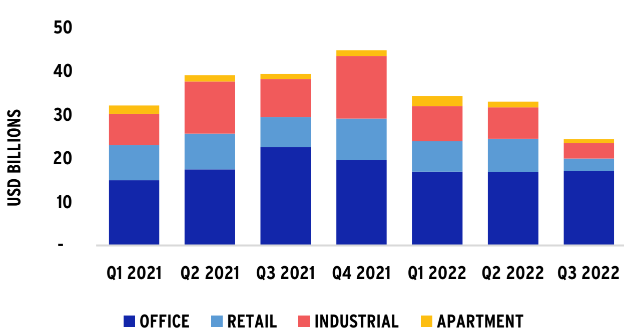
INVESTMENT ACTIVITY SLOWS AS MARKET IS EXPECTED TO GO THROUGH PRICE DISCOVERY

- Investment environment has materially changed from the start of the year. Sharp increases in borrowing costs have negatively impacted the underwriting ability of many investors. Today, carry costs have turned negative across several markets and sectors, with the largest disparity observed in Australia logistics and South Korea offices.
- A marked slowdown in transaction activity was noticeable since June 2022. Major gateway cities in the region are tracking at USD104.5 billion year-to-Sep 2022, down 9% compared to the same period last year. If hotel investments are excluded (hotel investments have hit a record high of USD12.7 billion year-to-date 2022 following a strong reopening theme), overall transaction volumes year-to-date are around $92 billion, down 15% from the same period last year.
- Quarterly downward trends were noted across several markets. For Singapore and South Korea, office investments fell after healthy activity in H1, but for Australia, the drop in Q3 was mostly due to a pull-back in the industrial sector.
- Markets are going through a period of price discovery. While transaction evidence has been limited year-to-date, most investors are underwriting yield expansion over the next six to eight months. Deal making is expected to proceed cautiously until there is greater certainty that inflation and interest rates have passed their peaks.

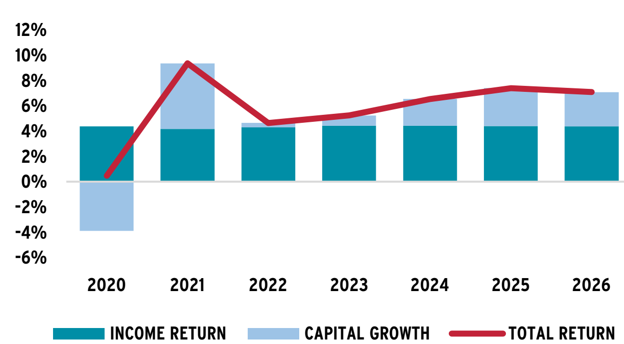
TOTAL RETURN OUTLOOK ADJUSTS DOWNWARD

- The forecast for total returns have been recalibrated lower over the next five years, with the most positive outlook still in logistics and multifamily. Total return is expected to build over the forecast period as capital growth improves.
- Investment strategies are adjusting to a period of slower growth and more expensive debt. We are observing shifts in country/sector allocations as well as more interest in alternative assets classes (like data centers, hotels, student housing and life sciences), which present favorable NOI growth
- The key to outperformance will be in choosing markets with strong income growth still available like Singapore and Seoul office or Australia logistics. Value-add opportunities such as renovation/redevelopment or identifying idiosyncratic opportunities can generate alpha. We believe groups with teams on-the-ground and a strong local network can have an advantage.
- Capital with flexibility on LTV terms today may have an upper hand acquiring assets.

ASIA PACIFIC INVESTMENT VOLUMES 2021 TO Q3 2022



ASIA PACIFIC TOTAL RETURN 2020 TO 2026F



Source: AEW Research, JLL, PMA, Real Capital Analytics, as of Q3 2022
Note: Investment volumes measure income producing investments across AEW's target markets.
There is no assurance that any prediction, projection or forecast will be realized.

