SECOND QUARTER 2019

INTERNATIONAL REPORT

CONSTRUCTION MARKET INTELLIGENCE

C ILLI



INDEPENDENT CONSULTANTS, LOCAL KNOWLEDGE AND EXPERTISE, GLOBAL NETWORK

The strength of Rider Levett Bucknall (RLB), the largest independent and most geographically prevalent construction cost consultancy of its kind in the world, is that it has the foremost construction intelligence available to it.

RLB collects and collates current construction data and forecast trends on a global, regional, country, city and sector basis. The RLB International Report, published half-yearly, provides a snapshot of construction market intelligence provided by the RLB network of offices around the globe. Each RLB office contributes to the global intelligence by providing current insights into the local conditions and trends that impact the construction industry within that region. Information that is gathered and disseminated by each local office includes:

- Forecast Tender Price Index
- RLB Construction Market Activity Cycle
- Key building type cost ranges in local currencies

TENDER PRICE INDEX

RLB's Tender Price Index (TPI) showcases the historical and forecast movements in construction cost inflation/ escalation on an annual basis. The TPI annual rate represents an overall forecast of the movement of construction costs for the industry as a whole within the key cities of RLB's network.

RLB MARKET ACTIVITY CYCLE

The RLB Market Activity Cycle focusses on seven key sectors within the overall construction economy. Local RLB directors assess the current position of each sector within the market activity cycle for each respective city.

BUILDING COST

RLB's Building Cost Ranges highlighted within each regional intelligence page are based on actual project construction costs. Building costs are provided in local currencies per m², with the exception of Oslo and Moscow whose building costs are expressed in Euros and North America, where all costs are in local currency per ft².

RELATIVITY INDEX

Using TPI data and cost modelling, RLB provides a general cost comparison for building costs between locations. The Relativity Index ranks each city in respect of other locations within the RLB network of offices. Currently forty nine are included in the index.

CONSTRUCTION MARKET INTELLIGENCE

A summary of Construction Market Intelligence is provided by each region highlighting the issues that are impacting the construction industry and providing key insights into current construction price movements.

KEY GLOBAL DATA

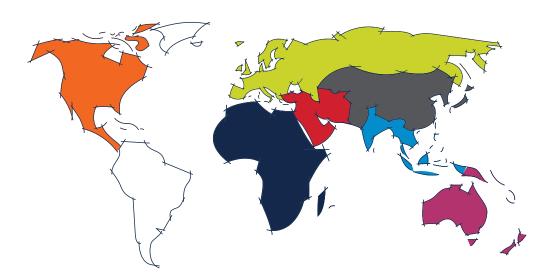
Key country and regional economic data is summarised within the Key Global Data tables describing the historical and projected economic conditions, within which the construction industry functions.

RLB publishes key industry intelligence publications throughout each year. For more detailed sector, city, country and regional information that is published by RLB, please review our regional or country specific publications which can be found within the publications section of **RLB.com**.

Cover: Coorparoo Square, QLD, Australia Architects: Conrad Gargett

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Each coloured region represents a section within the **Regional Intelligence** pages of this report



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GLOBAL INTELLIGENCE

Over the last 10 years, since the GFC and the start of the great recession, the global construction sector has seen strong growth. However, it would appear that growth during 2019 and into 2020 may be hindered by a combination of several global uncertainties, according to a survey of RLB's network of offices.

The key common global themes that RLB directors have identified as impacting construction growth in their regions are:

- A slowing of the global economy
- More conservative central bank decisions resulting in tighter credit conditions
- Ongoing trade tensions between the US and China
- Uncertainty in the terms of the United Kingdom's 'Brexit'.

The IMF revised their 2019 growth projections in the WEO January 2019 Report to 3.5%, down from 3.7% in October 2018 and 3.9% in January 2018, which is flowing through to general business confidence levels.

Despite the global threats identified above, the general perception of the global construction economy remains positive.

RLB's current construction market activity cycle highlights this sentiment. This edition has seen a further movement of sectors from the trough zone to the mid and peak zones of the activity cycle. One third of sectors are now in the peak zone, with 48% in the mid zone.

Construction activity in the US is forecast to increase in 2019 over 2018 levels. Commercial and infrastructure construction is gradually improving in all areas. The US economy is currently forecast to grow by 2.3% in 2019, down from 2.9% in 2018. Many experts are anticipating a construction slowdown in the second half of 2019 primarily due to the fading impact of the tax cut stimulus and an overall tightening in monetary policy. Overall, construction growth is starting to see some signs of a slowdown when compared to the last two years.

Construction is steadily improving in all Canadian Provinces. Oil & Gas capital expenditure has started to see a slight pick-up with current oil prices ranging from USD 55 to USD 65 per barrel.

The UK is still debating the process of leaving the European Union, with Brexit decision making still stalled more than two years after the UK referendum. This economic uncertainty is expected to have a negative impact on construction activity in 2019 through a hold on capital expenditure and the potential departure of corporate and manufacturing bases out of the UK. However, this may have positive flow-on effects for EU countries.

India overtook China and the US with the highest direct foreign investment in 2018 and its economy is forecast to grow by more than 7% in 2019. The Indian construction sector is set to see strong growth in 2019 and 2020.

The Chinese government has started to show more tolerance to its credit growth and to inject money into the economy. Such stimulus is expected to lead to steady growth in the near future, benefitting the construction industry within China and its territories.

The construction industry in Singapore, Vietnam, Malaysia, Indonesia and other Asian countries has been mixed over the past number of years, however most regions appear to be on the rise, most with more sectors in the growth phase of the market activity cycle.

Australia is seeing the effects of the government's emphasis on rail, road, airport and other major infrastructure-related projects that commenced during 2018 or are scheduled for commencement in 2019. Much of Australia's future construction growth will be funded by increased government spending on public facilities and infrastructure projects. The slowdown in the commencement of multilevel residential developments is a concern for the industry across the country.

Middle Eastern countries are pinning their hopes on oil prices remaining in the USD 55 to 65 a barrel range, and if that's the case, 2019 will see strong growth in construction activity. The Middle East's construction sector has shown a strengthening during 2018 and is forecast to continue this trend into 2019.

Both South Africa and Nigeria, Africa's two largest economies, are forecast to experience slow or limited growth in 2019, with perhaps Nigeria performing better than South Africa. A shortage of skilled workers both in construction and manufacturing will continue to stymie South Africa's economic growth for 2019. Depressed minerals & commodity prices continue to hold back the South African construction sector with business confidence at a near all-time low.

Expedient resolution of global trade tensions and an agreed Brexit solution should see positive sentiment returning to the industry in 2019, maintaining the current strength of the industry.

GLOBAL INTELLIGENCE RLB TENDER PRICE INDEX

Across the RLB global network of offices, construction escalation forecasts appear to be running at two speeds in 2019 and 2020. Globally, 42% of offices are forecasting escalation to be higher in 2019 than 2018, with 45% forecasting lower levels.

Since the release of the Q4 2018 RLB International Report, 16 cities have revised their 2019 TPI annual percentage forecasts upwards, while 19 were revised down.

The IMF's current forecast for global inflation is 3.6% for 2019 and 3.5% in 2020. Twenty-nine cities within the group are forecasting annual uplifts in construction costs higher than the global inflation forecast, while 28 cities forecast lower rates of construction cost growth.

African and Middle Eastern escalation forecasts for 2019 have softened since the Q4 2018 International Report. Half of the cities have revised their forecasts for building cost escalation slightly downwards for 2019.

Across North Asia, significant movements are being seen in the region around Hong Kong where construction cost deflation of between 2% and 3% is forecast for 2019. Most cities in the region are forecasting a slowing in escalation across 2019 with the exception of Hong Kong and Macau. This mirrors the anticipated fall in GDP growth across the region in 2019 and 2020.

Southeast Asian cities have been recording low levels of cost growth over the past few years and we are anticipating a gradual increasing of escalation rates during 2019. Ho Chi Minh City and Jakarta are forecasting the highest rate of TPI growth, with 3% for 2019.

Both Melbourne and Sydney have revised their escalation forecasts for 2019, up by 0.5% respectively. Since Q4 2018, most other cities have lowered their 2019 escalation forecasts by similar margins. As future building work is anticipated to fall during 2019, both Melbourne and Sydney are seeing significant infrastructure work underway, which is maintaining the pressure on costs.

New Zealand's escalation highs experienced during 2017 are retreating to levels not seen since before the earthquake rebuilding surge. Expectations are that escalation rates are stabilising across the country and are forecast to fall in each city during 2019. The United States is seeing a softening in escalation in 2019 and beyond, seemingly due to the plateauing of the economy. The fall in escalation predicted in our last report from 2018 levels has not been as steep and the current forecasts for 2019 are higher than previously reported. Canadian construction cost growth appears to have peaked in 2018 and is predicted to fall from those levels between 2019 and 2022.

Uncertainty still clouds the UK, especially London, which appears to be impacted the most by the Brexit uncertainty. The 2019 escalation forecast for London remains at only 1.0%, significantly lower than other centres across the UK.

Mainland Europe and Ireland regions are trending towards a more even level of escalation in 2019 and 2020 rather than the two speeds that have been historically reported.

		RLB TENDE	R PRICE ANN	UAL % CHANG	SE - Q1 2019		DIFFERENCE FROM Q4 2018 TPI FORECAST		
	2018	2019 (F)	2020 (F)	2021 (F)	2022 (F)	2023 (F)	Δ 2019	Δ 2020	
AFRICA									
CAPE TOWN	5.0	5.0	5.7	6.0	NP	NP	(0.4)	0.0	
DURBAN	6.3	5.0	5.6	5.8	5.9	6.0	(0.5)	0.0	
GABORONE	3.1	3.2	3.3	NP	NP	NP	0.0	0.0	
JOHANNESBURG	4.1	5.1	5.5	5.7	NP	NP	0.0	0.0	
ΜΑΡυτο	0.5	1.0	1.1	NP	NP	NP	0.0	0.0	
PORT LOUIS	5.0	3.5	3.0	NP	NP	NP	0.0	0.0	
MIDDLE EAST									
ABU DHABI	3.2	2.2	3.0	3.5	3.0	2.5	(0.5)	(0.7)	
DOHA	7.0	7.2	NP	NP	NP	NP	-	-	
DUBAI	3.0	2.2	3.0	3.5	3.0	2.5	(0.3)	(0.5)	
RIYADH	5.0	3.1	2.9	2.8	2.9	2.9	(1.9)	(2.1)	

