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Asia Pacific cities in tomorrow's world

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SUMMARY

At Nuveen Real Estate we believe Asia Pacific cities carry strong promise as part of our tomorrow's world investment thesis, and are highly compelling for institutional investors to consider when building a core real estate portfolio. This report explores how the diversity of DNA across the cities, the expanding investment possibilities within the region and the robust structural trend will continue to support strong risk-adjusted returns over the long term.

THE APPEAL OF ASIA PACIFIC

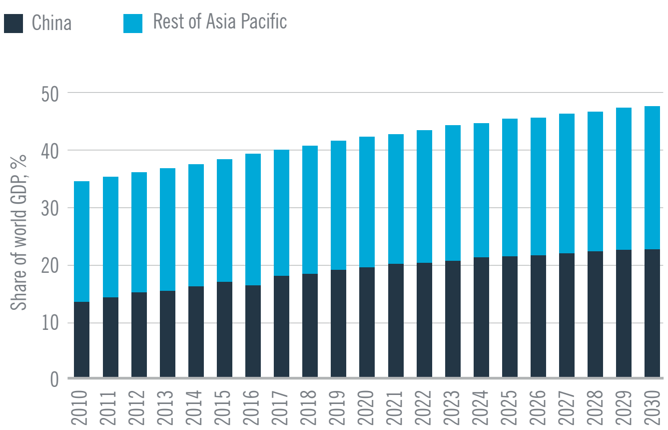
The weight of economic power and impact of structural megatrends will lean heavily towards the Asia Pacific region. By 2030, Asia Pacific, led by China, will account for nearly half of the world's output (Fig.1), more than 50% of the world's urban population (Fig.2) and almost all of the top 50 global cities with the largest forecast change in wealthy households.

Therefore, it is highly compelling for institutional investors to invest in Asia Pacific when building a sizeable core real estate portfolio. This is especially true in recent years, in light of heightened worldwide uncertainties following the Global Financial Crisis (GFC) in 2008 and the Coronavirus in 2019. The region's sturdy economic, demographic and political landscape provides risk mitigating and diversification benefits and a strong anchor to real asset values over the longer term.

An allocation into the Asia Pacific region may allow investors to enhance value to their global portfolio through regional diversification and enjoy additional benefits from variances across cities within the region. While there are many common threads running through some of the most prominent and resilient regional cities, domestic biases are also more pronounced across Asia Pacific than in the United States or Europe.

This allows global investors to tap into more diverse opportunities which further improve total portfolio risk-adjusted returns. It is the smart selection of cities, which are considered secularly resilient and sustainable from an economic and environmental perspective, that may help deliver attractive long-term and stable core returns. Top urban success stories in tomorrow's world are likely to come from Asia Pacific cities that are backed by supportive structural megatrends and also encapsulate the right DNA.

Fig. 1: The future is in Asia Pacific



Source: Oxford Economics, March 2023

> *The region's stellar growth over the past decades have been concentrated on key, core cities, many of which are already among the world's biggest, most globally competitive and resilient. Many more will rise to the fore in the coming decade, providing investors with even greater opportunities to tap into Asia Pacific's growing economic dominance.*
>
> **Louise Kavanagh**
>
> *Head of Asia Pacific and Chief Investment Officer*

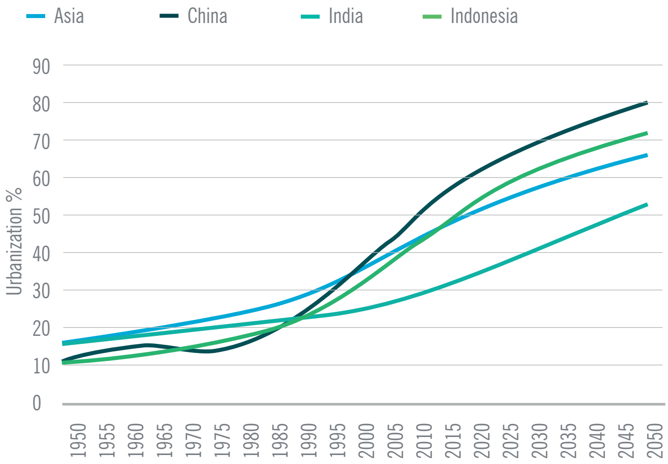
Picking the right cities with their own unique DNA, for example lifestyle leaders, millennial magnets, or education elitists, overlaid with an understanding of local micro-market dynamics, has shown to deliver outperformance in the long run. Our proprietary global cities filtering model considers both hard and soft factors, providing helpful insights to unlocking winning markets in successful cities both today and in the future.

Beyond traditional core markets, there are also strong merits to allocating and investing into alternatives to future-proof a broader portfolio. For example, many Chinese cities are not obvious targets for core investors, however these are developing at a rapid pace and should be closely monitored for future investability.

After all, progressive cities of today are the principal cities of tomorrow's world. Not only do they enhance returns through better-than-average growth, but also through structural repricing as they become more institutional, liquid and transparent.

Similar propositions can be made for alternatives sectors, such as data centers, student and senior housing, and luxury outlets in some markets to ride developed or emerging demographic trends. There is a strong case to be made for a core proposition in Asia Pacific and we believe now is the time to ride the bandwagon.

Fig. 2: A real demographic dividend boost from urbanization



Source: World Urbanisation Prospects: 2018 (latest data), UNPD

THE ENHANCED BENEFIT OF DIVERSIFICATION

An allocation into Asia Pacific allows investors to add value to their global portfolio through intra-regional growth diversification, and also benefit from the variances across economies within the region. A top-down macro perspective of real GDP growth since 1990 suggests the enhanced diversification benefit of adding Asia Pacific into a portfolio which includes the U.S. and Europe is highly pronounced (Fig. 3). This is due to growth across Asia Pacific historically being driven by the U.S. and to a lesser extent Europe. However, the overriding macro dynamics have evolved substantially over the past three decades.

The rise of China altered global trade patterns, placing it at the forefront of global capital and investment flows. China is now the world's largest economy in purchasing power parity (PPP) terms. Rising urbanization and an expanding middle class has also led to massive wealth creation and subsequently, expanding consumer demand and tourism. By 2030, the number of middle income households (defined by the government as annual household income between US$10,000-70,000) is set to increase by 81 million to 370 million, more than the entire population of the U.S.

By virtue of geographical proximity, many regional economies have benefited closely from China's rise, through foreign direct and portfolio investments, tourism and exports. An example is China's one belt, one road initiative. Also, while world demand still plays an important role in driving the region's growth, improving domestic demand growth – buoyant corporate and household balance sheets driving business investment and lifting consumer spending – will increasingly anchor the region's outlook in the coming years.

Fig. 3: Growth diversification between regions

	United States	Europe	Asia Pacific
United States	1.00	0.75	0.45
Europe		1.00	0.57
Asia Pacific			1.00

Source: Oxford Economics, March 2023

Note: Correlation of GDP growth between regions is measured between 1 and -1. 1 represents the most correlated and -1 the least correlated.

Rather than being led, Asia Pacific is now driving and outpacing world growth. The more attractive secular growth prospect for the region vis-a-vis many OECD countries – lower structural unemployment rate, well-buffered fiscal and foreign exchange reserve position, better infrastructure and transportation networks among others – suggests Asia Pacific can better stand alone and act as a strong diversifier to growth in the U.S. and Europe.

Fig. 4: Further diversification within the region

	Australia	China	Hong Kong	Japan	Singapore	South Korea
Australia	1.00	0.40	0.29	0.16	0.36	0.10
China		1.00	0.65	0.13	0.55	0.34
Hong Kong			1.00	0.64	0.86	0.63
Japan				1.00	0.68	0.56
Singapore					1.00	0.68
South Korea						1.00

Source: Oxford Economics, March 2023

Note: Correlation of GDP growth between regions is measured between 1 and -1. 1 represents the most correlated and -1 the least correlated.