Global Uncertainty Weighs on Asia Pacific

INFLATION AND EXTERNAL RISKS RESET GROWTH FORECASTS

- The region continues to be impacted by the deteriorating global outlook, inflation and weakness in China.
- Between September and October, the growth outlook for 2022 to 2023 worsened over gloomier prospects for the U.S. and European economies as well as the Fed's aggressive tightening stance.
- For most export-dependent economies in Asia Pacific, a weaker global outlook can be a drag on demand. For China in particular, a zero-COVID policy as well as weak labor and property markets continue to challenge growth.
- Based on revised forecasts, annual GDP growth across the major markets in Asia Pacific is expected to average 2.3% in both 2022 and 2023 (down 0.1% and 0.3% respectively from last quarter's report). Growth in 2023 is expected to be slower across most markets given recession risks in the West. We believe China is the only market that will buck the trend next year, where growth is likely to be higher, off its 3.2% y-o-y growth in 2022.

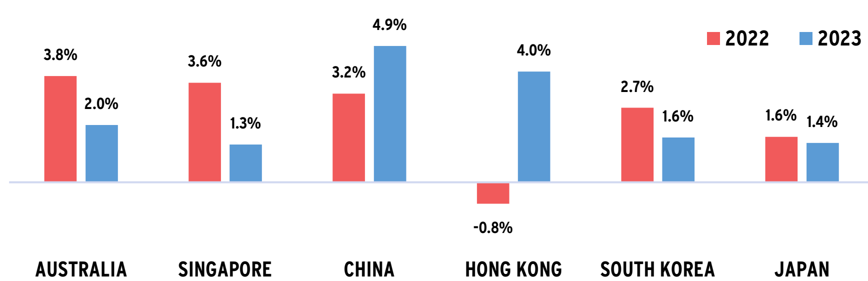
INFLATION MANAGEABLE DESPITE CONSUMPTION STRENGTH

- Retail sales have been robust. Year-to-Q3 sales numbers have hit new highs in Australia, Singapore, and South Korea. In Hong Kong, retail sales improved in the first two months of Q3. We expect the recent change in hotel quarantine measures to support a fuller recovery in the coming months. Similarly in Japan, with the lifting of foreign individual tourist arrivals caps as of October, a stronger recovery in retail and tourism should take hold.
- Inflation risks in the region are far more benign compared to western counterparts. In Q3, the largest headline inflation prints were in Singapore and Australia (both greater than 7% y-o-y), however core inflation which strips out the volatile sectors came in at 5.3% and 6.1% respectively. Average Q3 inflation across the major economies in the Asia Pacific region was 4.4%, but core inflation was just 3.6% (versus the 6.6% Q3 2022 core inflation print in the U.S.).
- Labor markets in the region are still holding up well. In fact, Manpower Group reports the most optimistic hiring intentions in Asia Pacific, boosted by China, Australia, and Hong Kong. However, we maintain caution, knowing instances of hiring freezes and layoffs could lay ahead (especially across technology, and most recently, e-commerce sectors)

WE EXPECT FURTHER RATE HIKES IN H2, CHINA AND JAPAN REMAIN ACCOMMODATIVE

- Monetary policy is divergent across the region. Australia, Singapore, South Korea and Hong Kong (through the USD peg) have raised rates several times this year and are expected to continue to do so until early 2023. The cumulative tightening will likely be noticeably less than the West, as inflation concerns are generally lower.
- Meanwhile, Japan's and China's central banks have reinforced the need to support business activity to shore up growth and will maintain loose monetary policy in the near-term. The BoJ intervened in the currency market in September, but is maintaining their stance on yield curve control, keeping interest rates low.
- Alongside front-loaded Fed tightening and weakening trade terms, local FX depreciation to the USD is likely to persist. Largest currency depreciation YTD has been the USDJPY, USDKRW and AUDUSD.

ASIA PACIFIC MARKETS GDP GROWTH 2022 AND 2023



Source: Oxford Economics, as of 20 October 2022
There is no assurance that any prediction, projection or forecast will be realized.

Investment Markets Slow; Occupier Conditions Mixed

Office

MIXED OCCUPIER CONDITIONS, LEASING SENTIMENT TURNED CAUTIOUS IN Q3

With unique local demand drivers and supply conditions, occupier markets remain mixed and are sitting in various points of the cycle. For Q3 however, the broad sentiment was a dial back in leasing and demand, reflecting uncertainty in the global economy. Still take-up for prime and well-located buildings were bright spots across cities. Markets that saw a substantial pull back in demand over Q3 included Sydney, Beijing and Shanghai. Seoul and Singapore are outliers with limited future supply keeping conditions landlord favorable. For Seoul in particular, the low supply environment is accompanied by healthy demand conditions.