GLOBAL INTELLIGENCE RLB TENDER PRICE INDEX

2018 NORTH ASIA BEIJING 3.0 CHENGDU 6.1 GUANGZHOU 5.0 HONG KONG (4.7) MACAU (4.1) SEOUL 4.4 SHANGHAI 3.5 SHENZHEN 5.0 SOUTHEAST ASIA CEBU CEBU 0.6 CLARK 0.6 HO CHI MINH CITY 2.7 JAKARTA 1.5 KUALA LUMPUR 0.0 MANILA 0.6 SINGAPORE 1.8 SUBIC 0.6 AUSTRALIA 0.6 AUSTRALIA 0.5 GOLD COAST 2.0 MELBOURNE 4.0 PERTH 1.0 SYDNEY 4.9 TOWNSVILLE 3.0 NEW ZEALAND 6.0 CHRISTCHURCH 3.0 WELLINGTON 6.0 CHRISTCHURCH 3.0 WELLINGTON 6.7 <td< th=""><th>2019 (F) 2.0 3.0 (3.0) (2.0) 4.8 2.0 3.0 1.6 1.6 1.6 3.0 3.0 1.5 1.6 1.3 1.6 3.9 3.0 3.5 0.8 2.5 4.0 1.5 4.4 3.5 2.0 4.0 3.5 2.0 4.0 3.5 3.5 2.0 4.0 3.5</th><th>ER PRICE ANN 2020 (F) 2.0 3.0 3.0 1.0 1.0 4.6 2.0 3.0 NP NP NP NP NP NP NP NP 2.0 NP NP 2.0 NP 4.0 5.1 3.3 1.2 3.0 4.0 2.8 4.2 3.5 3.0 2.0 4.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2</th><th>2021 (F) 2.0 3.0 4.0 2.0 2.0 4.1 3.0 3.0 NP NP NP NP NP NP NP NP NP NP</th><th>2022 (F) 2.0 3.0 4.0 3.0 3.0 3.0 3.0 3.0 3.0 NP NP NP NP NP NP NP NP NP NP</th><th>2023 (F) 2.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3</th><th>Q4 2018 TPI <u>Δ 2019</u> (2.1) 0.0 (6.0) (2.0) (2.0) (0.1) (1.5) (1.1) - - - - - - - - - - - - -</th><th>▲ 2020 (1.0) 0.0 0.0 (1.0) (1.0) (1.1) (1.1) - - - - - - - - - - - - -</th></td<>	2019 (F) 2.0 3.0 (3.0) (2.0) 4.8 2.0 3.0 1.6 1.6 1.6 3.0 3.0 1.5 1.6 1.3 1.6 3.9 3.0 3.5 0.8 2.5 4.0 1.5 4.4 3.5 2.0 4.0 3.5 2.0 4.0 3.5 3.5 2.0 4.0 3.5	ER PRICE ANN 2020 (F) 2.0 3.0 3.0 1.0 1.0 4.6 2.0 3.0 NP NP NP NP NP NP NP NP 2.0 NP NP 2.0 NP 4.0 5.1 3.3 1.2 3.0 4.0 2.8 4.2 3.5 3.0 2.0 4.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2	2021 (F) 2.0 3.0 4.0 2.0 2.0 4.1 3.0 3.0 NP NP NP NP NP NP NP NP NP NP	2022 (F) 2.0 3.0 4.0 3.0 3.0 3.0 3.0 3.0 3.0 NP NP NP NP NP NP NP NP NP NP	2023 (F) 2.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3	Q4 2018 TPI <u>Δ 2019</u> (2.1) 0.0 (6.0) (2.0) (2.0) (0.1) (1.5) (1.1) - - - - - - - - - - - - -	▲ 2020 (1.0) 0.0 0.0 (1.0) (1.0) (1.1) (1.1) - - - - - - - - - - - - -
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MACAU (4.1) SEOUL 4.4 SHANGHAI 3.5 SHENZHEN 5.0 SOUTHEAST ASIA CEBU CEBU 0.6 CLARK 0.6 HO CHI MINH CITY 2.7 JAKARTA 1.5 KUALA LUMPUR 0.0 MANILA 0.6 SINGAPORE 1.8 SUBIC 0.6 AUSTRALIA 3.5 BRISBANE 1.0 CANBERRA 3.5 DARWIN 0.5 GOLD COAST 2.0 MELBOURNE 4.0 PERTH 1.0 SYDNEY 4.9 TOWNSVILLE 3.0 NEW ZEALAND 6.0 UNITED STATES OF AMERICA BOSTON 4.4 CHICAGO 7.6 DENVER 4.0 HONOLULU 4.9 LAS VEGAS 5.4 LOS ANGELES 4.4 LOS ANGELES 4.4 </td <td>(2.0) 4.8 2.0 3.0 1.6 1.6 3.0 3.0 1.5 1.6 1.3 1.6 3.9 3.0 3.5 0.8 2.5 4.0 1.5 4.4 3.5 3.5 2.0 4.0</td> <td>1.0 4.6 2.0 3.0 NP NP NP NP 2.0 NP 2.0 NP 4.0 5.1 3.3 1.2 3.0 4.0 2.8 4.2 3.5 3.0 2.0</td> <td>2.0 4.1 3.0 3.0 NP NP NP NP NP NP NP NP NP NP NP 3.5 3.5 3.5 3.0 3.8 3.5 3.0 3.8 3.5</td> <td>3.0 3.6 3.0 3.0 NP NP NP NP NP NP NP NP NP 2.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3</td> <td>3.0 3.0 3.0 3.0 NP NP NP NP NP NP NP NP NP 3.0 3.0 3.5 3.5 3.5 3.0 3.5 3.5 3.5 3.0 3.5 3.5 3.0 3.5 3.5 3.0 3.5 3.5 3.0 3.5 3.5 3.0 3.5 3.5 3.0 3.5 3.5 3.0 3.5 3.5 3.0 3.5 3.5 3.0 3.5 3.5 3.0 3.5 3.5 3.0 3.5 3.5 3.0 3.5 3.5 3.0 3.5 3.5 3.0 3.5 3.5 3.0 3.5 3.5 3.0 3.5 3.5 3.0 3.5 3.5 3.0 3.5 3.5 3.0 3.5 3.5 3.5 3.0 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5</td> <td>$\begin{array}{c} (2.0) \\ (0.1) \\ (1.5) \\ (1.1) \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\$</td> <td>(1.0) 0.1 (1.0) (1.1) - - - - - - - - - - - - -</td>	(2.0) 4.8 2.0 3.0 1.6 1.6 3.0 3.0 1.5 1.6 1.3 1.6 3.9 3.0 3.5 0.8 2.5 4.0 1.5 4.4 3.5 3.5 2.0 4.0	1.0 4.6 2.0 3.0 NP NP NP NP 2.0 NP 2.0 NP 4.0 5.1 3.3 1.2 3.0 4.0 2.8 4.2 3.5 3.0 2.0	2.0 4.1 3.0 3.0 NP NP NP NP NP NP NP NP NP NP NP 3.5 3.5 3.5 3.0 3.8 3.5 3.0 3.8 3.5	3.0 3.6 3.0 3.0 NP NP NP NP NP NP NP NP NP 2.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3	3.0 3.0 3.0 3.0 NP NP NP NP NP NP NP NP NP 3.0 3.0 3.5 3.5 3.5 3.0 3.5 3.5 3.5 3.0 3.5 3.5 3.0 3.5 3.5 3.0 3.5 3.5 3.0 3.5 3.5 3.0 3.5 3.5 3.0 3.5 3.5 3.0 3.5 3.5 3.0 3.5 3.5 3.0 3.5 3.5 3.0 3.5 3.5 3.0 3.5 3.5 3.0 3.5 3.5 3.0 3.5 3.5 3.0 3.5 3.5 3.0 3.5 3.5 3.0 3.5 3.5 3.0 3.5 3.5 3.0 3.5 3.5 3.0 3.5 3.5 3.5 3.0 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5	$\begin{array}{c} (2.0) \\ (0.1) \\ (1.5) \\ (1.1) \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\$	(1.0) 0.1 (1.0) (1.1) - - - - - - - - - - - - -
SEOUL 4.4 SHANGHAI 3.5 SHENZHEN 5.0 SOUTHEAST ASIA CEBU CEBU 0.6 CLARK 0.6 HO CHI MINH CITY 2.7 JAKARTA 1.5 KUALA LUMPUR 0.0 MANILA 0.6 SINGAPORE 1.8 SUBIC 0.6 AUSTRALIA 1.5 AUSTRALIA 0.6 AUSTRALIA 0.6 AUSTRALIA 0.6 AUSTRALIA 0.6 AUSTRALIA 0.6 AUSTRALIA 0.5 GOLD COAST 2.0 MELBOURNE 4.0 PERTH 1.0 SYDNEY 4.9 TOWNSVILLE 3.0 NEW ZEALAND 6.0 CHRISTCHURCH 3.0 WELLINGTON 6.0 UNITED STATES OF AMERICA BOSTON 4.4 CHICAGO 7.6 DENVER 4.0 <td>$\begin{array}{c} 4.8\\ 2.0\\ 3.0\\ \hline \\ 3.0\\ \hline \\ 1.6\\ 1.6\\ 3.0\\ 1.5\\ 1.6\\ 1.3\\ 1.6\\ \hline \\ 3.9\\ 3.0\\ 3.5\\ 0.8\\ 2.5\\ 4.0\\ 1.5\\ 4.4\\ 3.5\\ \hline \\ 3.5\\ 2.0\\ 4.0\\ \hline \end{array}$</td> <td>4.6 2.0 3.0 NP NP NP NP 2.0 NP 2.0 NP 4.0 5.1 3.3 1.2 3.0 4.0 2.8 4.2 3.5 3.0 2.0</td> <td>4.1 3.0 3.0 NP NP NP NP NP NP NP 4.5 4.1 3.0 1.8 3.5 3.5 3.0 3.8 3.5 3.0 2.0</td> <td>3.6 3.0 3.0 NP NP NP NP NP NP NP NP 2.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3</td> <td>3.0 3.0 3.0 NP NP NP NP NP NP NP NP 3.0 3.0 3.0 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5</td> <td>$\begin{array}{c} (0.1) \\ (1.5) \\ (1.1) \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\$</td> <td>0.1 (1.0) (1.1) - - - - - - - - - - - - - - - - - - -</td>	$\begin{array}{c} 4.8\\ 2.0\\ 3.0\\ \hline \\ 3.0\\ \hline \\ 1.6\\ 1.6\\ 3.0\\ 1.5\\ 1.6\\ 1.3\\ 1.6\\ \hline \\ 3.9\\ 3.0\\ 3.5\\ 0.8\\ 2.5\\ 4.0\\ 1.5\\ 4.4\\ 3.5\\ \hline \\ 3.5\\ 2.0\\ 4.0\\ \hline \end{array}$	4.6 2.0 3.0 NP NP NP NP 2.0 NP 2.0 NP 4.0 5.1 3.3 1.2 3.0 4.0 2.8 4.2 3.5 3.0 2.0	4.1 3.0 3.0 NP NP NP NP NP NP NP 4.5 4.1 3.0 1.8 3.5 3.5 3.0 3.8 3.5 3.0 2.0	3.6 3.0 3.0 NP NP NP NP NP NP NP NP 2.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3	3.0 3.0 3.0 NP NP NP NP NP NP NP NP 3.0 3.0 3.0 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5	$\begin{array}{c} (0.1) \\ (1.5) \\ (1.1) \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\$	0.1 (1.0) (1.1) - - - - - - - - - - - - - - - - - - -