Fig. 5: Global cities after the GFC – divergence in performance

	Highest quartile (-30% to -65%)		Medium quartile (-30% to -20%)		Medium quartile (-20% to -10%)		Lowest quartile (-10% to 0%)	
No lag (0-1 year)	Manchester San Diego Los Angeles Miami	Seattle Atlanta Boston San Francisco Chicago	New York London Denver Dallas Philadelphia	Portland Washington DC Minneapolis Houston Brisbane	Sydney Calgary Oslo Melbourne	Stockholm Paris Perth Auckland	Montreal Toronto Vancouver	
Lag (2-4 years)	Dublin Birmingham Edinburgh Budapest Madrid Porto		Tokyo Wellington Barcelona Prague Frankfurt		Berlin Lisbon Amsterdam Milan	Rotterdam Brussels Rome	Vienna Seoul Antwerp Cape Town Geneva Johannesburg	Munich Zurich Warsaw Hamburg Düsseldorf Copenhagen

Fig. 6: Strong benefits of a diversified portfolio

	Adelaide	Auckland	Beijing	Brisbane	Canberra	Hong Kong	Melbourne	Nagoya	Osaka	Perth	Seoul	Shanghai	Singapore	Sydney	Tokyo
Adelaide	1.00	0.84	-0.06	0.96	0.99	0.42	0.99	0.04	0.05	0.96	0.81	-0.36	0.42	0.96	0.02
Auckland		1.00	-0.41	0.86	0.84	0.22	0.84	-0.22	-0.24	0.83	0.93	-0.62	0.29	0.86	-0.24
Beijing			1.00	-0.17	-0.09	0.14	-0.07	0.41	0.44	-0.15	-0.38	0.72	0.27	-0.12	0.41
Brisbane				1.00	0.96	0.33	0.96	0.14	0.15	0.99	0.86	-0.46	0.45	0.96	0.13
Canberra					1.00	0.35	0.99	0.09	0.09	0.95	0.81	-0.43	0.41	0.97	0.07
Hong Kong						1.00	0.43	-0.13	-0.14	0.38	0.21	0.14	0.61	0.35	-0.16
Melbourne							1.00	0.09	0.08	0.94	0.82	-0.36	0.46	0.99	0.06
Nagoya								1.00	0.99	0.11	-0.17	0.20	0.31	0.14	0.99
Osaka									1.00	0.11	-0.20	0.24	0.27	0.12	0.99
Perth										1.00	0.82	-0.45	0.49	0.92	0.11
Seoul											1.00	-0.51	0.35	0.86	-0.20
Shanghai												1.00	0.05	-0.40	0.20
Singapore													1.00	0.44	0.32
Sydney														1.00	0.10
Tokyo															1.00

Source: MSCI, March 2023

Note: Correlation of GDP growth between regions is measured between 1 and -1. 1 represents the most correlated and -1 the least correlated.

Furthermore, there are additional diversification benefits from inter-region allocation (Fig. 4). For example, as the growth correlation between Hong Kong and Singapore is high – both being open economies with a large financial services and export sectors – a well balanced portfolio, while not excluding one over the other, should avoid a high, equal weighting to both economies. Adding Australia into a portfolio that includes Japan, South Korea and/or Hong Kong and Singapore may help to enhance risk-adjusted returns meaningfully.

A key lesson learnt from the GFC is while most global markets were hit by the economic downturn, the depth and breadth of the decline in values varied significantly across regions and cities, underlining the case for diversification (Fig. 5). Some cities were more resilient and shielded, with little decline or no change in values. Most cities in the U.S. saw a sharp and near instant downturn as risks intensified, and scattered transactions due to market illiquidity led to a magnified price contraction. Regardless of the magnitude of the downturn, some cities rebounded quicker than others from more resilient domestic conditions such as Sydney, Hong Kong, Singapore and Seoul.

In Europe, the sovereign debt crisis between 2009-2012 drove a prolonged market contraction, particularly for economies in Portugal, Ireland, Greece and Spain.

Choosing a balanced and diverse portfolio, backed by economic growth cycles across Asia Pacific is vital, as strong and resilient growth pulls income and capital value higher over the long term. Equally important, the more varied differences across global and regional markets, such as investable size, transparency, liquidity, tax and currency, can further help mitigate overall portfolio risk and enhance total returns.

For example, following the GFC, the regional office market performance was quite synchronized as a result of the coordinated and large monetary stimulus worldwide. Capital flowed strongly back into the few core office markets across the region, such as Sydney, Singapore, Hong Kong, Seoul and Tokyo – gateway capital cities also serving as the financial and commercial centers of the respective economies.

> *The relative value of core real estate is attractive compared to the local fixed income markets and the size of allocation will continue to broaden out as investors continue to seek inflation, protection, stable income and diversification.*
>
> **Abigail Dean**
> *Global Head of Strategic Insights*

However, in more recent years, while financial conditions remain largely robust (thus holding prices at elevated levels), the relative fundamental attractiveness of the different markets began to surface through a divergence in total returns; again suggesting strong diversification gains through a well-balanced portfolio.

Broadly speaking, scaling up a diversified portfolio of office assets (Fig. 6) can be achieved through:

1. Avoiding over-concentration in purely Australian and/or Japanese cities, given that cities within the same economies tend to trend in the same direction (by varying magnitude and with lags) due to similar economic or capital market conditions
2. Limit exposure to both Hong Kong and Singapore, for similar reasons, given the high market correlation
3. Include Seoul and Singapore office markets, the former being a localized market while the limited size, scale and depth of investable assets in Singapore restrict competition and transaction

There are various benefits to investing in Asia Pacific core real estate, and we believe that enhanced diversification is one of them.

DIVERSIFICATION HINGES ON RESILIENCE

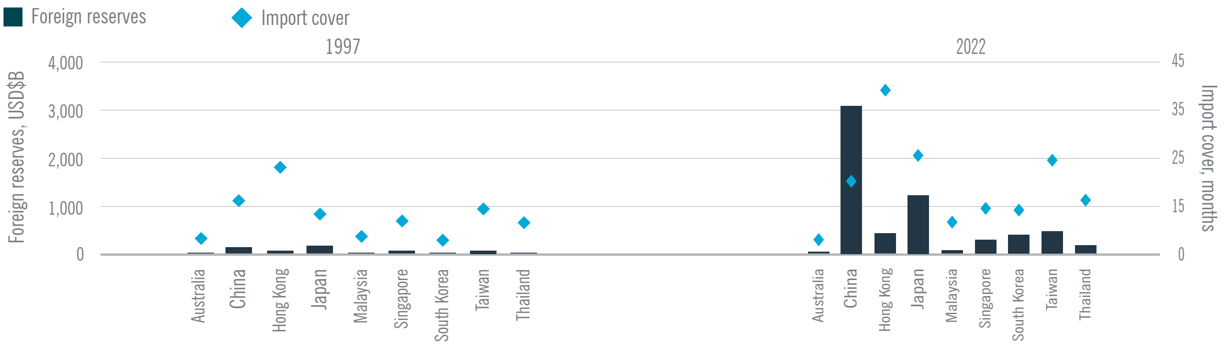
There is little doubt that Asia Pacific provides intra- and inter-regional growth diversification to concentration risks within a global real estate portfolio. However, diversification is beneficial insofar as the long-term, structural fundamentals of the economies that are invested in are resilient. Especially as, in recent months, there has been heightened concern over the outlook for inflation and monetary policy globally which may impact yield, pricing and the broader attractiveness of the real estate market at this stage of the cycle.

Against this backdrop of still high asset pricing in some markets alongside rising economic and geopolitical risks, how sturdy are regional economies today? Looking back, the Asian financial crisis in 1997 was driven by a mismatch between economic fundamentals eventually leading to sharp currency depreciations from speculative attacks, capital outflow and widespread corporate and household defaults.

However, this time is different;

1. **Better external defence:** accounting for more than half of the world's holdings, the region's foreign currency reserves have climbed to more than US$6 trillion from less than a trillion back in 1997. Ample currency reserves mean that the import cover (a rough gauge of currency stability) for most regional economies now stands at multiples of 1997's levels and much more than the three months 'rule of thumb' that is adequately required. In the case of Thailand and South Korea, two of the worst hit economies in 1997, reserves are nine times and seven times higher, respectively.

Fig. 7: Stronger buffer to growth



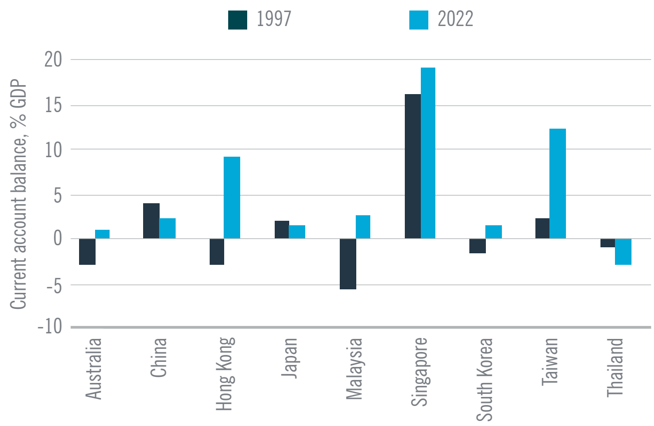
Source: Oxford Economics, March 2023

Most regional economies now have floating exchange rates (soft peg to the United States dollar), reducing the need for central banks to actively intervene in the currency markets. Current account balances (a measure of trade and financial flows) are also in much better shape now than in 1997, placing the region in a much better position in the event of an external crisis (Fig.7 and Fig.8).

2. **Stronger internal resilience:** the GFC in 2008 and most recently, the pandemic-induced economic downturn, have driven policymakers to engage in higher fiscal and monetary stimulus, helping to support economic conditions. As a result, the build-up in savings from the relatively robust labor market and rising asset values, particularly through the housing market, have strengthened household balance sheets.