INVESTMENT ACTIVITY FALLS, BUT FARES BETTER THAN OTHER SECTORS AND REGIONS

Activity in the office sector has held up with close to $50 billion transacted between Q1 and Q3 2022, showing only a 6% decline compared to the same period last year. For reference, office volumes are down 3% and 14% in the U.S. and Europe respectively. Overall, the performance was uneven across markets. Investment weakness in Greater China persisted through the first three quarters of the year. Despite some deals closing in Q3 in Shanghai, they were mostly by corporates for owner-occupation. In Seoul and Singapore, where investment volumes were healthy in H1, failed deals (Parkview Square in Singapore and IFC Yeouido in Seoul) lowered liquidity expectations in the market. Meanwhile in Australia, several deals concluded in Q3, mostly by domestic players who are taking a longer-term view of CBD prime assets.

Logistics

RENT GROWTH HAS CONTINUED

Demand continues to surprise on the upside, against rising headwinds. Positive take-up was reported across Australia, South Korea and Japan, led by e-commerce and 3PL firms that continue to expand. In Q3, we noted that limited vacancy in Australia is constricting demand while in South Korea further supply delays have extended landlord favorable conditions. With the looming economic slowdown, take-up in the sector is expected to slow. The industry understands that major e-commerce players in the region are not over-committed in terms of warehouse space, and as a result, we do not anticipate any large-scale reduction of their leased space throughout the regions' markets.

STRONGEST YIELD EXPANSION EXPECTED

Investment volumes into the logistics sector have sharply declined from last year's record but are still holding at 7% above the volumes seen in 2020. Investment volumes have fallen the most in Australia down 30% compared to the same period in 2021, when several portfolio deals concluded. The yield decompression cycle for logistics is underway, impacting mostly long WALE assets where yields have softened circa 25 to 30 bps from six months ago. Yield expansion is expected to be largest in the logistics sector, especially given the strong repricing that has taken place over 2020 and 2021.

Multifamily - Japan

BETTER BUSINESS CONDITIONS AND NORMALIZING MIGRATION TRENDS

Leading business indicators like the Tankan Business Survey and hiring conditions of medium and large enterprises continue to strengthen from Q2. The latest job-to-applicants ratio has also indicated more positivity, rising to 1.6 in August vs. 1.2 last year. These typically have a strong correlation to net migration trends (as more job seekers move into the city) and we expect this trend to follow, benefiting the residential leasing markets. We believe a return of foreigners who typically prefer staying in the central areas will also support leasing activity in coming months.

On the investment side, transaction volumes continue to be healthy with USD4.4 billion in transactions up to September 2022. We expect another year of strong cross-border investor activity, especially as fundamentals remain solid, the cost of debt stays low, and currency (USDJPY) is at an extremely favorable entry point.

Retail

NASCENT RECOVERY, BUT COULD BE UNWOUND

Although some fundamentals have improved, there are risks that consumption activity might be curbed from inflation and rising interest rates. Investors that were previously active in the space have reduced exposure and from those that are still interested, they are targeting fewer markets.

Office

AUSTRALIA: DEMAND SLOWS WITH GROWING UNCERTAINTY

- Leasing demand remained concentrated in the <500 sqm segment of the market, with tenant preference for fitted-out suites in Prime grade buildings. Some large consolidations and return-of-space brought down overall demand in Q3.
- Rental recovery is expected to gain pace in late 2023, but the current outlook is clouded by uncertainty and recession risks for the global economy.
- Despite a strong quarter for transaction volumes, the full year tally is expected to be short of 2021's levels. Several office deals are currently up for sale, but activity is expected to be slow, especially for lower grade assets as investors await price discovery.

SINGAPORE: OUTLOOK REMAINS POSITIVE DUE TO SUPPLY SHORTAGE

- Despite demand momentum slowing going forward, limited supply (due to stock withdrawals) is expected to support 4.5% to 5.5% rental growth p.a. in the next three years.
- After close to15 large deals completing in H1, setting a new half yearly record of $5.3 billion, the pace of activity has slowed substantially in Q3. We expect deal making volume to remain low in the current environment.