SHANGHAI 3.5 SHENZHEN 5.0 SOUTHEAST ASIA CEBU CEBU 0.6 CLARK 0.6 HO CHI MINH CITY 2.7 JAKARTA 1.5 KUALA LUMPUR 0.0 MANILA 0.6 SINGAPORE 1.8 SUBIC 0.6 AUSTRALIA 0.6 ADELAIDE 3.5 BRISBANE 1.0 CANBERRA 3.5 DARWIN 0.5 GOLD COAST 2.0 MELBOURNE 4.0 PERTH 1.0 SYDNEY 4.9 TOWNSVILLE 3.0 NEW ZEALAND 6.0 UNITED STATES OF AMERICA BOSTON BOSTON 4.4 CHICAGO 7.6 DENVER 4.0 HONOLULU 4.9 LAS VEGAS 5.4 LOS ANGELES 4.4 NEW YORK 4.5 PHOENIX	$\begin{array}{c} 2.0 \\ \hline 3.0 \\ \hline \end{array}$	2.0 3.0 NP NP NP NP 2.0 NP 4.0 5.1 3.3 1.2 3.0 4.0 2.8 4.2 3.5 3.0 2.0	3.0 3.0 NP NP NP NP NP NP NP A.5 4.1 3.0 1.8 3.5 3.5 3.0 3.8 3.5 3.0 2.0	3.0 3.0 NP NP NP NP NP NP NP NP 2.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3	3.0 3.0 NP NP NP NP NP NP NP NP 3.0 3.0 3.0 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5	(1.5) (1.1)	(1.0) (1.1) - - - - - - - - - - - - - - - - - - -
SHENZHEN 5.0 SOUTHEAST ASIA CEBU 0.6 CLARK 0.6 HO CHI MINH CITY 2.7 JAKARTA 1.5 KUALA LUMPUR 0.0 MANILA 0.6 SINGAPORE 1.8 SUBIC 0.6 O.6 AUSTRALIA 0.6 ADELAIDE 3.5 BRISBANE 1.0 CANBERRA 3.5 DARWIN 0.5 GOLD COAST 2.0 MELBOURNE 4.0 PERTH 1.0 SYDNEY 4.9 TOWNSVILLE 3.0 NEW ZEALAND 6.0 AUCKLAND 6.0 CHRISTCHURCH 3.0 WELLINGTON 6.0 7.6 DENVER 4.0 HONOLULU 4.9 LAS VEGAS 5.4 LOS ANGELES 4.4 CHICAGO 7.6 DENVER 4.0 HONOLULU 4.9 LAS VEGAS 5.4 LOS ANGELES 4.4 S S PHOENIX 6.5 SAN FRANCISCO 6.7	$\begin{array}{c} 3.0\\ \hline 1.6\\ \hline 1.6\\ \hline 3.0\\ \hline 3.0\\ \hline 1.5\\ \hline 1.6\\ \hline 1.3\\ \hline 1.6\\ \hline 3.9\\ \hline 3.0\\ \hline 3.5\\ \hline 0.8\\ \hline 2.5\\ \hline 4.0\\ \hline 1.5\\ \hline 4.4\\ \hline 3.5\\ \hline 3.5\\ \hline 2.0\\ \hline 4.0\\ \hline \end{array}$	3.0 NP NP NP NP 2.0 NP 2.0 NP 4.0 5.1 3.3 1.2 3.0 4.0 2.8 4.2 3.5 3.0 2.0	3.0 NP NP NP NP NP NP NP 4.5 4.1 3.0 1.8 3.5 3.5 3.0 3.8 3.5 3.0 3.8 3.5	3.0 NP NP NP NP NP NP NP 3.5 4.1 3.0 2.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3	3.0 NP NP NP NP NP NP A.5 3.0 3.0 3.0 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5	(1.1)	(1.1) - - - - - - - - - - - - -
CEBU 0.6 CLARK 0.6 HO CHI MINH CITY 2.7 JAKARTA 1.5 KUALA LUMPUR 0.0 MANILA 0.6 SINGAPORE 1.8 SUBIC 0.6 AUSTRALIA 1.0 ADELAIDE 3.5 BRISBANE 1.0 CANBERRA 3.5 DARWIN 0.5 GOLD COAST 2.0 MELBOURNE 4.0 PERTH 1.0 SYDNEY 4.9 TOWNSVILLE 3.0 NEW ZEALAND 6.0 UNITED STATES OF AMERICA BOSTON BOSTON 4.4 CHICAGO 7.6 DENVER 4.0 HONOLULU 4.9 LAS VEGAS 5.4 LOS ANGELES 4.4 NEW YORK 4.5 PHOENIX 6.5 WASHINGTON, D.C. 6.5 WASHINGTON, D.C. 6.5 WASHINGT	$ \begin{array}{r} 1.6 \\ 3.0 \\ 3.0 \\ 1.5 \\ 1.6 \\ 1.3 \\ 1.6 \\ \hline 3.9 \\ 3.0 \\ 3.5 \\ 0.8 \\ 2.5 \\ 4.0 \\ 1.5 \\ 4.4 \\ 3.5 \\ \hline 3.5 \\ 2.0 \\ 4.0 \\ 4.0 \\ \end{array} $	NP NP NP 2.0 NP 2.0 NP 4.0 5.1 3.3 1.2 3.0 4.0 2.8 4.2 3.5 3.0 2.0	NP NP NP NP NP NP 4.5 4.1 3.0 1.8 3.5 3.5 3.5 3.0 3.8 3.5 3.0 3.8 3.5 3.0 3.8 3.5	NP NP NP NP NP A.5 4.1 3.0 2.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3	NP NP NP NP NP 4.5 3.0 3.0 3.0 3.0 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5	- - - - - - - - - - - - - - - - - - -	
CLARK 0.6 HO CHI MINH CITY 2.7 JAKARTA 1.5 KUALA LUMPUR 0.0 MANILA 0.6 SINGAPORE 1.8 SUBIC 0.6 AUSTRALIA 1.6 ADELAIDE 3.5 BRISBANE 1.0 CANBERRA 3.5 DARWIN 0.5 GOLD COAST 2.0 MELBOURNE 4.0 PERTH 1.0 SYDNEY 4.9 TOWNSVILLE 3.0 NEW ZEALAND 6.0 UNITED STATES OF AMERICA BOSTON BOSTON 4.4 CHICAGO 7.6 DENVER 4.0 HONOLULU 4.9 LAS VEGAS 5.4 LOS ANGELES 4.4 NEW YORK 4.5 PHOENIX 6.7 SEATTLE 6.5 WASHINGTON, D.C. 6.5 CANADA 5	$ \begin{array}{r} 1.6 \\ 3.0 \\ 3.0 \\ 1.5 \\ 1.6 \\ 1.3 \\ 1.6 \\ \hline 3.9 \\ 3.0 \\ 3.5 \\ 0.8 \\ 2.5 \\ 4.0 \\ 1.5 \\ 4.4 \\ 3.5 \\ \hline 3.5 \\ 2.0 \\ 4.0 \\ 4.0 \\ \end{array} $	NP NP NP 2.0 NP 2.0 NP 4.0 5.1 3.3 1.2 3.0 4.0 2.8 4.2 3.5 3.0 2.0	NP NP NP NP NP NP 4.5 4.1 3.0 1.8 3.5 3.5 3.5 3.0 3.8 3.5 3.0 3.8 3.5 3.0 3.8 3.5	NP NP NP NP NP A.5 4.1 3.0 2.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3	NP NP NP NP NP 4.5 3.0 3.0 3.0 3.0 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5	- - - - - - - - - - - - - - - - - - -	- - - - - - - - - - - - - - - - - - -
HO CHI MINH CITY 2.7 JAKARTA 1.5 KUALA LUMPUR 0.0 MANILA 0.6 SINGAPORE 1.8 SUBIC 0.6 AUSTRALIA 0.6 ADELAIDE 3.5 BRISBANE 1.0 CANBERRA 3.5 DARWIN 0.5 GOLD COAST 2.0 MELBOURNE 4.0 PERTH 1.0 SYDNEY 4.9 TOWNSVILLE 3.0 NEW ZEALAND 6.0 UNITED STATES OF AMERICA BOSTON BOSTON 4.4 CHRISTCHURCH 3.0 WELLINGTON 6.0 UNITED STATES OF AMERICA BOSTON BOSTON 4.4 CHICAGO 7.6 DENVER 4.0 HONOLULU 4.9 LAS VEGAS 5.4 LOS ANGELES 4.4 NEW YORK 4.5 PHOENIX 6.5	$\begin{array}{r} 3.0\\ 3.0\\ 1.5\\ 1.6\\ 1.3\\ 1.6\\ 3.9\\ 3.0\\ 3.5\\ 0.8\\ 2.5\\ 4.0\\ 1.5\\ 4.4\\ 3.5\\ \hline 3.5\\ 2.0\\ 4.0\\ \hline 3.5\\ 2.0\\ 4.0\\ \hline \end{array}$	NP NP NP 2.0 NP 4.0 5.1 3.3 1.2 3.0 4.0 2.8 4.2 3.5 3.0 2.0	NP NP NP NP NP 4.5 4.1 3.0 1.8 3.5 3.5 3.0 3.8 3.5 3.0 3.8 3.5 3.0 3.8 3.5 3.0 2.0	NP NP NP NP 4.5 4.1 3.0 2.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3	NP NP NP NP 4.5 3.0 3.0 3.0 3.0 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5	- - - - (0.2) (1.0) 0.3 (0.4) (0.5) 0.5 (1.0) 0.5 (1.0) 0.5 0.0	- - - - - - - - - - - - - - - - - - -
JAKARTA 1.5 KUALA LUMPUR 0.0 MANILA 0.6 SINGAPORE 1.8 SUBIC 0.6 AUSTRALIA 0.6 ADELAIDE 3.5 BRISBANE 1.0 CANBERRA 3.5 DARWIN 0.5 GOLD COAST 2.0 MELBOURNE 4.0 PERTH 1.0 SYDNEY 4.9 TOWNSVILLE 3.0 NEW ZEALAND 6.0 CHRISTCHURCH 3.0 WELLINGTON 6.0 UNITED STATES OF AMERICA BOSTON BOSTON 4.4 CHICAGO 7.6 DENVER 4.0 HONOLULU 4.9 LAS VEGAS 5.4 LOS ANGELES 4.4 NEW YORK 4.5 PHOENIX 6.7 SEATTLE 6.5 WASHINGTON, D.C. 6.5 CANADA S	$\begin{array}{r} 3.0\\ 1.5\\ 1.6\\ 1.3\\ 1.6\\ \hline \end{array}$	NP NP 2.0 NP 4.0 5.1 3.3 1.2 3.0 4.0 2.8 4.2 3.5 3.0 2.8 4.2 3.5	NP NP NP NP 4.5 4.1 3.0 1.8 3.5 3.5 3.0 3.8 3.5 3.0 3.8 3.5 3.0 3.8 3.5 3.0 2.0	NP NP NP NP 4.5 4.1 3.0 2.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3	NP NP NP NP 4.5 3.0 3.0 3.0 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5	- - - - (0.2) (1.0) 0.3 (0.4) (0.5) 0.5 (1.0) 0.5 (1.0) 0.5 0.0	- - - - - - - - - - - - - - - - - - -