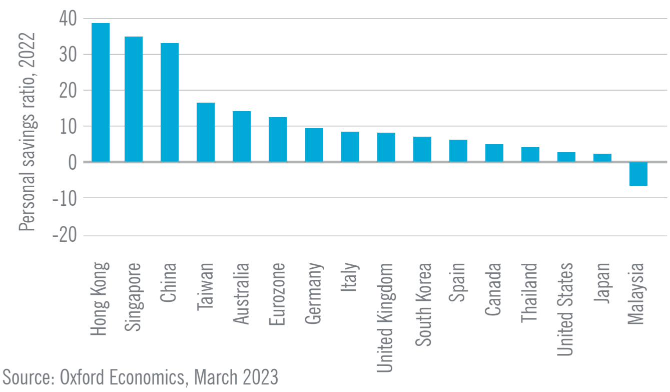
Largely driven by the rise of the Chinese middle class, Asia Pacific, by most accounts, is the wealthiest regional bloc in the world. Rising wealth, in turn, can help to mitigate against any crisis related to a pullback in consumer spending. If anything, most regional economies need to spend more and save less, to reduce the reliance on investments and exports to support growth. China is a case in point; the soft, managed slowdown in recent years reflects a coordinated effort by policymakers to rebalance credit-driven investments towards urbanization driven services and consumer-led growth (Fig.9 and Fig.10).

Fig. 8: More resilience to external risks



Source: Oxford Economics, March 2023

Fig. 9: Among the highest savers



Source: Oxford Economics, March 2023

The region is also a hotbed of global megatrends, which will help to provide a strong anchor for asset values across the region's core and growth markets.

That said, there has been increasing focus on the outlook for interest rates across the region, particularly following the series of U.S. Federal Reserve rate hikes over the past year. Monetary policy tightening across the region over the last 12 months, to temper inflation without derailing growth, underscores a greater challenge for the real estate market. Higher financing costs driving a negative yield spread across many regional markets have already weakened investment appetite and sentiment, resulting in wider bid-ask spreads and more scattered pricing.

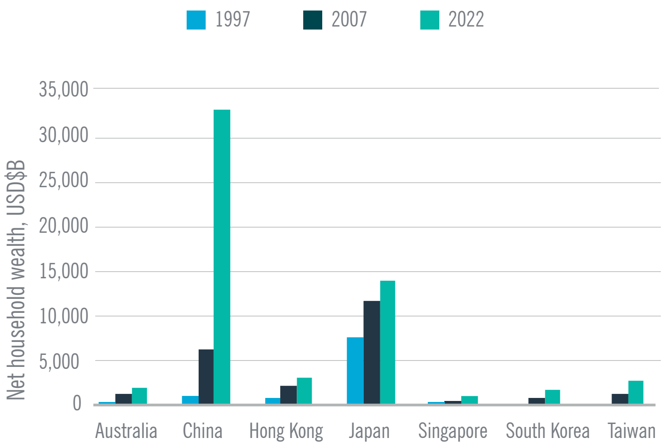
In Hong Kong, by virtue of the U.S. dollar peg, there is little question that monetary policy will have to follow the Fed in order to maintain the HK$-US$ interest rate differential. In Singapore, the Monetary Authority of Singapore, which uses the SG$ as a monetary policy tool, is likely to maintain the slope of the Singapore dollar nominal effective exchange rate policy band, in order to ensure medium-term price stability.

The Reserve Bank of Australia is expected to raise rates further, albeit modestly, in 2023 hiking by more than 300bp in 2022 (Fig.11). The Bank of Japan is also expected to normalize monetary policy, having widened the 10-year Japanese government bond band to +/-50bp at the end of 2022.

Growth across many Asia Pacific economies has eased this year, as uncertain global economic, financial and geopolitical risks dampen momentum. Any further monetary tightening in the medium term would most likely be measured, with the peak of the current interest rate cycle near current levels (Fig.12).

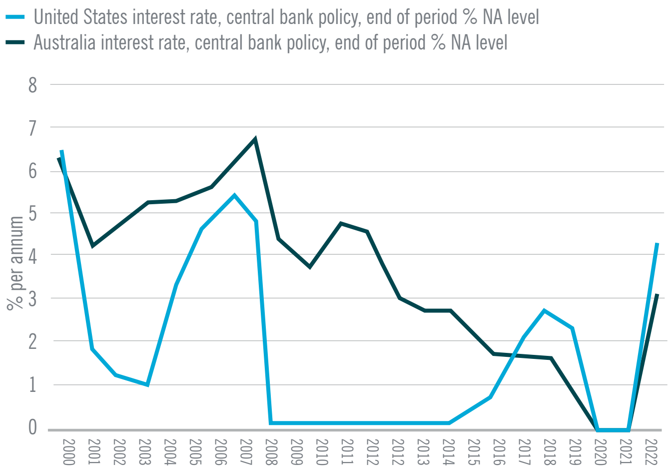
On balance, capital market sentiment will stay robust and competition for core real estate investments is likely to remain keen in the near term. However, the risk of capital outflow – impacting on interbank liquidity and rates – especially for open economies such as Hong Kong and Singapore, bears watching. We think investors should stay vigilant on changes in financing conditions, focus on core investments to mitigate price risks (bubble) and keep gearing at very reasonable levels at this point of the cycle.

Fig. 10: Robust household balance sheet



Source: Oxford Economics, March 2023

Fig. 11: Policy rate between United States and Australia to converge



Source: Oxford Economics, March 2023

Fig. 12: Central banks to move more cautiously

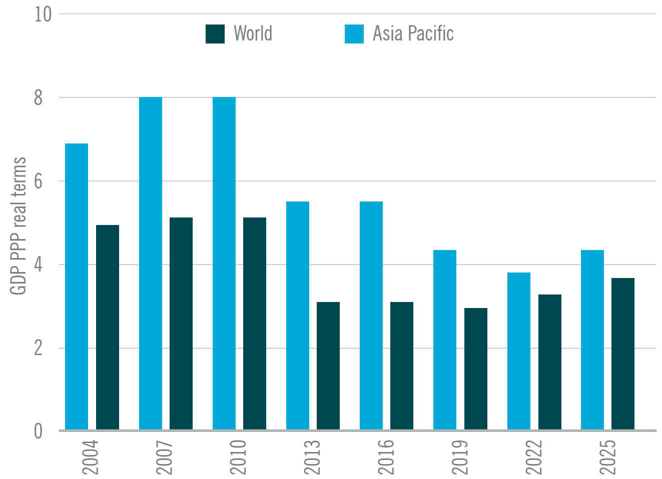
% per annum	2018	2019	2020	2021	2022	2023
United States	2.38	1.63	0.13	0.13	4.38	5.38
Australia	1.50	0.75	0.04	0.04	3.07	4.10
China	3.30	3.25	2.95	2.95	2.75	2.75
Hong Kong	2.75	2.49	0.50	0.50	4.75	5.75
Japan	-0.06	-0.07	-0.03	-0.02	-0.02	0.00

Source: Oxford Economics, March 2023

A HOTBED OF MEGATREND OPPORTUNITIES

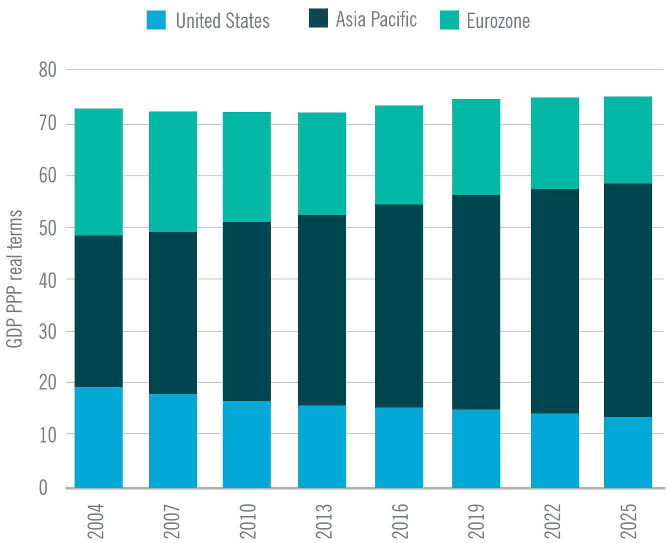
More resilient underlying fundamentals after the Asian financial crisis in 1997 will complement the region's longer-term secular trends to underpin economic growth prospects and real estate investment performance over coming decades. Among economic blocs, Asia Pacific continues to dominate and drive the global economy and provides the most attractive access to growth within the broader global property investment portfolio.

Fig. 13: Asia Pacific outpaces world growth...



Source: Oxford Economics, March 2023

Fig. 14: ...and dominates global economy



Source: Oxford Economics, March 2023

Over the last decade, regional growth (in real, PPP terms) is 1.5 times the world average rate (4.7% versus 3.0% respectively). While the growth gap is expected to halve in the coming decade, due mainly to the managed slowdown in China, it is still expected to outperform (Fig.13 and Fig.14).

Consequently, the size of the region's economy, having grown by 49% over the past decade, is expected to expand by a similar level the next 10 years.