HONG KONG: MARKET REMAINS TENANT FAVORABLE

- Leasing activity year-to-date has been limited and with new supply added to the decentralized markets, vacancy has steadily increased. Rents in Central and Kowloon East are down 24% and 17% respectively from the start of 2020.
- Institutional investors have generally avoided the office market, with only a handful of deals concluding since the start of 2020. In Q3, the sale of Goldin Financial Center completed after two years on the market at a price estimated to be 40% below the initial asking price.

CHINA: WEAKNESS IN OCCUPIER AND INVESTMENT MARKETS

- COVID-control measures as well as government crackdowns in previously fast expanding industries like technology and education has disrupted leasing activity in Shanghai and Beijing. We believe, large upcoming supply will keep markets tenant favorable, while rental weakness is expected to persist in the near-term.
- Investor interest remains almost absent, especially by foreign capital concerned about geopolitical and policy risk. Major transactions in Q3 were mostly located in Shanghai (none in Beijing) by domestic investors/corporates and for self-use.

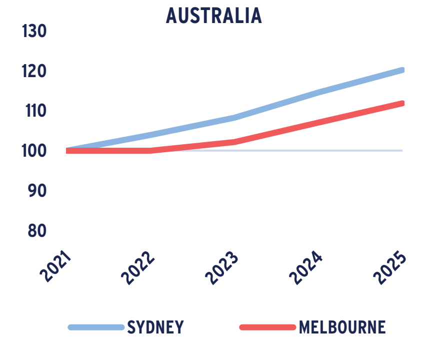
SOUTH KOREA: OCCUPIER MARKET HEALTHY, BUT HIGHER DEBT COSTS COULD IMPACT INVESTMENTS

- Market conditions in Seoul continue to surprise on the upside. Fundamentals are extremely landlord favorable with healthy occupier demand as well as limited new supply. Current vacancy levels are at 2.5%, the lowest since 2009.
- Despite solid occupier fundamentals, investment markets were quiet in Q3 after the failed sale of IFC to Mirae, bringing down liquidity expectations for the year.

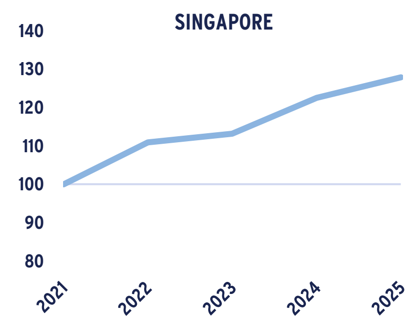
JAPAN: WE BELIEVE SUPPLY RISKS WILL DELAY RENTAL RECOVERY

- Tokyo: Leasing activity is gradually improving in Q3 after several quarters of weakness, and rents were stable over the quarter. However, any meaningful or sustained rental recovery in the next 12 months will likely be offset by the high volume of supply scheduled in 2023 (estimated to be 2.3% of total stock).

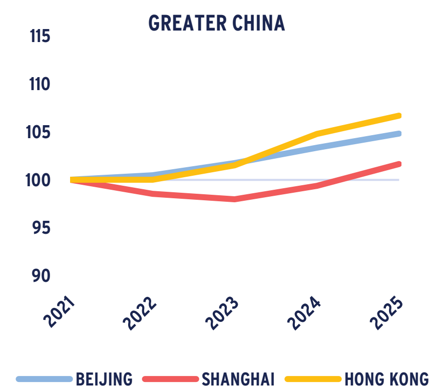
OFFICE RENT INDEX (2021 - 2025F) 2021 =100



Source: AEW Research, JLL, Q3 2022



Source: AEW Research, JLL, Q3 2022



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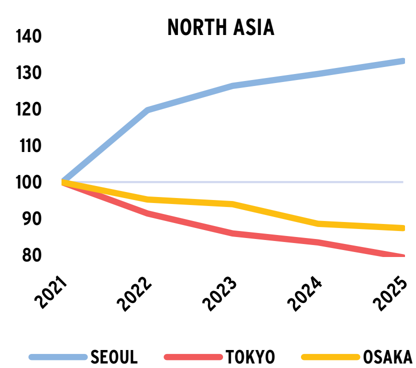