KUALA LUMPUR 0.0 MANILA 0.6 SINGAPORE 1.8 SUBIC 0.6 AUSTRALIA 0.6 ADELAIDE 3.5 BRISBANE 1.0 CANBERRA 3.5 DARWIN 0.5 GOLD COAST 2.0 MELBOURNE 4.9 TOWNSVILLE 3.0 NEW ZEALAND 4.9 AUCKLAND 6.0 CHRISTCHURCH 3.0 WELLINGTON 6.0 UNITED STATES OF AMERICA BOSTON BOSTON 4.4 CHICAGO 7.6 DENVER 4.0 HONOLULU 4.9 LAS VEGAS 5.4 LOS ANGELES 4.4 NEW YORK 4.4 PHOENIX 6.7 PORTLAND 7.11 SAN FRANCISCO 6.7 SEATTLE 6.5 WASHINGTON, D.C. 6.5 CANADA	$ \begin{array}{r} 1.5\\ 1.6\\ 1.3\\ 1.6\\ \hline 3.9\\ 3.0\\ 3.5\\ 0.8\\ 2.5\\ 4.0\\ 1.5\\ 4.4\\ 3.5\\ \hline 3.5\\ \hline 3.5\\ 2.0\\ 4.0\\ \hline 4.0\\ \hline $	NP NP 2.0 NP 4.0 5.1 3.3 1.2 3.0 4.0 2.8 4.2 3.5 3.0 2.0	NP NP NP 4.5 4.1 3.0 1.8 3.5 3.5 3.0 3.8 3.5 3.0 3.8 3.5 3.0 2.0	NP NP NP 4.5 4.1 3.0 2.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 2.5 2.0	NP NP NP 4.5 3.0 3.0 3.0 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5	- - - - (0.2) (1.0) 0.3 (0.4) (0.5) 0.5 (1.0) 0.5 (1.0) 0.5 0.0	- - - - - - - - - - - - - - - - - - -
MANILA 0.6 SINGAPORE 1.8 SUBIC 0.6 AUSTRALIA 0.6 ADELAIDE 3.5 BRISBANE 1.0 CANBERRA 3.5 DARWIN 0.5 GOLD COAST 2.0 MELBOURNE 4.0 PERTH 1.0 SYDNEY 4.9 TOWNSVILLE 3.0 NEW ZEALAND 6.0 CHRISTCHURCH 3.0 WELLINGTON 6.0 UNITED STATES OF AMERICA BOSTON BOSTON 4.4 CHICAGO 7.6 DENVER 4.0 HONOLULU 4.9 LAS VEGAS 5.4 LOS ANGELES 4.4 NEW YORK 4.5 PHOENIX 6.7 PORTLAND 7.11 SAN FRANCISCO 6.7 SEATTLE 6.5 WASHINGTON, D.C. 6.5 CANADA	$ \begin{array}{r} 1.6 \\ 1.3 \\ 1.6 \\ \hline 3.9 \\ 3.0 \\ 3.5 \\ 0.8 \\ 2.5 \\ 4.0 \\ 1.5 \\ 4.4 \\ 3.5 \\ \hline 3.5 \\ 3.5 \\ 2.0 \\ 4.0 \\ 4.0 \\ \end{array} $	NP 2.0 NP 4.0 5.1 3.3 1.2 3.0 4.0 2.8 4.2 3.5 3.0 2.0	NP NP NP 4.5 4.1 3.0 1.8 3.5 3.5 3.0 3.8 3.5 3.0 3.8 3.5 3.0 2.0	NP NP 4.5 4.1 3.0 2.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 2.5 2.0	NP NP 4.5 3.0 3.0 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 2.5 2.0	- - (0.2) (1.0) 0.3 (0.4) (0.5) 0.5 (1.0) 0.5 (1.0) 0.5 0.0	- - - - - - - - - - - - - - - - - - -
SINGAPORE 1.8 SUBIC 0.6 AUSTRALIA ADELAIDE ADELAIDE 3.5 BRISBANE 1.0 CANBERRA 3.5 DARWIN 0.5 GOLD COAST 2.0 MELBOURNE 4.0 PERTH 1.00 SYDNEY 4.9 TOWNSVILLE 3.0 NEW ZEALAND 6.0 AUCKLAND 6.0 CHRISTCHURCH 3.0 WELLINGTON 6.0 UNITED STATES OF AMERICA BOSTON BOSTON 4.4 CHICAGO 7.6 DENVER 4.0 HONOLULU 4.9 LAS VEGAS 5.4 LOS ANGELES 4.44 NEW YORK 4.5 PHOENIX 6.7 PORTLAND 7.11 SAN FRANCISCO 6.7 SEATTLE 6.5 WASHINGTON, D.C. 6.5 CANADA	$ \begin{array}{r} 1.3 \\ 1.6 \\ \hline 3.9 \\ 3.0 \\ 3.5 \\ 0.8 \\ 2.5 \\ 4.0 \\ 1.5 \\ 4.4 \\ 3.5 \\ \hline 3.5 \\ 2.0 \\ 4.0 \\ 4.0 \\ \end{array} $	2.0 NP 4.0 5.1 3.3 1.2 3.0 4.0 2.8 4.2 3.5 3.0 2.0	NP NP 4.5 4.1 3.0 1.8 3.5 3.5 3.0 3.8 3.5 3.0 3.8 3.5 3.0 2.0	NP NP 4.5 4.1 3.0 2.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 2.5 2.0	NP NP 4.5 3.0 3.0 3.5 3.5 3.5 3.5 3.5 3.5 3.5 2.5 2.0	- (0.2) (1.0) 0.3 (0.4) (0.5) 0.5 (1.0) 0.5 (1.0) 0.5 0.0	- - 0.0 1.0 0.3 (0.3) 0.0 1.0 (0.3) 0.3 0.0 0.0
SUBIC 0.6 AUSTRALIA ADELAIDE 3.5 BRISBANE 1.0 CANBERRA 3.5 DARWIN 0.5 GOLD COAST 2.0 MELBOURNE 4.0 PERTH 1.0 SYDNEY 4.9 TOWNSVILLE 3.0 NEW ZEALAND 6.0 CHRISTCHURCH 3.0 WELLINGTON 6.0 UNITED STATES OF AMERICA BOSTON 4.4 CHICAGO 7.6 DENVER 4.0 HONOLULU 4.9 LAS VEGAS 5.4 LOS ANGELES 4.4 NEW YORK 4.5 PHOENIX 6.7 PHOENIX 6.7 SEATTLE 6.5 WASHINGTON, D.C. 6.5 CANADA 6.5	$ \begin{array}{r} 3.9 \\ 3.0 \\ 3.5 \\ 0.8 \\ 2.5 \\ 4.0 \\ 1.5 \\ 4.4 \\ 3.5 \\ \hline \end{array} $ $ \begin{array}{r} 3.5 \\ 2.0 \\ 4.0 \\ 4.0 \\ \end{array} $	NP 4.0 5.1 3.3 1.2 3.0 4.0 2.8 4.2 3.5 3.0 2.0	NP 4.5 4.1 3.0 1.8 3.5 3.5 3.0 3.8 3.5 3.0 3.8 3.5 3.0 2.0	NP 4.5 4.1 3.0 2.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 2.5 2.0	NP 4.5 3.0 3.0 3.5 3.5 3.5 3.5 3.5 3.5 2.5 2.0	- (0.2) (1.0) 0.3 (0.4) (0.5) 0.5 (1.0) 0.5 0.0 0.0	- 0.0 1.0 0.3 (0.3) 0.0 1.0 (0.3) 0.3 0.3 0.0 0.0
AUSTRALIA ADELAIDE 3.5 BRISBANE 1.0 CANBERRA 3.5 DARWIN 0.5 GOLD COAST 2.0 MELBOURNE 4.0 PERTH 1.0 SYDNEY 4.9 TOWNSVILLE 3.0 NEW ZEALAND 6.0 AUCKLAND 6.0 UNITED STATES OF AMERICA BOSTON BOSTON 4.4 CHICAGO 7.6 DENVER 4.0 HONOLULU 4.9 LAS VEGAS 5.4 LOS ANGELES 4.4 NEW YORK 4.5 PHOENIX 6.7 SEATTLE 6.5 WASHINGTON, D.C. 6.5 CANADA 6.5	3.9 3.0 3.5 0.8 2.5 4.0 1.5 4.4 3.5 3.5 2.0 4.0	4.0 5.1 3.3 1.2 3.0 4.0 2.8 4.2 3.5 3.0 2.0	4.5 4.1 3.0 1.8 3.5 3.5 3.0 3.8 3.5 3.0 3.8 3.5 3.0 2.0	4.5 4.1 3.0 2.5 3.5 3.5 3.0 3.5 3.5 3.5 2.5 2.0	4.5 3.0 3.0 3.5 3.5 3.5 3.5 3.5 3.5 3.5 2.5 2.0	(0.2) (1.0) 0.3 (0.4) (0.5) 0.5 (1.0) 0.5 0.0 0.0	0.0 1.0 0.3 (0.3) 0.0 1.0 (0.3) 0.3 0.0 0.0
ADELAIDE 3.5 BRISBANE 1.0 CANBERRA 3.5 DARWIN 0.5 GOLD COAST 2.0 MELBOURNE 4.0 PERTH 1.0 SYDNEY 4.9 TOWNSVILLE 3.0 NEW ZEALAND 6.0 AUCKLAND 6.0 CHRISTCHURCH 3.0 WELLINGTON 6.0 UNITED STATES OF AMERICA BOSTON BOSTON 4.4 CHICAGO 7.6 DENVER 4.0 HONOLULU 4.9 LAS VEGAS 5.4 LOS ANGELES 4.4 NEW YORK 4.5 PHOENIX 6.7 PORTLAND 7.11 SAN FRANCISCO 6.7 SEATTLE 6.5 WASHINGTON, D.C. 6.5 CANADA	3.0 3.5 0.8 2.5 4.0 1.5 4.4 3.5 $3.5 2.0 4.0 4.0 4.0 4.0 $	5.1 3.3 1.2 3.0 4.0 2.8 4.2 3.5 3.0 2.0	4.1 3.0 1.8 3.5 3.0 3.8 3.5 3.0 3.8 3.5 3.0 2.0	4.1 3.0 2.5 3.5 3.5 3.0 3.5 3.5 3.5 2.5 2.0	3.0 3.0 3.5 3.5 3.5 3.5 3.5 3.5 3.5 2.5 2.0	$(1.0) \\ 0.3 \\ (0.4) \\ (0.5) \\ 0.5 \\ (1.0) \\ 0.5 \\ 0.0 \\ 0.$	1.0 0.3 (0.3) 0.0 1.0 (0.3) 0.3 0.0 0.0
BRISBANE 1.0 CANBERRA 3.5 DARWIN 0.5 GOLD COAST 2.0 MELBOURNE 4.0 PERTH 1.0 SYDNEY 4.9 TOWNSVILLE 3.0 NEW ZEALAND 6.0 AUCKLAND 6.0 CHRISTCHURCH 3.0 WELLINGTON 6.0 UNITED STATES OF AMERICA BOSTON BOSTON 4.4 CHICAGO 7.6 DENVER 4.0 HONOLULU 4.9 LAS VEGAS 5.4 LOS ANGELES 4.4 NEW YORK 4.5 PHOENIX 6.7 PORTLAND 7.11 SAN FRANCISCO 6.7 SEATTLE 6.5 WASHINGTON, D.C. 6.5 CANADA	3.0 3.5 0.8 2.5 4.0 1.5 4.4 3.5 $3.5 2.0 4.0 4.0 4.0 4.0 $	5.1 3.3 1.2 3.0 4.0 2.8 4.2 3.5 3.0 2.0	4.1 3.0 1.8 3.5 3.0 3.8 3.5 3.0 3.8 3.5 3.0 2.0	4.1 3.0 2.5 3.5 3.5 3.0 3.5 3.5 3.5 2.5 2.0	3.0 3.0 3.5 3.5 3.5 3.5 3.5 3.5 3.5 2.5 2.0	$(1.0) \\ 0.3 \\ (0.4) \\ (0.5) \\ 0.5 \\ (1.0) \\ 0.5 \\ 0.0 \\ 0.$	1.0 0.3 (0.3) 0.0 1.0 (0.3) 0.3 0.0 0.0