By contrast, the world economy expanded by 29% from 2013-2022, and is expected to grow by a further 32% over the next 10 years. From just 32% in 2007, Asia Pacific will account for nearly half of world output by 2032 (Fig.15). This irreversible shift in economic influence from West to East also belies another megatrend: the rise of the middle class, wealth and consumption, much of which is led by the rise of China and, in time, India.

Fig. 15: Faster growth, bigger role

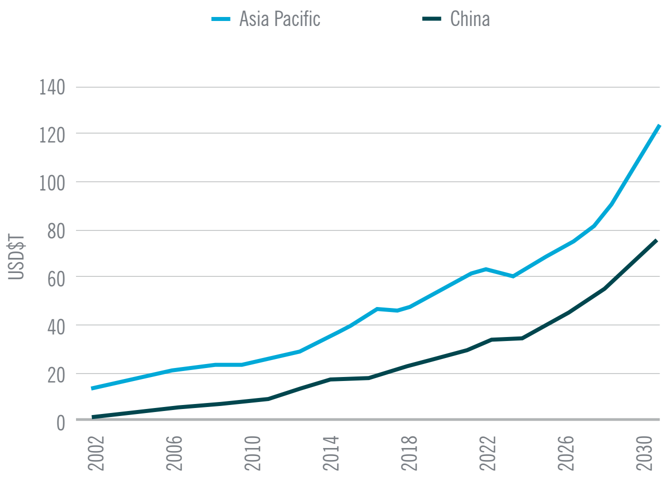
	2013-2022		2023-2032	
%	p.a.	Cumulative	p.a.	Cumulative
World	2.6	29.4	2.8	31.9
Asia Pacific	4.1	49.4	4.0	47.3
United States	1.9	20.9	1.4	15.4
Europe	1.7	18.1	1.4	15.0

Source: Oxford Economics, March 2023

FASTER GROWTH, BIGGER ROLE

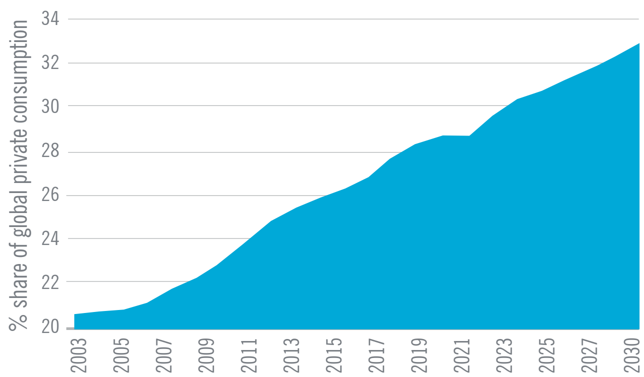
The revival of domestic demand conditions across the region after the prolonged downturn from 1997 to 2003, helped to mitigate the headwinds from the GFC. Undoubtedly, the coordinated global monetary easing and the large injection of stimulus by China helped support sentiment, however most regional economies did indeed enter the GFC in stronger economic and financial health; robust household and corporate savings, healthy business and labor market conditions and stronger fiscal and external balances. Consequently, the V-shape economic impact of the GFC on many Asia Pacific economies was sharp but relatively short-lived. The rise of the middle class, particularly in China, was key in mitigating global cyclical risks and more importantly, in strengthening regional trade, tourism and investments.

Fig. 16: Sharp increase in net household wealth



Source: Oxford Economics, March 2023

Fig. 17: Asia Pacific - consumer powerhouse



Source: Oxford Economics, March 2023

By most measures, Asia Pacific is now the wealthiest regional economic bloc in the world and Chinese consumers are already the biggest buyers of luxury products. Over the past decade alone, net household wealth across the region grew 67% to US$60 trillion in 2022 from US$36 trillion in 2013. Much of the increase can be attributed to rising asset prices (stock and real estate) due to loose financial conditions, however the continuing rise of the middle class in China is also expected to continue driving the level of net wealth across the region in the coming 10 years, by 117% to US$131 trillion (Fig.16). That being said, by 2030, Asia Pacific is expected to account for more than 30% of global consumption. The impact of a deepening and broadening consumer class alongside the rapid adoption of technology across the region will not go unnoticed in the retail and logistics sectors (Fig.17).

OPPORTUNITY IS KEY

The rapid development of Asia Pacific, in particular, the rise of China over the past decade, has provided global institutional real estate investors with diversification and growth benefits, as well as a wider and deeper universe of assets to invest in. As mentioned previously, Asia Pacific is the epicentre of many global megatrend opportunities of the future. As regional growth continues to outpace world averages, the weight of economic dominance will continue to tilt towards the East, placing Asia Pacific at the forefront of many of the investment opportunities available to real estate investors.

Strong macro backdrop should in turn translate into better investment opportunities for the commercial real estate market. As a factor of production in the local economy, commercial real estate values are inextricably linked to economic growth. Strong business performance translates into excess corporate profit which may drive higher rental income, ultimately capitalizing on rising value.

Although still accounting for only 20% of the total, the level of investable stock across Asia Pacific has risen 66% between 2010 and 2022, accounting for 37% of the growth in global office stock during the period. This trend of Asia Pacific accounting for the biggest source of much of the increase in the global property universe, is set to continue in the coming years (Fig.18).

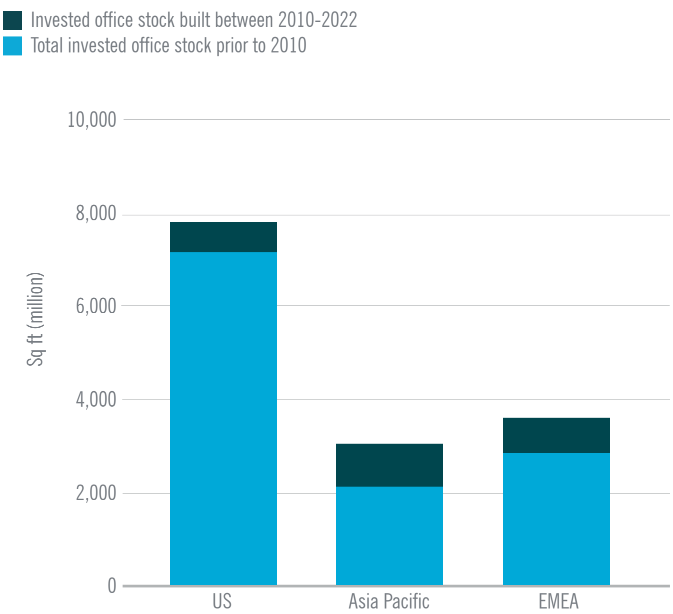
However, beyond a wider net of assets to choose from, structuring a global real estate portfolio through a robust strategic or tactical allocation, requires an in-depth understanding of the opportunity set in each of the selected markets. For example, in Tokyo, the level of Grade-B office stock accounts for roughly 75% of the investable office universe. This is a result of the much earlier industrial development of the Japanese economy and a more diversified nature and scale of the city.

High Grade-B Tokyo offices form a substantial proportion of a typical global or domestic institutional real estate portfolio, given the liquidity, investability and smaller scale of the assets. While many large-scale office projects in the development pipeline, in the Toranomon and Azabudai districts, are likely to lift the percentage of Grade-A office stock higher in the coming years, much of it will be held privately in developers' balance sheets and is not likely to broaden the Grade-A investment universe significantly.

Similarly, for other mature core cities, such as Seoul and Singapore, the Grade-B investment universe ratio stands at around 60% and 70%, respectively (Fig.19). However, in Seoul's case, the dominance of the large conglomerates and a relatively less transparent market means that private domestic investors are more active in the Grade-B segment.

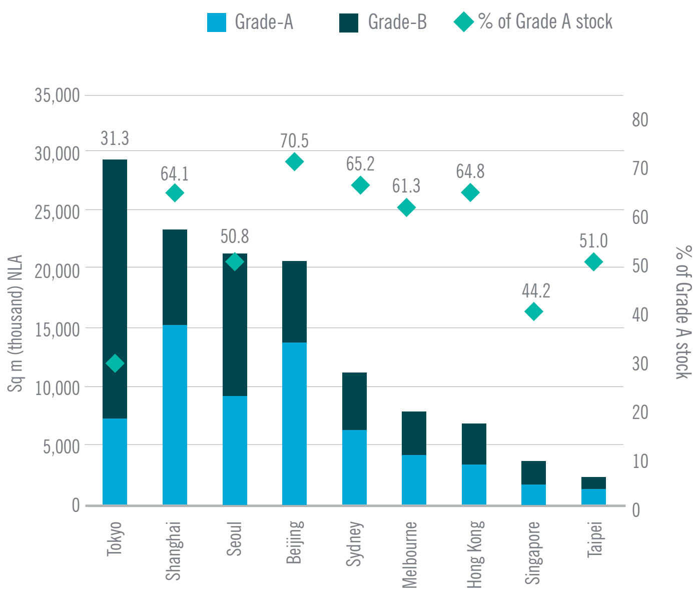
In the more recent emerging growing office markets, such as Shanghai, Beijing and Melbourne, the rapid development of new, large-scale office buildings has allowed global institutional investors to more actively deploy capital into the Grade-A space. In Shanghai and

Fig. 18: More investment opportunities



Source: MSCI Real Capital Analytics, 30 March 2023

Fig. 19: Not just when but also what to buy



Source: MSCI Real Capital Analytics, 30 April 2023

A deeper set of investment opportunities will surface in Asia Pacific over the coming years as markets continue to mature. But investors will need to intricately understand the make up and micro fabric of regional cities in order to navigate the more diverse landscape.