Source: AEW Research, JLL, Q3 2022

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Logistics

AUSTRALIA: OCCUPIER MARKET STRENGTH, BUT PRICING ADJUSTS

- Occupier conditions continue to be robust, mainly attributed to pre-leases which accounted for close to 50% of the quarter's new leases in Sydney and Melbourne. Vacancy rates as of Q3 are at all-time lows (less than 1%).
- Rents today are 20% to 40% higher vs. one year ago which has started to pinch on tenant affordability and could be met with resistance, especially by small-to medium-sized end-users. Still, there is broad consensus that rental growth will drag into 2023, ranging from 8% to 12% for the year.
- Investment activity in the sector has moderated from 2021's highs. Given the strong repricing in recent years and increased debt costs, cap rates for long WALE assets have already started to expand (25 to 50 bps from six months ago). There Is expectation for further cap rate expansion in the next 12 months.

SINGAPORE: HEALTHY DEMAND FOR PRIME ASSETS

- Business Parks: Market is bifurcated; vacancy in outer lying areas have increased but centrally located, newer facilities continue to be sought by growing industries like pharmaceutical and biomedical. Limited contiguous space in such locations has resulted in demand spillover to the high-tech buildings, which are zoned for light industrial use.
- Logistics: Demand for warehouses remained healthy as food, pharma and aerospace firms increased their storage requirements. Expansion momentum from e-commerce firms slowed in Q3 and could further taper in coming months. With near-term supply low, upward rental pressure could continue, baring economic headwinds.

HONG KONG: INVESTOR INTEREST FOR CONVERSION

- Rents are still growing as demand remains positive and vacancy limited, however strong supply is expected in 2023 and worsening economic conditions could reduce the momentum.
- Although transaction volumes have declined by 27% y-o-y in Q3, investor interest in the sector, especially by value-add funds are strong. New-economy conversion plays (to data centers, cold storage or self-storage) are key themes in 2022.

SOUTH KOREA: SUPPLY PEAK IN 2023

- New completions in 2022 are now expected to be about just 31 million sq ft, about 40% lower than initially forecasted, extending favorable conditions for landlords.
- We believe new supply will peak in 2023, and concerns on slowing demand momentum could stymie further rental growth, especially in the oversupplied cold storage segment.
- Investment volumes in Greater Seoul logistics have continued to climb in 2022 (up 10% year-to-date) despite the increased cost of debt. In general, cross-border capital is keeping at bay as they wait for construction costs and interest rates to settle.

JAPAN: REGIONAL CITIES LIKELY TO OUTPERFORM

- While demand in Greater Tokyo is still healthy, supply completing over the next three years is high (with limited pre-leasing) resulting in downward rental pressure in the near-term. Meanwhile regional cities are expected to outperform, given the limited new construction and sustained demand from manufacturing groups.

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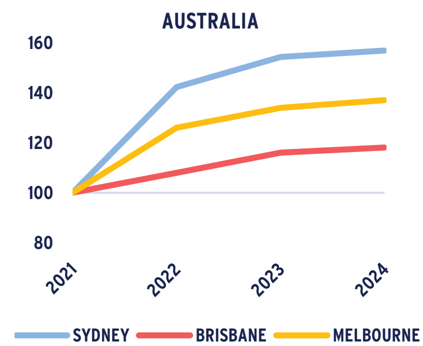
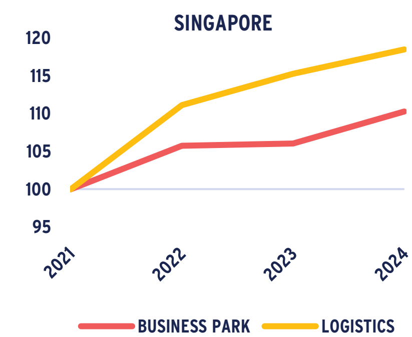
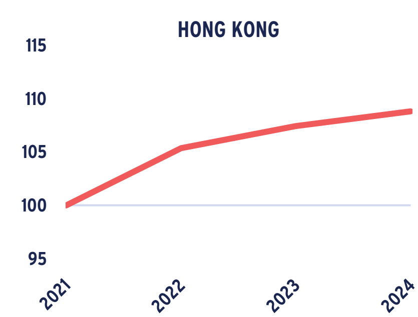
LOGISTICS RENT INDEX (2021- 2024F) 2021 =100