CANBERRA 3.5 DARWIN 0.5 GOLD COAST 2.0 MELBOURNE 4.0 PERTH 1.0 SYDNEY 4.9 TOWNSVILLE 3.0 NEW ZEALAND 6.0 AUCKLAND 6.0 UNITED STATES OF AMERICA BOSTON BOSTON 4.4 CHICAGO 7.6 DENVER 4.0 HONOLULU 4.9 LAS VEGAS 5.4 LOS ANGELES 4.4 NEW YORK 4.5 PHOENIX 6.7 SEATTLE 6.5 WASHINGTON, D.C. 6.5 CANADA 6.5	3.5 0.8 2.5 4.0 1.5 4.4 3.5 3.5 2.0 4.0	3.3 1.2 3.0 4.0 2.8 4.2 3.5 3.0 2.0	3.0 1.8 3.5 3.5 3.0 3.8 3.5 3.0 2.0	3.0 2.5 3.5 3.5 3.0 3.5 3.5 3.5 2.5 2.0	3.0 3.0 3.5 3.5 3.0 3.5 3.5 3.5 2.5 2.0	0.3 (0.4) (0.5) 0.5 (1.0) 0.5 0.0 0.0	0.3 (0.3) 0.0 1.0 (0.3) 0.3 0.0 0.0
DARWIN 0.5 GOLD COAST 2.0 MELBOURNE 4.0 PERTH 1.0 SYDNEY 4.9 TOWNSVILLE 3.0 NEW ZEALAND 6.0 AUCKLAND 6.0 CHRISTCHURCH 3.0 WELLINGTON 6.0 UNITED STATES OF AMERICA BOSTON BOSTON 4.4 CHICAGO 7.6 DENVER 4.0 HONOLULU 4.9 LAS VEGAS 5.4 LOS ANGELES 4.4 NEW YORK 4.5 PHOENIX 6.7 PORTLAND 7.11 SAN FRANCISCO 6.7 SEATTLE 6.5 WASHINGTON, D.C. 6.5 CANADA	0.8 2.5 4.0 1.5 4.4 3.5 3.5 2.0 4.0	1.2 3.0 4.0 2.8 4.2 3.5 3.0 2.0	1.8 3.5 3.5 3.0 3.8 3.5 3.0 3.0 2.0	2.5 3.5 3.5 3.0 3.5 3.5 2.5 2.0	3.0 3.5 3.5 3.0 3.5 3.5 3.5 2.5 2.0	(0.4) (0.5) 0.5 (1.0) 0.5 0.0 0.0	(0.3) 0.0 1.0 (0.3) 0.3 0.0
GOLD COAST 2.0 MELBOURNE 4.0 PERTH 1.0 SYDNEY 4.9 TOWNSVILLE 3.0 NEW ZEALAND 6.0 AUCKLAND 6.0 CHRISTCHURCH 3.0 WELLINGTON 6.0 UNITED STATES OF AMERICA BOSTON BOSTON 4.4 CHICAGO 7.6 DENVER 4.0 HONOLULU 4.9 LAS VEGAS 5.4 LOS ANGELES 4.4 PHOENIX 6.7 PORTLAND 7.1 SAN FRANCISCO 6.7 SEATTLE 6.5 WASHINGTON, D.C. 6.5 CANADA	2.5 4.0 1.5 4.4 3.5 3.5 2.0 4.0	3.0 4.0 2.8 4.2 3.5 3.0 2.0	3.5 3.5 3.0 3.8 3.5 3.0 3.0 2.0	3.5 3.5 3.0 3.5 3.5 2.5 2.0	3.5 3.5 3.0 3.5 3.5 2.5 2.0	(0.5) 0.5 (1.0) 0.5 0.0 0.0	0.0 1.0 (0.3) 0.3 0.0 0.0
MELBOURNE 4.0 PERTH 1.0 SYDNEY 4.9 TOWNSVILLE 3.0 NEW ZEALAND 6.0 AUCKLAND 6.0 CHRISTCHURCH 3.0 WELLINGTON 6.0 UNITED STATES OF AMERICA BOSTON BOSTON 4.4 CHICAGO 7.6 DENVER 4.0 HONOLULU 4.9 LAS VEGAS 5.4 LOS ANGELES 4.4 NEW YORK 4.5 PHOENIX 6.7 PORTLAND 7.11 SAN FRANCISCO 6.7 SEATTLE 6.5 WASHINGTON, D.C. 6.5	4.0 1.5 4.4 3.5 3.5 2.0 4.0	4.0 2.8 4.2 3.5 3.0 2.0	3.5 3.0 3.8 3.5 3.0 2.0	3.5 3.0 3.5 3.5 2.5 2.0	3.5 3.0 3.5 3.5 2.5 2.0	0.5 (1.0) 0.5 0.0	1.0 (0.3) 0.3 0.0
SYDNEY 4.9 TOWNSVILLE 3.0 NEW ZEALAND 6.0 AUCKLAND 6.0 CHRISTCHURCH 3.0 WELLINGTON 6.0 UNITED STATES OF AMERICA BOSTON BOSTON 4.4 CHICAGO 7.6 DENVER 4.0 HONOLULU 4.9 LAS VEGAS 5.4 LOS ANGELES 4.4 NEW YORK 4.5 PHOENIX 6.7 PORTLAND 7.11 SAN FRANCISCO 6.7 SEATTLE 6.5 WASHINGTON, D.C. 6.5	4.4 3.5 3.5 2.0 4.0	4.2 3.5 3.0 2.0	3.0 3.8 3.5 3.0 2.0	3.0 3.5 3.5 2.5 2.0	3.5 3.5 2.5 2.0	(1.0) 0.5 0.0 0.0	0.3 0.0 0.0
TOWNSVILLE 3.0 NEW ZEALAND 6.0 AUCKLAND 6.0 CHRISTCHURCH 3.0 WELLINGTON 6.0 UNITED STATES OF AMERICA BOSTON BOSTON 4.4 CHICAGO 7.6 DENVER 4.0 HONOLULU 4.9 LAS VEGAS 5.4 LOS ANGELES 4.4 NEW YORK 4.5 PHOENIX 6.7 PORTLAND 7.11 SAN FRANCISCO 6.7 SEATTLE 6.5 WASHINGTON, D.C. 6.5 CANADA	3.5 3.5 2.0 4.0	3.5 3.0 2.0	3.5 3.0 2.0	3.5 2.5 2.0	3.5 2.5 2.0	0.0	0.0
NEW ZEALAND AUCKLAND 6.0 CHRISTCHURCH 3.0 WELLINGTON 6.0 UNITED STATES OF AMERICA BOSTON BOSTON 4.4 CHICAGO 7.6 DENVER 4.0 HONOLULU 4.9 LAS VEGAS 5.4 LOS ANGELES 4.4 NEW YORK 4.5 PHOENIX 6.7 SEATTLE 6.5 WASHINGTON, D.C. 6.5 CANADA CANADA	3.5 2.0 4.0	3.0 2.0	3.0 2.0	2.5 2.0	2.5 2.0	0.0	0.0
AUCKLAND 6.0 CHRISTCHURCH 3.0 WELLINGTON 6.0 UNITED STATES OF AMERICA BOSTON 4.4 CHICAGO 7.6 DENVER 4.0 HONOLULU 4.9 LAS VEGAS 5.4 LOS ANGELES 4.4 NEW YORK 4.5 PHOENIX 6.7 PORTLAND 7.11 SAN FRANCISCO 6.7 SEATTLE 6.5 WASHINGTON, D.C. 6.5 CANADA	2.0 4.0	2.0	2.0	2.0	2.0		
CHRISTCHURCH 3.0 WELLINGTON 6.0 UNITED STATES OF AMERICA BOSTON 4.4 CHICAGO 7.6 DENVER 4.0 HONOLULU 4.9 LAS VEGAS 5.4 LOS ANGELES 4.4 NEW YORK 4.5 PHOENIX 6.7 PORTLAND 7.1 SAN FRANCISCO 6.7 SEATTLE 6.5 WASHINGTON, D.C. 6.5 CANADA	2.0 4.0	2.0	2.0	2.0	2.0		
WELLINGTON6.0UNITED STATES OF AMERICABOSTON4.4CHICAGO7.6DENVER4.0HONOLULU4.9LAS VEGAS5.4LOS ANGELES4.4NEW YORK4.5PHOENIX6.7PORTLAND7.1SAN FRANCISCO6.7SEATTLE6.5WASHINGTON, D.C.6.5CANADA	4.0					0.0	
UNITED STATES OF AMERICA BOSTON 4.4 CHICAGO 7.6 DENVER 4.0 HONOLULU 4.9 LAS VEGAS 5.4 LOS ANGELES 4.4 NEW YORK 4.5 PHOENIX 6.5 PHOENIX 6.7 SEATTLE 6.5 WASHINGTON, D.C. 6.5 CANADA		4.0	3.0				0.0
BOSTON 4.4 CHICAGO 7.6 DENVER 4.0 HONOLULU 4.9 LAS VEGAS 5.4 LOS ANGELES 4.4 NEW YORK 4.5 PHOENIX 6.7 PORTLAND 7.1 SAN FRANCISCO 6.7 SEATTLE 6.5 WASHINGTON, D.C. 6.5 CANADA				3.0	3.0	0.0	0.0
CHICAGO 7.6 DENVER 4.0 HONOLULU 4.9 LAS VEGAS 5.4 LOS ANGELES 4.4 NEW YORK 4.5 PHOENIX 6.7 PORTLAND 7.1 SAN FRANCISCO 6.7 SEATTLE 6.5 WASHINGTON, D.C. 6.5 CANADA							(0.4)
DENVER 4.0 HONOLULU 4.9 LAS VEGAS 5.4 LOS ANGELES 4.4 NEW YORK 4.5 PHOENIX 6.7 SAN FRANCISCO 6.7 SEATTLE 6.5 WASHINGTON, D.C. 6.5	4.5	4.0	4.0	3.0	3.0	0.1	(0.1)
HONOLULU 4.9 LAS VEGAS 5.4 LOS ANGELES 4.4 NEW YORK 4.5 PHOENIX 6.7 PORTLAND 7.1 SAN FRANCISCO 6.7 SEATTLE 6.5 WASHINGTON, D.C. 6.5 CANADA	5.0 4.0	4.0 3.5	3.0 3.0	3.0 3.0	3.0	0.7 (0.1)	0.2
LAS VEGAS 5.4 LOS ANGELES 4.4 NEW YORK 4.5 PHOENIX 6.7 PORTLAND 7.1 SAN FRANCISCO 6.7 SEATTLE 6.5 WASHINGTON, D.C. 6.5 CANADA	4.0	3.0	3.0	3.0	3.0	0.7	(0.1) (0.6)
LOS ANGELES 4.4 NEW YORK 4.5 PHOENIX 6.7 PORTLAND 7.1 SAN FRANCISCO 6.7 SEATTLE 6.5 WASHINGTON, D.C. 6.5 CANADA	5.0	4.0	3.0	3.0	3.0	0.7	0.5
NEW YORK 4.5 PHOENIX 6.7 PORTLAND 7.1 SAN FRANCISCO 6.7 SEATTLE 6.5 WASHINGTON, D.C. 6.5 CANADA	4.0	3.5	3.0	3.0	3.0	0.2	(0.1)
PHOENIX6.7PORTLAND7.1SAN FRANCISCO6.7SEATTLE6.5WASHINGTON, D.C.6.5CANADA	5.0	4.0	4.0	4.0	4.0	0.9	0.7
SAN FRANCISCO6.7SEATTLE6.5WASHINGTON, D.C.6.5CANADA	5.0	4.0	3.0	3.0	3.0	0.7	0.7
SEATTLE6.5WASHINGTON, D.C.6.5CANADA	5.5	4.0	3.0	3.0	3.0	1.4	(0.1)
WASHINGTON, D.C.6.5CANADA	5.5	5.0	4.5	4.5	4.0	0.9	1.5
CANADA	5.0	4.0	3.0	3.0	3.0	0.9	0.5
	5.0	4.0	3.0	3.0	3.0	0.9	0.5
TORONTO 9.5	5.0 2.0	4.0 2.3	3.0 2.3	3.0 2.3	3.0 3.0	2.5 0.0	2.2 0.0
	2.0	2.5	2.5	2.5	3.0	0.0	0.0
UNITED KINGDOM BIRMINGHAM 2.5	2.3	3.3	4.0	4.0	3.5	0.0	0.0
BRISTOL 3.0	3.0	3.0	3.0	4.0 NP		0.0	0.0
LEEDS 1.6	4.2	4.7	6.2	6.1	NP	0.0	0.0
LONDON 1.3	1.0	1.5	2.0	2.8	NP	0.0	0.0
MANCHESTER 1.0	1.0	2.5	3.5	NP	NP	0.0	0.0
SHEFFIELD 1.2	3.8	4.3	5.6	5.6	NP	0.0	0.0
THAMES VALLEY 2.0	1.5	2.5	2.5	3.0	NP	-	-
		7.0	NB	10			
ATHENS 1.0	3.0	3.0	NP	NP	NP	-	-
BERLIN 2.0	2.0	NP	NP	NP	NP	0.0	0.0
BUDAPEST8.0COPENHAGEN1.8	C 0	4.0 2.5	3.0 NP	NP NP	NP NP	(2.0)	(1.0)
DUBLIN 7.2	6.0	2.5 7.5	NP	NP	NP NP	0.5	-
MADRID 0.1	2.2		NP	NP	NP NP	0.0	-
MOSCOW 1.5	2.2 8.0	NP		NP	NP	0.0	0.0
OSLO 4.0	2.2 8.0 0.1	NP 2.0	NP		3.0	-	-
PARIS 1.0	2.2 8.0	NP 2.0 4.0	3.0	3.0	0.0	_	