Leo Chung
Research Director, Strategic Insights, Asia Pacific

to a lesser extent Beijing, newer office stock built by local developers is often sold into the market in order to recycle cash flows, particularly in the more decentralized districts. By contrast, Central Grade-A office assets in Hong Kong are held closely by the developers. Regardless of the price cycle, the investment ticket size in Chinese cities, Hong Kong and Seoul tends to be much bigger than in the Australian cities (Grade-A) and Tokyo (Grade-B).

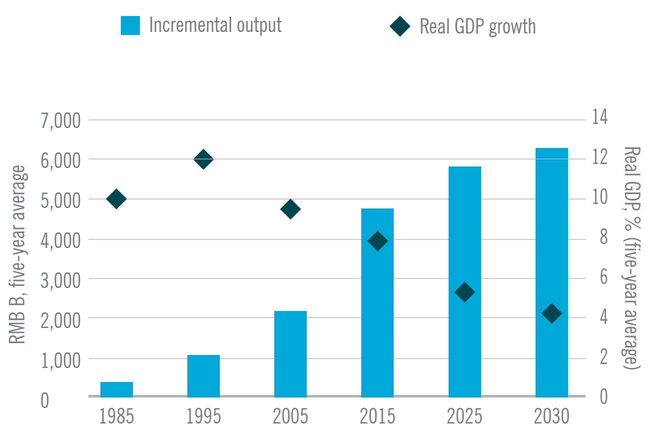
The growth of the investable market across Asia Pacific will provide global investors with a wider pool of options. Beyond the size of the opportunity set, investors will also need to consider the depth of the market to make the most meaningful capital allocation to achieve the best risk-adjusted returns.

THE RISE OF CHINA

The rapid development of China has been a key contributor to the rise of economic strength in the East. Tomorrow's world will see China continuing to play an increasing and critical role within the global economic and financial ecosystem. Although the Chinese economy has been slowing of late, the slowdown prior to the pandemic is policy-induced and has rebalanced the economy away from credit-driven investments into a greater share of consumption.

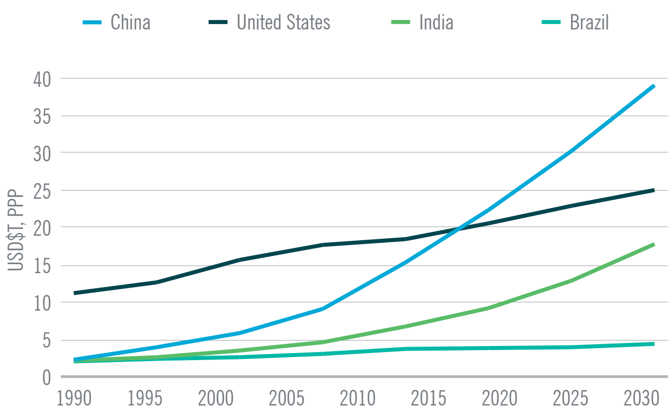
Furthermore, as China's growth steps away from highly-elevated levels, the economy still produces more output compared to three decades ago when growth was running at a much higher pace (Fig.20). China is already the world's largest economy, at around US$26 trillion measured by PPP terms, having surpassed the U.S. back in 2016 (Fig.21). The rise of China is indisputable and we believe Chinese cities will form an increasingly integral part of a global real estate portfolio over the long-term.

Fig. 20: Slower growth but gaining global share



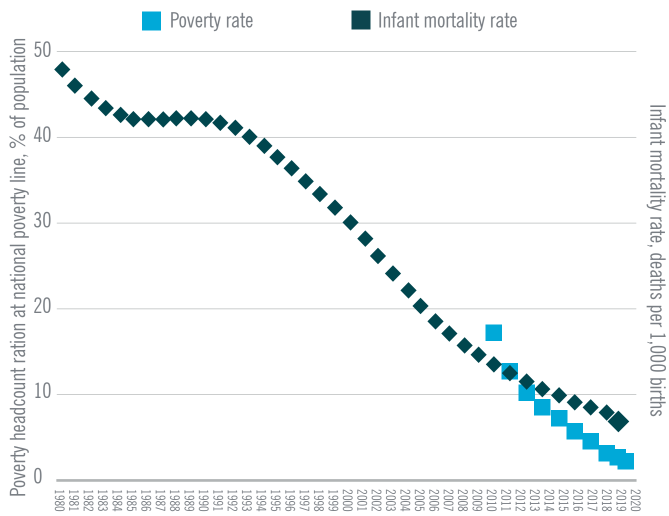
Source: Oxford Economics, March 2023

Fig. 21: Impressive growth performance



Source: Oxford Economics, March 2023

Fig. 22: More than an economic miracle



Source: World Bank, 2022

More than an economic miracle

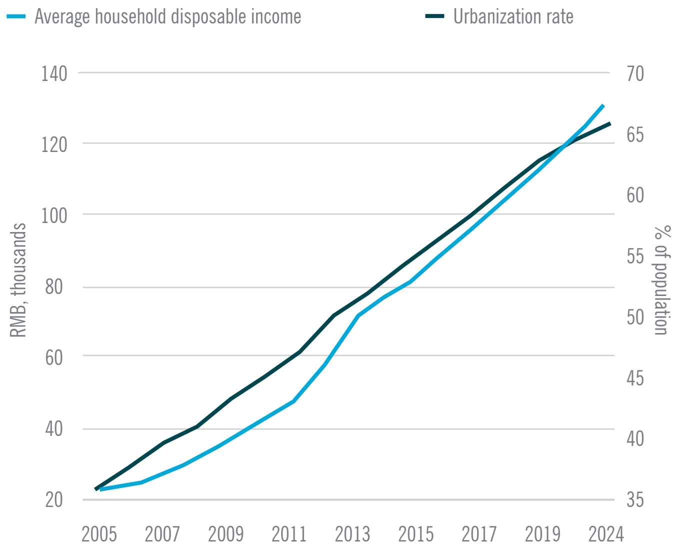
The rise of China belies a positive structural story. According to the World Bank, over 600 million Chinese have been lifted from poverty in the past 30 years, while the infant mortality rate has also fallen sharply (Fig.22).

More than one billion Chinese, equivalent to 90% of the population, now use a mobile phone as their primary tool of communication. By comparison, only 3% of Chinese households had a telephone back in 1980.

Urbanization underpins consumer demand

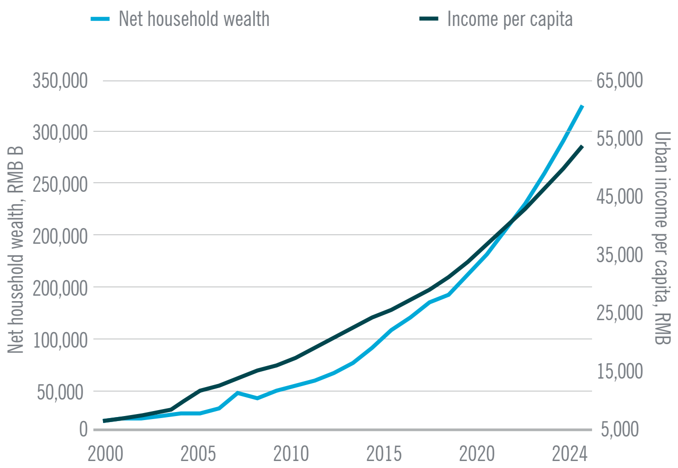
Over the past 30 years, China's urbanization ratio rose from 19.4% in 1980, immediately after the country kicked off its reform and open-door policies, to 62.5% in 2021. By 2030, it is estimated that around 72% of the population will be living in cities, implying approximately 128 million more urbanites in China, more than the entire population of Japan. This means an expansion of the services sector and higher wages should help to significantly boost household wealth and consumption (Fig.23 and Fig.24).