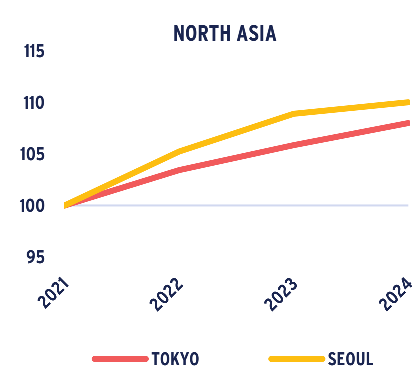
Source: JLL, as of Q3 2022



Source: JLL, as of Q3 2022



Source: JLL, as of Q3 2022



Source: JLL, as of Q3 2022

Retail

AUSTRALIA: RETAIL SALES SURPRISE, BRIEF INCREASE IN INVESTMENT VOLUMES IN Q3

- The increase in interest rates since the RBA started tightening in May (which was targeted at taming consumption) have had limited impact year-to-date. Retail sales have continued to expand in September, up 19.2% y-o-y and 0.6% m-o-m reaching record levels. Spending has been driven by discretionary categories such as clothing and footwear, café and restaurants, and department stores.

- Rents for most retail categories have been flat year-to-date except for large format retail and neighborhood centers that continue to see mild increases. For prime CBD retail, Melbourne continues to fare worse than Sydney due to lower foot traffic during the weekdays.

- Transaction volumes increased in the quarter, but this is expected to be temporary. The increased cost of debt is likely to slow investment volumes in following months. Retail yields which were previously expected to stay stable in 2022 and 2023 are now expected to soften between 25 to 60 bps in the next 12 to 18 months.

SINGAPORE: RETAIL RENTS RECOVERING

- The consumption and tourism recovery as well as the normalized office-based crowds have supported foot traffic and tenant sales across prime and suburban shopping centers. In the quarter, further relaxation on mask-wearing mandates indoors also boosted retailer confidence.

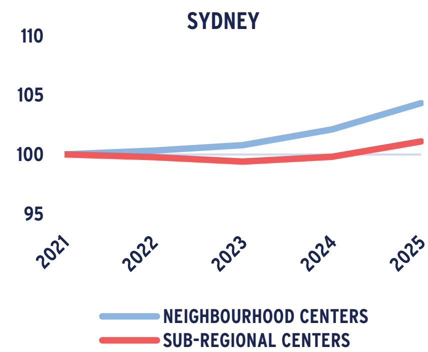
- Rents across both suburban and prime locations have increased by 1.7 to 1.9% q-o-q. While suburban rents have already recovered to their levels at start of the pandemic, rents in prime malls are still 15% lower than where they were in March 2020.

- Investment into the sector was muted in the quarter. One pending deal expected to close in Q4 is the portfolio sale of three suburban shopping centers. Once finalized, it would mark the biggest deal to close in Singapore this year.

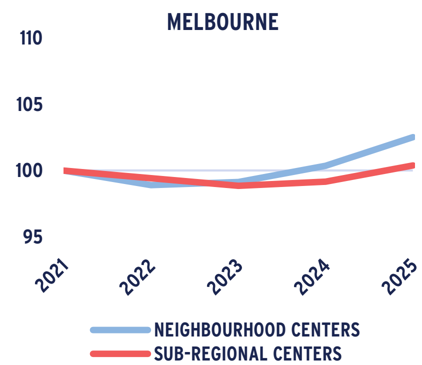
HONG KONG: POSSIBLE TOURISM-LED RECOVERY COULD FORM

- Retails sales have expanded mildly over Q3, in part supported by the government-issued consumption vouchers. By the end of September, the mandatory hotel quarantine for inbound visitors was withdrawn which gives scope for a more visible rebound in retail sales in the near- to medium-term.
- Leasing activity grew in Q3 with retailers taking advantage of the cheap rents. Rents today for high street and prime malls are still 40% and 33% lower than where they were at the start of the pandemic.
- Domestic, non-institutional investors continue to make-up the bulk of capital interested in the sector. Investment sentiment from this group of buyers is expected to wane going forward, especially in an environment of increased debt costs.