NP: NOT PUBLISHED (F): FORECAST

GLOBAL INTELLIGENCE GLOBAL CONSTRUCTION COST RELATIVITY INDEX

Movements within the RLB Relativity Index are a direct result of the construction cost escalation, and changing economic conditions, including exchange rate movement for each respective country/city. Sudden surges up or down the index usually result from a 'one off' lift or fall in construction costs by abnormal supply and demand pressures, major government policy intervention through monetary and trade policies, natural disasters or political uncertainty.

This period has seen London fall two places in the index due to very low escalation rises over the past two years, which have been significantly lower than both Boston and Chicago. This has resulted in London moving from sixth to eighth.

Cities with construction escalation lower than 2% for 2019 have generally fallen within the relativity index as cities with higher escalation have become more expensive to build in relative terms.

Most US cities have moved upwards within the index as construction costs have increased faster than other cities around the globe.

CITY MOVEMENT

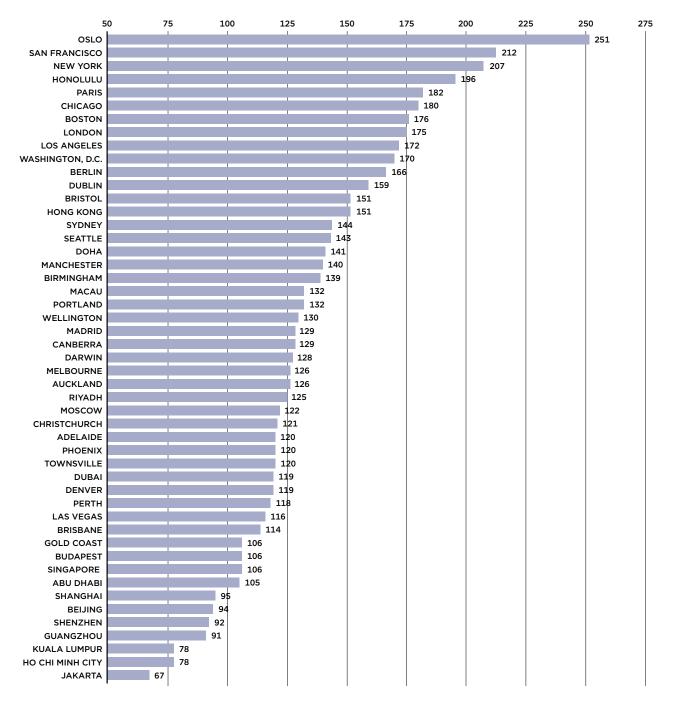
NUMBER OF PO	SITIONS	
OSLO		0
SAN FRANCISCO		0
NEW YORK		0
HONOLULU		0
PARIS	•	0
CHICAGO		1
BOSTON		1
LONDON	▼	2
LOS ANGELES		1
WASHINGTON, D.C.		1
BERLIN	▼	2
DUBLIN		2
BRISTOL		0
HONG KONG	▼	2
SYDNEY		0
SEATTLE		1
DOHA		2
MANCHESTER	▼	2
BIRMINGHAM	▼	1
MACAU		1
PORTLAND		2
WELLINGTON		3
MADRID		3
CANBERRA		0
DARWIN	▼	3
MELBOURNE		1
AUCKLAND		1
RIYADH		1
MOSCOW	▼	9
CHRISTCHURCH		0
ADELAIDE		0
PHOENIX		4
TOWNSVILLE	▼	1
DUBAI	▼	1
DENVER		0
PERTH	▼	2
LAS VEGAS		1
BRISBANE	▼	1
GOLD COAST		0
BUDAPEST		2
SINGAPORE		0
ABU DHABI	•	2
SHANGHAI		0
BEIJING		0
SHENZHEN		0
GUANGZHOU		0
KUALA LUMPUR		0
HO CHI MINH CITY		0
JAKARTA		0
	-	

GLOBAL INTELLIGENCE GLOBAL CONSTRUCTION COST RELATIVITY INDEX

RLB's Construction Cost Relativity Index identifies the relative cost of constructing similar buildings across the globe. The index is based on the local costing of standard building models/basket of goods. These are costed globally, and within regions, using the same quantities and similar specifications. They are costed in local currencies and relativities calculated using a combination of statistical methods including:

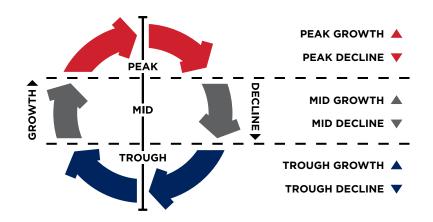
- Conversion into one currency method by converting local currency model costs using USD and IMF's published Purchasing Power Parity (PPP)
- RLB developed EKS multilateral index
- RLB Relativity Factor, a weighted sum of 'one currency' results

The resultant index highlights the relativity in construction costs between key global cities at Q1 2019.



GLOBAL INTELLIGENCE RLB MARKET ACTIVITY CYCLE

Activity within the construction industry traditionally has been subject to volatile cyclical fluctuations. The RLB Construction Market Activity Cycle (cycle) is a representation of the development activity cycle for the construction industry within the general economy.



Within the general construction industry, RLB considers seven sectors to be representative of the industry as a whole and are represented in the Market Activity Cycle table in the Regional Intelligence pages of this report.

Each sector is assessed as to which of the three zones (peak, mid or trough) best represents the current status of that sector within the cycle, then further refined by identifying whether the current status is in a growth or a decline phase.

The 'up' and 'down' arrows within the table represent whether the sector is in a growth or decline phase with the colour of the arrow determining the zone within the cycle. The three colours identified in the cycle diagram (red, grey and blue) represent the peak, mid and trough zones of the cycle.

The doughnut graph contained within the publication showcases the number of responses for each sector that are either in the peak, mid or trough zones of the cycle. The column graph shows the net movement of each sector within each zone.