Fig. 23: Rising urbanization and income



Source: Oxford Economics, March 2023

Fig. 24: Massive wealth accumulation

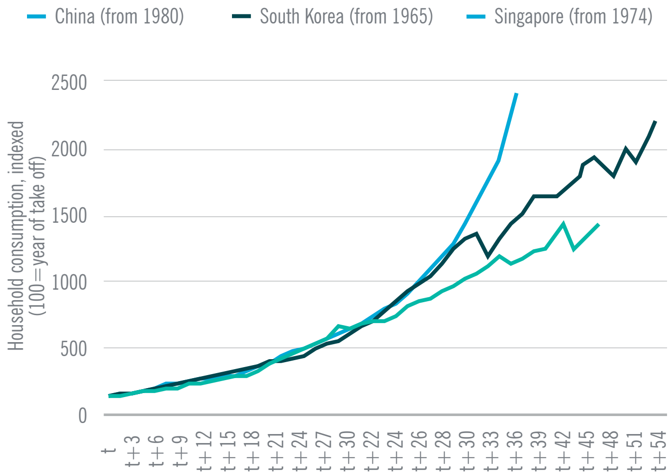


Source: Oxford Economics, March 2023

Rising middle class to drive high-end demand

There is an untapped demographic dividend in China based on quality, rather than the quantity of labor. By 2030, China is projected to have at least 310 million college graduates - constituting about 40% of the labor force - similar to levels in Germany, France and the U.K. today. At 282 million, China's middle class households (US$10,000-70,000 income band, constant 2015 prices) outnumbered the U.S. (at 45 million) in 2021 and it is expected that by 2030, another 88 million households will join this burgeoning class, opening up vast opportunities for future consumption growth. Consumer demand should continue to expand in the coming years, if mirroring the experiences of other regional economies over the past three decades (Fig.25).

Fig. 25: More room to spend



Source: Oxford Economics, March 2023
Note: t=year

China surpassed the U.S. as the world's largest trading nation in 2013, and in 2022, total merchandise trade reached US$6.3 trillion higher than the U.S. at around US$5.4 trillion. Chinese consumers are the biggest purchasers of luxury goods, accounting for 30% of the market ahead of the U.S. and Europe. In 2019, 155 million Chinese travelled overseas, more than any other country.

Since 2010, Chinese development lending has exceeded the World Bank; loans to Latin American countries exceeded the combined amount from the World Bank and the Inter-American Development Bank. China is also the top holder of U.S. Treasuries. Many Chinese cities will rank among the top global cities in the coming years, underpinned by urbanization, rising middle class, wealth and a growing services economy from improving productivity. It provides a compelling opportunity for global institutional investors to ride the secular rise of China and Chinese cities, and allocate selectively across the different real estate classes.

THE DNA OF ASIA PACIFIC CITIES

Global institutional investors diversify across regions, countries and markets to hedge volatility and achieve the best risk-adjusted returns. It is the smart selection of cities, that are considered secularly resilient and sustainable, from both an economic and environmental perspective, that can help deliver attractive long-term and stable returns. Many Asia Pacific cities are built along the same lines and multiple regional capital cities also happen to be gateway and financial centers of their respective economies.

After 1945, the bulk of labor and productive resources were concentrated in one or two cities nationally in order to achieve economies of scale. Over time, these cities have continued to grow in population and GDP through better employment prospects, access to services and amenities, better transport and infrastructure and quality of life. For example, Seoul, Sydney and Tokyo account for roughly 20% or more of their respective national economies and contribute even more to growth. With 35 million in population, Greater Tokyo is the world's largest metropolitan area and is likely to remain so for the next decade.

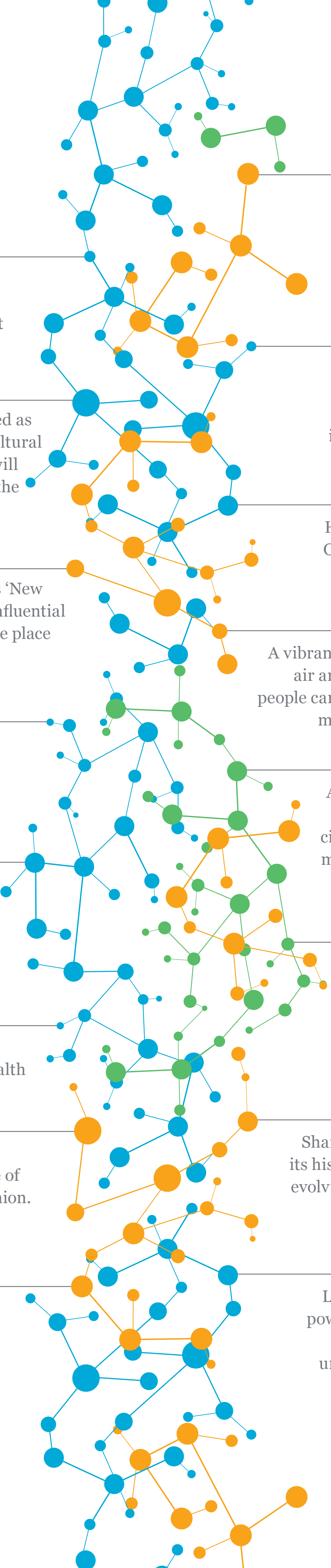
However, every city has its own DNA geographically, culturally, economically and socially. This variance in the DNA of each city provides investors with investment choices and justification through economic driven diversification. Investing in Hong Kong and Singapore is largely an investment in financial services growth: Hong Kong serves as a conduit for China's relatively closed capital market, whereas Singapore is the banking hub for private banking and South East Asia. Beijing and Tokyo may appear dissimilar in outlook, but they both provide density dividends underpinned by strong business concentration.

Beyond the capital cities, there are strong investment prospects in other key secondary cities. Melbourne is considered the sporting and cultural capital of Australia, drawing tourists as well as a strong cohort of international students due to its quality of life and affordability. Osaka is a tourist hub with a strong food culture, while Guangzhou provides demographic dividends through millennials, despite an ageing population profile across China. There can also still be diversification within industries. Nagoya, for example is a play on the car industry while Singapore, on life sciences.

In the coming decades, the real economic power centers of the world economy are cities and metro areas. Cities are the platforms for innovation, entrepreneurship and economic growth. Seoul's economy is bigger than Malaysia, Shanghai outranks the Philippines, and as a nation, Tokyo would rank in the top 20 largest economies in the world. Furthermore, cities evolve; 20 years ago, backwater Shenzhen was a fishing village. However, over time it has transformed into China's first special economic zone and key manufacturing hub, and is slowly becoming the Silicon Valley of China. Against the current late stage property cycle, investors still have many options to choose from. Picking cities with the right DNA that are secularly positive should help portfolio diversification and risk mitigation. For example, how about co-working space in Hong Kong, student housing in Melbourne, senior living in Tokyo and data storage in Singapore?

> *Australian cities are about stability, transparency, institutional acceptance and rule of law. They encapsulate many of the hard and soft factors that underpin a global city, making them highly attractive for global investors.*

Anthea Trazzera
Director, Real Estate Acquisitions



Hong Kong
Home to the highest concentration of banking institutions in the world, cosmopolitan Hong Kong serves as the gateway to China and hub of Asia.

Tokyo
A neon-lit modern playground full of skyscrapers, technological wonders, gastronomic experiences, and an ancient stronghold of Japanese culture.

Melbourne
Stylish, arty Melbourne is both dynamic and cosmopolitan; proud of itself as Australia's sporting and cultural capital.

Beijing
This eternal capital, which has served as China's political headquarter and cultural centre for the past eight centuries, will become a preeminent global city in the coming century.

Osaka
Historically a merchant city, Osaka is the nation's kitchen and manufacturing hub.

Brisbane
Boasting the country's best climate, this 'New World City' has rapidly emerged as an influential Asia Pacific leader and a highly-desirable place for the forward-thinkers.

Perth
A vibrant city with clear skies, fresh air and beautiful beaches, where people can still enjoy the benefits of a modern and relaxed lifestyle.

Shenzhen
As one of China's wealthiest and most entrepreneurial cities, Shenzhen draws a mix of businessmen, investors and migrant workers to its golden gates.

Singapore
As one of the wealthiest and business friendly global cities, Singapore is a cultural melting pot that gleams with capitalistic vigour.

Sydney
Australia's iconic face to the world and the nerve centre of the country's commercial and financial activities.

Canberra
As the monument to the young country's aspirations, Canberra shows off the nation's unique democratic and cultural landscape.

Adelaide
Sophisticated, cultured and neat-casual, Adelaide is shaped by prosperity and wealth for the free-spirited at heart.

Shanghai
Shanghai displays the charm of its historic past, while constantly evolving itself into a modern and futuristic metropolis.

Seoul
Korea's political, economic and cultural hub is at the cutting edge of technological innovation and fashion.

Nagoya
Living in the nation's central powerhouse of manufacturing, Nagoyans take pride in the unpretentious nature of their friendly, accessible city.

Guangzhou
Formerly a port and backwater of fish farms, Guangzhou transformed itself into a top global manufacturer and trading portal.