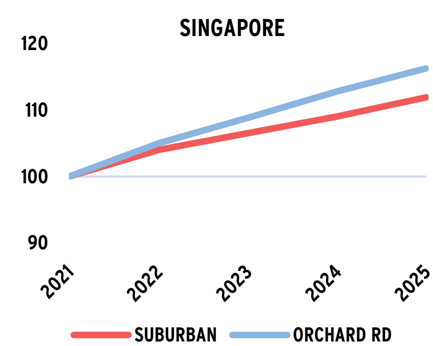
RETAIL RENT INDEX (2021 - 2025F) 2021 =100



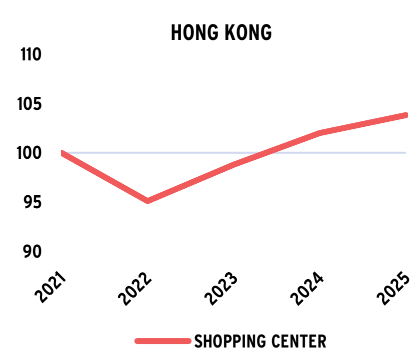
Source: JLL, as of Q3 2022



Source: JLL, as of Q3 2022



Source: JLL, as of Q3 2022



Source: JLL, as of Q3 2022

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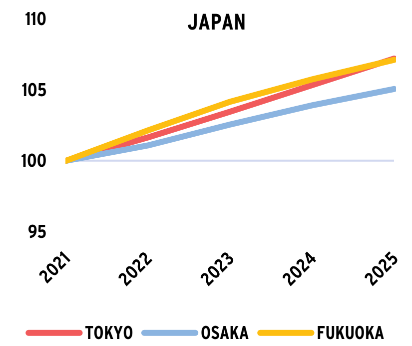
Multifamily

JAPAN: MIGRATION TRENDS START TO NORMALIZE

- Migration trends across Tokyo are normalizing – areas that saw large outflows during the pandemic are starting to see positive adjustments in their net population growth.
- From the end of September 2022 till the next net migration season in March/ April 2023, the increase in population is expected to be largely dependent on foreigners, who typically prefer staying in Central areas close to CBDs.
- Tokyo 23 Wards occupancy remains high at around 96.4% and rents have increased by 1.7% q-o-q and 3.1% y-o-y. The quarter's rental growth was being driven by newly completed buildings that had higher asking rents.
- Concerns about inflation means affordability could be stretched and it might take longer to lease newer and pricier units as tenants get more selective.

MULTIFAMILY RENT INDEX (2021 - 2025F) 2021 =100



Source: PMA, as of Q3 2022

AUSTRALIA: POSITIVE FUNDAMENTALS, BULK OF NEW SUPPLY IN MELBOURNE

- Fundamentals for build-to-rent (BTR) are solid - residential vacancy is low (less than 1%) and increasing immigration after border reopening and visa relaxation points to pent-up demand for rental housing in the inner-city areas. At the same time, rising mortgage rates are pushing would-be buyers into the rental market.
- Given the positive fundamentals and inflation hedging benefits (due to shorter term leases), more investors are evaluating positions in this sector. The current land tax issues in some markets like Brisbane, as well as 30% tax for foreign capital through the Managed Investment Trusts (MIT), are major challenges today.
- New supply for BTR is expanding quickly, with stock set to double y-o-y in 2022 (5,150 units) and again by the end of 2024 (12,000 units). The bulk of projects in the pipeline are in Melbourne, where land costs, planning permits and tax concessions make it more economical.
- Most BTR projects in the market today are focused on the higher end of the market and typically command a 20% rental premium to traditional rental projects.

CHINA (TIER 1): DEMAND AND INVESTOR INTEREST DISRUPTED

- Leasing demand for the multifamily sector in Shanghai and Beijing has slowed in the first three quarters of 2022. While some of the affects are seasonal, COVID outbreaks and control measures by the authorities have dominated the disruption.
- Investor interest in the sector has also waivered under the current conditions, with only one multifamily deal concluding in Q3 in Shanghai's Xinjiangwan area of a 560-unit apartment to be branded as Blinq.

Additional Notes

NATIXIS INVESTMENT MANAGERS