GLOBAL INTELLIGENCE RLB MARKET ACTIVITY CYCLE

Globally within the RLB network of offices, 70 cities have reported the current position of the seven key sectors within their local construction market.

On a consolidated basis the results highlight that the global construction industry continues to strengthen. This edition saw a shift in sectors from the trough zone to the mid and peak zones. One third of sectors are now in the peak zone, with 48% in the mid zone.

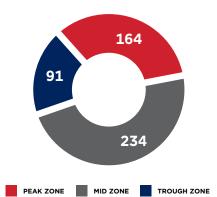
Sixty percent of sectors are in the growth phase of the cycle. The civil and industrial sectors each have over 50 cities within the growth phase. This highlights the significant investment in infrastructure that is planned or underway, mainly due to growing global urbanisation, increasing population and changing methods of energy production.

North America showed the strongest growth since our last edition. Nine sectors shifted from the trough and mid zones to the peak zone in this edition, resulting in 59% of sectors in the peak zone for the region.

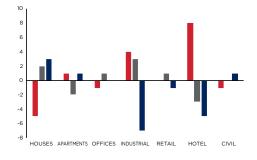
Current global issues surrounding the United Kingdom's exit from the European Union, unresolved trade tensions between the US and China, falling global manufacturing and the slowdown of global growth may impact development cycles in key regions in the future.

GLOBAL MARKET ACTIVITY

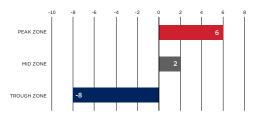
NUMBER OF SECTORS PER ZONE



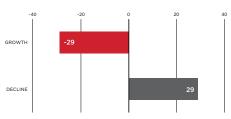
NET GLOBAL SECTOR MOVEMENT FROM Q4 2018 TO Q1 2019



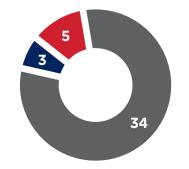
NET ZONE MOVEMENT FROM Q4 2018 TO Q1 2019

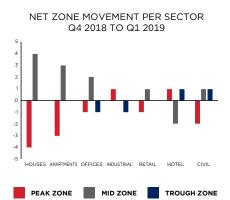


NET PHASE MOVEMENT FROM Q4 2018 TO Q1 2019



MARKET SECTOR ACTIVITY





Market activity across Africa is stagnant, with 81% of sectors in the mid zone, up from 60% in the previous edition.

Half of all sectors are in the mid growth zone, indicating positive sentiment towards an uplift in activity.

Growth across Africa has fallen, from 76% of sectors to 62%, however, it is still strong in the apartment and industrial sectors with five of the six cities in the growth phase.

Durban had the strongest activity with two sectors in the peak growth zone and all remaining sectors in the mid zone.

Port Louis has seen a significant increase in hotel and resort developments.

In sub-Saharan Africa, GDP growth is expected to pick up from 2018 levels to 3.5% in 2019 and 3.6% in 2020. According to the January 2019 World Economic Outlook (WEO) update, these GDP projections have been revised down from the IMF's October 2018 levels due to a softening of oil prices.

South Africa's real GDP increased slightly for the September 2018 Quarter, with a 1.1% increase from the same quarter in 2017. This increase was largely driven by the manufacturing, finance, transport and trade industries. Over the same period real GDP for the construction industry fell 1.9%, driven by decreases in non-residential building and construction work activities.

Real GDP growth in Mozambique is estimated at 3.5% for 2018, falling from the average of 7% recorded from 2004 to 2017. The decline in growth was attributed to a fall in public investment and foreign direct investment according to the African Development Bank (ADB) Group. For Botswana real GDP growth for 2018 is estimated at 4.2%, up from 2.4% in 2017 according to ADB. This growth was driven by a recovery in mining and the expansion of non-mining activities. According to Statistics Mauritius, Mauritius GDP at market prices is forecast to grow by around 4.0% in 2019, with construction forecast to grow 8.5%, assuming the implementation for major public investment projects goes ahead.

In a number of countries, such as Zimbabwe, there is political unrest due to an almost non-existent economy and very high unemployment numbers. On the other hand, there are ongoing construction activities in Central and West Africa with South African construction and consulting companies participating in a number of these projects.

Within South Africa, the focus continues to be the upcoming general elections, especially now that the voting date has been announced for early May. Campaigning has commenced with politicians making all sorts of promises. One issue of particular focus for all parties is the expropriation of land without compensation.

One of the major issues confronting South Africa in the near future is the long term viability of ESKOM, the state owned enterprise responsible for all electricity generation and distribution in the country. Years of neglected maintenance to power stations has led to constant breakdowns causing significant 'load shedding' across the network, where blackouts occur on a daily basis, having a major impact on the general economy.

AFRICA	HOUSES	APARTMENTS	OFFICES	INDUSTRIAL	RETAIL	HOTEL	CIVIL
CAPE TOWN	•		•		▼	•	
DURBAN	•					•	
GABORONE (BOTSWANA)		A	•		A	•	
JOHANNESBURG		A	•	A			•
MAPUTO (MOZAMBIQUE)		A	•	▼	▼	•	•
PORT LOUIS (MAURITIUS)		•					

A positive move by President Ramaphosa was the appointment of the Zondo Commission for the enquiry into 'state capture', a type of systemic political corruption in which private interests significantly influence a state's decision-making processes to their own advantage.

The volatility of the Rand continues to be sensitive to political activities and shows constant movement over the short term. The currency has traded to the USD in a range of 13.2558 to 14.5389 since the start of the year, a range of 10%. This volatility impacts key construction imported inputs such as petrol, steel and cement.

Construction activity within Southern Africa is not showing growth, resulting in low profit margins and an outflow of skilled construction professionals. Political uncertainty and a volatile currency are some of the major factors contributing to the slowdown.

There has been a significant increase in hotel and resort developments and redevelopments in the island nations surrounding Africa, especially Mauritius, Maldives and the Seychelles. Mauritius has seen an upward trend in most sectors, with the hosting of the Indian Ocean Island Games in Port Louis sparking government investment in infrastructure.

Escalation across South Africa continues to be on the low side due to low tender prices resulting from weak construction activity. Competition is fierce between construction companies and it is anticipated that the average escalation for the country in 2019 will be below 5%.

RLB TENDER PRICE INDEX

% CHANGE I	FORECAST	
	2019 (F)	2020 (F)
CAPE TOWN	5.0	5.7
DURBAN	5.0	5.6
GABORONE	3.2	3.3
JOHANNESBURG	5.1	5.5
ΜΑΡυτο	1.0	1.1
PORT LOUIS	3.5	3.0

Contrary to the 2018 forecast for South Africa, escalation forecasts for 2019 and onwards align closely to inflation forecasts, due to the scarcity of building projects available.

Competition is fierce within South Africa and as such escalation for Cape Town, Durban and Johannesburg are expected to see marginal rises for 2019 and 2020.

Gaborone and Maputo are seeing gradual uplifts in escalation for 2019 and 2020 from 2018 levels. However, these levels still lie below the IMF's inflation forecasts.

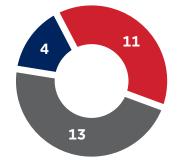
Despite the increase in workload in Port Louis, escalation is forecast to fall from its 2018 level of 5.0%, to 3.5% in 2019 and 3.0% in 2020.

			OFFICE B	UILDING		RETAIL				INDUSTRIAL	
		PREMIUM OFFICES		GRA	GRADE A		MALL		IOPPING	WAREHOUSE	
AFRICA		LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH
CAPE TOWN	ZAR	11,000	14,500	9,900	13,250	NP	NP	NP	NP	3,100	3,600
DURBAN	ZAR	14,000	16,000	12,000	14,500	5,200	7,000	NP	NP	4,750	5,700
GABORONE	BWP	13,260	16,320	9,180	11,220	8,160	12,240	10,810	14,485	7,140	8,160
JOHANNESBURG	ZAR	16,500	18,500	7,600	11,500	NP	NP	10,500	13,500	3,600	3,900
ΜΑΡυτο	MZN	89,660	110,365	62,120	75,890	55,180	82,720	72,625	97,615	51,000	61,200
PORT LOUIS	MUR	54,365	66,810	37,640	45,900	33,455	50,080	44,370	59,160	32,640	35,700

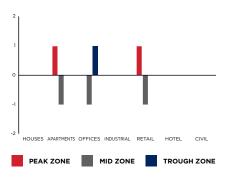
			нот	ELS		CAR PARKING				RESIDENTIAL	
	LOCAL CURRENCY	5 S1	5 STAR		3 STAR		MULTI STOREY		MENT	MULTIS	STOREY
AFRICA		LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH
CAPE TOWN	ZAR	NP	NP	NP	NP	3,100	4,000	5,700	7,800	11,500	16,250
DURBAN	ZAR	NP	NP	NP	NP	NP	NP	2,500	3,500	15,500	18,000
GABORONE	BWP	40,700	51,410	19,870	26,480	3,520	4,590	4,080	5,100	7,650	12,750
JOHANNESBURG	ZAR	NP	NP	NP	20,000	3,600	5,200	4,100	6,200	13,000	17,500
ΜΑΡυτο	MZN	275,115	347,515	134,270	179,010	23,615	30,700	27,580	34,475	51,715	86,190
PORT LOUIS	MUR	166,660	210,520	81,325	108,440	14,330	18,665	16,730	20,910	31,315	52,215

NP: NOT PUBLISHED

MARKET SECTOR ACTIVITY



NET ZONE MOVEMENT PER SECTOR Q4 2018 TO Q1 2019



Market activity in the Middle East continues to strengthen, with 39% of sectors now in peak, up from 32% previously.

Abu Dhabi drove the growth in the region, with two sectors transitioning from the mid to peak zone for this edition.

The retail and civil sectors were the strongest, with three of the four cities reportedly in the peak zone.

Riyadh remains the only city not to have a market sector within the peak zone.

Economic growth rates in the UAE continue to improve marginally year on year, with non-oil economic growth expected to be 3.6% in 2019. The government continues to pursue initiatives on spending and legislation aimed at improving economic performance. The introduction of VAT continues to bring in greater government revenues but it is still too early to see the direct impact, as it has only been 12 months since the implementation. Economic growth is expected to increase in 2019 and 2020, although in only minor increments. Expo 2020 remains a large driver of activity, however the expected injection of investor confidence is unlikely to make an impact until 2020 or 2021. Dubai continues to expand its infrastructure to meet demand in both population growth and the targeted increase in tourism. New investments include the new Al Maktoum Airport, Dubai Airport, together with a number of road and metro projects. Expo 2020, GDP growth and an increasing population continue to soften the impact of the commercial sector downturn, however the market remains challenging overall.

Qatar remains the best performing economy in the GCC in terms of GDP growth. Relying mostly on its gas sector for the bulk of its revenues, Qatar continues to perform strongly. While this is positive for GDP growth the reliance on large long term gas export deals does mean that short-term liquidity for investment remains challenging. The diversification of the economy remains aspirational, but with some success mostly a result of the need to react to the political embargo. Cost of living increases, slow tourism growth and investor uncertainty remain a challenge to the diversification of the economy.