Fig. 26: Different personalities provide good diversification

		Capital city	Coastal champion	Culture capital	Density dividend	Diversification driver	Education elitist	Investment intensive	Lifestyle leader	Mega metropolis	Middle class mass	Millennial magnet	Political powerhouse	Rollercoaster rider	Sustainability standout	Technology trailblazer	Tourist trap
Tokyo	Asia's alpha+ city	●		●	●					●			●				
Osaka	Japan's food capital			●		●	●		●							●	●
Beijing	China's political and cultural capital	●		●						●			●				
Guangzhou	South China's commercial epicentre							●	●	●		●				●	
Shenzhen	China's productivity powerhouse							●		●	●	●				●	
Shanghai	China's commercial capital		●		●					●	●	●					
Sydney	City of dreams	●							●	●					●		●
Hong Kong	Asia's world city				●			●				●		●			●
Singapore	City that roars							●			●				●	●	●
Melbourne	Lifestyle capital	●	●	●			●		●								
Seoul	Asia's Silicon Valley	●		●						●			●			●	

Source: Nuveen Real Estate, 2023

Sydney: City of dreams

Coastal champion
Beaches, rock pools, parks and sandstone cliffs - Sydney's coastline has it all

Tourist target
Australia's leading tourism and events destination

Sustainability standout
2030 strategy sets the vision for a green, global and connected Sydney

Lifestyle leader
The beautiful cosmopolitan city celebrates its cultural diversity and heritage, and passion for arts and sports

Mega metropolis
The most densely populated city in the entire Oceania continent

- The state capital of New South Wales is the most populous and the largest city in Australia.
- It is the largest economy in Australia, accounting for over a quarter of the country's total economic activity including services, manufacturing, mining, finance, property and retail.
- Australia's leading financial centre, home to 65% of the country's banks, financial services, insurance fund management and stockbroking firms, and one third of the sector's employees.
- One of the most multicultural cities in the world, with 32% of its population born overseas versus 22% for Australia overall. Over half of its population are first or second generation immigrants, from all corners of the globe.
- Sydney annually ranks among worldwide top 10 most liveable cities lists.
- The site of the first British colony in Australia, which was set up in 1788 but officially became a city in 1842.
- It has the deepest natural harbour in the world with 504,000 mega litres of water.
- The Sydney Harbour Bridge is the widest long-span bridge and tallest steel arch bridge in the world.
- The world famous Sydney Opera House hosts a minimum of 3,000 shows per year.

Tokyo: Asia's alpha+ city

Culture capital
Unveiling Japanese culture with a large number of festivals, rituals, observances and celebrations

Capital city
Founded as Edo, Tokyo's literal translation means 'Eastern capital'

Political powerhouse
The seat of the Emperor of Japan and the Japanese government

Density dividend
The most populous metropolitan area in the world

Mega metropolis
Over 50% more population than the world's next largest metropolitan areas

- The Greater Tokyo Area is the world's largest metropolitan area by population and second largest by urban landmass.
- In 1962, Tokyo became the first city in the world to reach a population of more than 10 million.
- There are over 100 universities and colleges in Tokyo, with the world's highest concentration of higher-learning institutions. One third of Japan's university students attend school in Tokyo.
- Tokyo's literacy rate is almost perfect at 99%.
- Shibuya Crossing is said to be the busiest crossing in the world, with as many as 2,500 people crossing the street at the same time.
- Shinjuku Station is the busiest rail station in the world, with approximately 3.64 million passengers passing through each day.
- Oshiya, or 'pushers', are employed to literally push the millions of passengers aboard the train system during rush hours.
- With 12 Michelin three-star restaurants, Tokyo has more top-rated restaurants than any other city.
- Mount Fuji, known as a popular landmark seen from Tokyo, can only be seen less than 180 days each year in Tokyo due to air dust and clouds.
- The city is famous for having capsule hotels, which consist of a room no larger than a refrigerator.

OUR APPROACH TO CITY SELECTION

Asia Pacific's global footprint is led by some of the region's most interconnected, vibrant and resilient world cities. Many of these cities are highly populated and sizeable global financial centers, key manufacturing and transport hubs, tourist hotspots or innovation powerhouses. With about three quarters of the world's population projected to be living in cities by 2050 according to the UN, many more Asia Pacific cities will rank among tomorrow's world top urban economic success stories. By 2030, 16 of the biggest 25 cities in the world (by economic output) will reside in the region and Asia Pacific cities will account for 37 of the top 50 cities with the largest changes in household wealth (by total household personal disposable income) between 2010 and 2030. By 2030, Suzhou, Shenzhen, Guangzhou, New Delhi and Dhaka will replace Osaka, Nagoya, Bangkok, Singapore and Taipei among the top 10 Asia Pacific cities by economic output. During the same period, Asia Pacific cities will account for the top eight spots globally with the highest number of middle class income (US$35,000-70,000 annual) households; Tokyo, Seoul, Shanghai, Osaka, Shenzhen, Beijing, Jakarta and Guangzhou. Many rapidly developing secondary cities in Asia Pacific today will complement existing core markets to provide institutional investors with a deeper and broader universe of good quality investable assets for tomorrow's world.

In designing core real estate strategies, looking at longer-term structural drivers of real estate performance is paramount, given the increasingly complex market dynamics and evolving investor requirements. While a tactical analysis of market cycles remains important, understanding structural trends such as urbanization, technology, aging populations, migration and interconnectedness will be key to preserving values and unlocking growth in cities over the long term. Our in-house city filtering process is methodical, based on a set of robust and consistently available global data. It is meant to identify future-proof, resilient cities backed by megatrends, allowing investors to look past short-term cycles. As thematic trends evolve, it is important to overlay hard factors with soft factors in order to derive a comprehensive set of resilient cities of the future. After all, while the building blocks of resilient cities are the same, the DNA of cities can be very different, yet successful. Given the later stage economic development of Asia Pacific compared to the U.S. and Europe, global institutional investors may need to complement existing core cities with a basket of high-growth cities that build on core and diversify through growth. By 2030 the world's economic hierarchy will be very different from today, therefore it may be time to look at the world differently, and invest in the future of Asia Pacific cities with a magnified prism.

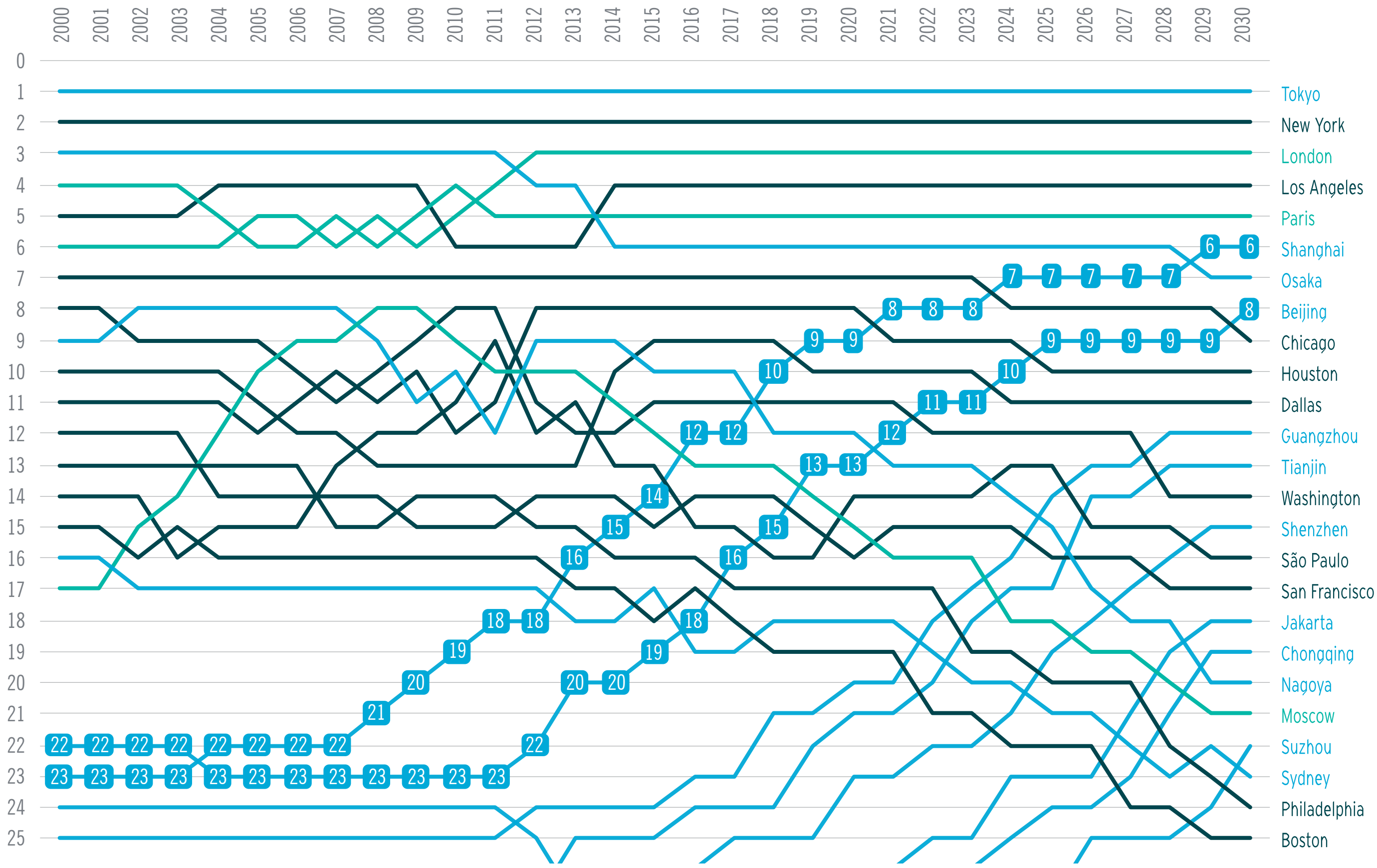
Shenzhen: soft and hard factors drive our selection

Fig. 27: Soft, hard and growth factors form part of our city filtering model

		Economic capital	Human capital	Social capital	
Hard factors: Scale and productivity	Scale: Population		√		Paris, London, New York, Los Angeles, Tokyo, Beijing
	Scale: Size of GDP	√			Tokyo, New York, London, Los Angeles, Osaka
	Productivity: GDP per capita	√			Geneva, San Jose, Perth, Oslo, San Francisco
	Youthfulness: Population <40		√		Istanbul, Shanghai, New York, Beijing, Guangzhou
	Affluence: Households US$100,000		√		New York, Washington, Boston, Canberra, Singapore
Soft factors: Liveability and likeability	Connectivity: International flights			√	London, Atlanta, Paris, Chicago, Shanghai, Beijing
	Technology: Innovation index			√	London, Vienna, San Francisco, Boston, New York, Amsterdam
	Liveability: Quality of life index			√	Vienna, Sydney, Melbourne, Singapore, Austin, Denver
Growth factors: Tomorrow's world	Population growth				Perth, Tianjin, Dallas, Austin, Beijing, Nashville, Istanbul
	Economic growth				Tianjin, Chengdu, Wuhan, Chongqing
	Affluence growth				Xiamen, Urumqi, Lanzhou, Chengdu

Source: Nuveen Real Estate, 2023

Fig. 28: Cities ranked by size of GDP



Source: Nuveen Real Estate, 2023

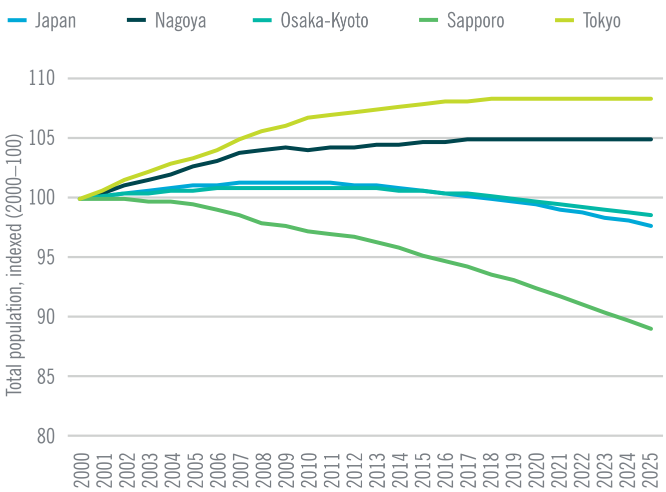
AN UNTAPPED DEMOGRAPHIC DIVIDEND

A favorable demographic dividend will continue to place Asian cities at the forefront of tomorrow's world global cities landscape. While many Asian countries are overshadowed by an aging and declining total and working-age population, many gateway Asian cities continue to be buoyed by rising urbanization, positive net migration and a more youthful and productive labor force. There is still an untapped demographic dividend from investing in many Asian cities. The population of many gateway Asian cities is still growing, mainly through urbanization and intra-migration, despite falling national averages.

Cities are growing faster and getting bigger

Many Asian cities will continue to yield net positive demographic dividend in the coming years, as workers typically move into cities offering better job prospects, wages and a higher quality of living. These gateway or global cities continue to expand geographical boundaries, output and population size and become even more interconnected and wealthy. For example, the Tokyo population grew by close to 0.3% from 2010-2022, even while the general population stagnated and started to decline since 2011 (Fig.29). Similarly, the population of major Australian cities has also consistently outstripped the national average in relative terms.

Fig. 29: Stronger case for Tokyo than Japan



Source: Oxford Economics, 2023

While overall population growth has stayed stagnant in China since the 1980s due to the one-child policy, the registered population of major cities has grown by more than five times the national average, mainly due to rapid urbanization and expansion of the geographical boundaries. In many regional cities, a wide variation also exists between the resident and floating population. For example, in Singapore around 250,000 people travelled back and forth to Malaysia daily before the pandemic.

Many Asian cities are among the biggest in population size globally. A high population provides a large and easily accessible pool of labor, a more productive capacity and also a large potential domestic market for consumer goods, entrepreneurial opportunity and overall economic growth. Many of the world's most populated cities will reside in China; there are already 18 Chinese cities with a population of over five million people, and more than 155 cities with one million people. Many of the world's biggest metropolis will also reside in China in the future, as we see the emergence of new cities centered around some of the largest existing urban centers today. It is estimated that the top 225 Chinese cities will contribute about 30% of global growth by 2025 (McKinsey), with Tokyo, Seoul, Jakarta and Bangkok among the other big Asian megacities.

The world's urban landscape is changing and Asia will be at the epicentre of this decisive shift in the coming decades. Despite the rather uninspiring headline of demographic trend, there are lots of strong mitigants to underpin the prospects for many Asian economies and cities. Many of tomorrow's world cities will reside in Asia, and are expected to become the largest (by economic and population size), wealthiest, most interconnected and resilient cities in the world, underpinned by the shift in economic influence from West to East.

> *Japan is aging but at a slower rate than many developed markets and will enjoy a new demographic dividend based on the quality, diversity and inclusion of labor, rather than just the quantity.*

Shu Watanabe
Head of Japan, Real Estate

MICRO-MARKET ANALYSIS IS KEY TO DELIVERING ALPHA

Making good and attractive real estate investments requires choosing the right cities, that are secularly strong and resilient. A deep understanding of broad country and city level economic conditions and market fundamentals is also critical. In the current climate of elevated pricing and heightened geopolitical risks, it is the local ground knowledge that can help to deliver outperformance.

Rapid urbanization will translate into increasing household and wealth growth, which in turn should strengthen consumption power for housing and household durables. Many of tomorrow's urban economic success stories will arise out of Asia Pacific cities and global institutional investors will do well to ride the growth of these future megacities.

As we select cities through numerous filters, we also conduct in-depth studies of micro-markets to determine what, where and when to deploy capital into the selected choice markets. For example, our scoring system for the Hong Kong house market, by districts (Fig.30), underwent two key stages:

Stage 1: Filtering

- Demographic and real estate market factors which are quantitative and top-level in nature. While traditional luxury housing markets are centered at the peak, island-south, and Kowloon Tong, data shows that Wan Chai has the highest number of high-disposable income households
- For example, population, household growth, disposable income
- 11 of 18 districts passed through this process

Stage 2: Scoring

- Qualitative factors which are critical for a district's future growth and attractiveness
- For example, school net, accessibility to CBD, public's perception and potential change in development landscape
- Central and Western, Wan Chai, Kowloon City, Sai Kung and Yau Tsim Mong are ranked top among the 18 districts

Fig. 30: A case study of Hong Kong

Districts	School net	Accessibility	Perception	Development	Final score
Central and Western	4	4	5	7	20
Wan Chai	3	4	4	8	19
Kowloon City	4	3	2	10	19
Sai Kung	2	2	3	10	17
Yau Tsim Mong	2	4	2	9	17
Southern	1	2	5	8	16
Eastern	3	3	3	3	12
Islands	1	1	3	6	11
Shatin	2	1	2	5	10
Tai Po	2	1	2	5	10
Tsuen Wan	1	2	2	4	9

Source: Nuveen Real Estate, 2023

CONCLUSION

Asia Pacific is made up of many of the megatrends that will shape tomorrow's world; strong and resilient growth, untapped demographics and technological adaptability. The region's global footprint is already led by some of the most interconnected, vibrant and resilient cities, many of which are global financial centers, key manufacturing and transport hubs, tourist hotspots and innovation powerhouses.

Many more growing cities outside the traditional gateway cities will rank among tomorrow's world urban economic success stories. All of these core and emerging cities share a common thread: safe and clean with excellent hard (infrastructure and transportation) and soft (highly-educated workforce) connectivity. However, there are differentiating features too; some are tourist havens, such as Sydney, others are millennial magnets, such as Shenzhen, or coastal champions like Singapore and Melbourne.

The diversity of DNA across Asia Pacific cities can allow global institutional investors to build a well diversified portfolio of a deep and broad universe of good quality investable assets over time, particularly during periods of challenging investment climate.

Asia Pacific cities has demonstrated a compelling diversity between their own makeup, with the potential for attractive hedging possibilities within the region, while the undercurrents of relatively attractive pricing and structural trends continue to support strong risk-adjusted returns. We believe Asia Pacific cities carry strong promise in tomorrow's world.

> *The real estate market transcends beyond the built environment. It is more about the individual DNA of the cities, such as people and livability. For a well positioned and diversified long-term portfolio, we advise investors to select, but not rank cities, as tomorrow's world winning cities are underpinned by varying economic and social fiber providing different attractive opportunities at different stages of the cycle.*

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