Saudi Arabia continues to implement the 'Vision 2030' plan, the governmental drive to reduce the Kingdom's dependency on the hydrocarbon-based industries. This drive is resulting in strong opportunities, with billions due to be committed to achieving a sustainable industry for the Kingdom. In addition, Saudi Arabia has recently cut oil production, which is planned to result in increased oil prices. Outside of this, the Kingdom has recently signed new investment deals in Asia in attempts to expand investment, supporting the foreign support required for the Kingdom's planned mega-projects. Within its borders, Saudi Arabia has now had the benefit of a years' worth of revenue from the introduction of VAT (January 2018) and the revised pricing for fuel and energy. This additional revenue combined with the ambitious governmental drivers, young population and transition favouring privatisation, creates great opportunity for the construction industry.

MIDDLE EAST	HOUSES	APARTMENTS	OFFICES	INDUSTRIAL	RETAIL	HOTEL	CIVIL
ABU DHABI			▼	•	•	•	
DOHA			▼				
DUBAI	•	▼	▼		▼		
RIYADH			A			A	

The UAE construction sector entered a downturn in mid-2018 and is continuing to contract. This is driven mostly by an oversupply of residential, commercial and retail units, which has reached a level that has caused developers to rethink their portfolio strategy. Construction sector growth is expected to remain under pressure throughout 2019 as owners balance their portfolio amongst tightening demand. The UAE remains active across most sectors with variances across each of the Emirates although budgets are putting greater pressure on margins and fees. Expo 2020 remains a large driver of activity, while tourism is increasing and VAT is increasing the government's revenues. There remains continuing pressure on liquidity, meaning projects are slowing and new opportunities are taking extended periods to gain momentum.

Construction remains slow in Qatar with investment outside of the World Cup stadiums and Metro system limited. 2018 saw few significant opportunities for new projects in any of the commercial sectors of residential, retail and office. Hospitality also remains stagnant as investors weigh up the feasibility of new hotels to service the World Cup with uncertain returns beyond 2023. Construction activity on new projects is expected to remain slow in 2019 as funding is focussed on completing the World Cup stadiums and the Metro system. The timing of any increase in other sectors in anticipation of the World Cup remains uncertain. Increases in government revenues however has enabled continued funding of some major programs such as Lusail City. It is propagated that now Qatar has weathered the initial impact of the embargo, and will post a budget surplus at the end of 2018, projects centred around selfreliance (food production, import/export infrastructure etc.) will increase, together with a continued focus on medical and education.

The forecast opportunity within Saudi Arabia is clearly strong, however should all opportunities arise, the Kingdom may face some challenging hurdles. The move towards Saudization should see an injection of resources into the industry, albeit in professional and management roles. Conversely the increasing visa costs and regulation may cause a slight labour shortage, depending upon the actual award of the proposed opportunities. The commodity cost of construction materials appears stable; however, this could again become volatile if the Kingdom awards its forecast projects in quick succession.

RLB TENDER PRICE INDEX

% CHANGI	E FORECAST	
	2019 (F)	2020 (F)
ABU DHABI	2.2	3.0
DOHA	7.2	NP
DUBAI	2.2	3.0
RIYADH	3.1	2.9

The construction sector in the UAE is expected to remain under pressure throughout 2019 as owners balance their portfolio against tighter demand. As such, escalation forecasts in Abu Dhabi and Dubai see 2019 falling from 2018 levels before rising again in 2020 to 3.0% respectively.

Within Doha, activity remains focussed on the World Cup stadiums and Metro system. Increases in government revenues has enabled the funding of some major programs and after weathering the impact of the embargo there is an expectation that budget surpluses will be used to fund projects centred around self-reliance. As such, forecast escalation for 2019 sees a slight increase from 2018.

Riyadh revised its previous forecasts, and is anticipating falls in escalation from 2018 levels, with 3.1% in 2019 and 2.9% in 2020. This is driven by the cost of construction materials which at present appears stable.

			OFFICE B	UILDING			RET	INDUSTRIAL			
		PREMIUM OFFICES		GRADE A		MALL		STRIP SHOPPING		WAREHOUSE	
MIDDLE EAST		LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH
ABU DHABI	AED	5,700	6,800	4,600	6,400	4,000	6,300	NP	NP	1,460	2,650
DOHA	QAR	6,700	8,800	6,300	8,500	5,500	6,700	NP	NP	NP	NP
DUBAI	AED	6,000	7,200	4,850	6,800	4,250	6,700	NP	NP	1,900	3,000
RIYADH	SAR	5,200	8,100	5,300	7,300	3,300	6,000	3,600	5,100	3,550	4,300

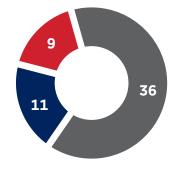
		HOTELS					CAR PA	RESIDENTIAL			
	LOCAL	5 STAR		3 STAR		MULTI STOREY		BASEMENT		MULTI STOREY	
MIDDLE EAST		LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH
ABU DHABI	AED	8,800	11,750	5,900	8,300	1,760	3,500	2,800	4,400	4,400	6,500
DOHA	QAR	12,000	15,000	7,700	8,800	NP	NP	2,850	4,650	6,700	8,000
DUBAI	AED	9,300	14,500	6,200	9,300	2,400	3,700	3,200	4,650	4,650	6,900
RIYADH	SAR	7,800	12,250	6,400	8,000	2,450	3,050	3,300	3,850	3,150	13,750

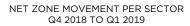
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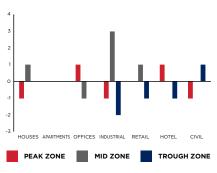
Winstar Shanghai Indoor Ski Resort, Shanghai, China

Architect: East China Architectural Design & Research Institute

MARKET SECTOR ACTIVITY







For major cities in China, a downward trend is anticipated for commercial developments due to the economic downturn. In Shenzhen and Guangzhou, the GBA initiative will ensure a promising upward trend in industrial development.

Hong Kong activity maintains a stable level as six months earlier.

In South Korea, residential, office and retail will continue to decline from 2018 due to oversupply in the previous three years.

The ongoing trade tensions between China and the US, together with weakening domestic demand have impacted economic growth in the North Asia region. Growth slowed during 2018, and the outlook for 2019 remains weak.

China's GDP growth rate for 2018 was 6.6%, declining 0.2% compared with 2017, the weakest growth rate recorded since 1990. A continuous slowing of the Chinese economy is expected for 2019. Despite the signs of a softening economy, due to the intense trade conflicts, together with weakening domestic demands and the previous deleveraging campaign by the central government, China is making efforts to release fiscal restraints. The government has started to show more tolerance to its credit growth and to inject money into the economy. Such stimulus is expected to lead to a more steady growth in the near future, benefitting the construction industry.

The Guangdong-Hong Kong-Macau Greater Bay Area ('GBA') initiative in China has entered into a period of rapid development. Guangzhou and Shenzhen, being the forefront cities, are poised to see acceleration in infrastructure investment in the near future and a growing demand for real estate developments in the longer term. Shenzhen, as the epicentre of technological innovation in China, continues to inject stimulus to elevate its status as an international innovation and technology hub, by attracting talents through provision of housing units.

The economy of Hong Kong and Macau saw weaker growth last year. Under mounting external pressures, Hong Kong's economic growth decelerated from 4.1% in the first half of 2018 to 2.1% in the second half of the year, with growth for the fourth quarter at a mere 1.3%, the lowest since the first quarter of 2016. Overall, Hong Kong's economy grew by 3% in 2018. The completion of major infrastructure projects and the weakening property market have put a brake on the growth of construction activities in Hong Kong.

GDP in Macau grew 4.7% in 2018, a notable slowdown from previous years. Domestic demand weakened by 1.7% year-on-year while gross fixed capital formation declined by 12.5% owing to a significant decrease in private construction investment. Since the completion of large-scale tourism and entertainment projects in the past two years, the construction market has remained competitive amid weak demand.

NORTH ASIA	HOUSES	APARTMENTS	OFFICES	INDUSTRIAL	RETAIL	HOTEL	CIVIL
BEIJING	•		▼		▼		▼
CHENGDU					•		
GUANGZHOU			•		•	•	
HONG KONG	•	•	•	•	•	•	▼
MACAU	•	•	•		•	•	▼
SEOUL	•	•	•		•	•	
SHANGHAI	•				•	•	
SHENZHEN	•				•	•	

Singapore Sport Hub, Singapore

164.0

10.0

Architect: DP Architects Pte Ltd Sports Venue design / Structural Design: Arup

Н В 1 Ξ ā d Ð D

South Korea, with its export-driven economy, is also adversely affected by the trade tension between China and the US. GDP mildly increased, by 2.7% in 2018. However, due to the government's expanding fiscal policies, the economy is expected to maintain steady growth in 2019.

The prices of major construction materials have increased rapidly in China due to the central government's enforcement of environmental protection measures, including sharply increased fees for disposal of construction waste and the reduced production of materials for pollutant emission controls. The prices for concrete, steel bars and structural steel increased by 24%, 10% and 19% respectively in Shanghai in 2018.

Cautious investment sentiment is anticipated for Hong Kong under the challenging external environment. The estimated production of public housing for the next five years will remain flat while the projected supply for new private residential property in the next three to four years is forecast to drop by 4%.

Hong Kong's government commitment to increases in land supply and investment in infrastructure works such as, major reclamation projects and the ten year hospital development plan, will provide a strong support to the construction industry in the coming years.

The restriction of sea sand collection in South Korea, increases in import costs, and increases in minimum wages, are encouraging construction cost escalation. However, the downward trend in activity within the construction sector should ultimately offset such cost uplifts.

RLB TENDER PRICE INDEX

% CHANGE		2020 (F)
BEIJING	2.0	2.0
CHENGDU	3.0	3.0
GUANGZHOU	-3.0	3.0
HONG KONG	-2.0	1.0
MACAU	-2.0	1.0
SEOUL	4.8	4.6
SHANGHAI	2.0	2.0
SHENZHEN	3.0	3.0

A moderate rise in tender prices of between 2% and 4% is expected in 2019 for the major cities in China. This forecast considers the combined effect of decelerating economic growth and the rise in material prices.

Guangzhou has a more pessimistic view that tender prices are plagued by the drawn-out trade tensions, and may dip by 2% to 5% in 2019. The picture remains unclear until a settled trade deal between China and the US is achieved.

Hong Kong and Macau are expected to see a moderate downward trend in tender prices for 2019.

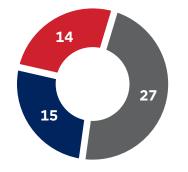
Escalation is Seoul is forecast to peak in 2019 at 4.8% before gradually declining from 2020 onwards.

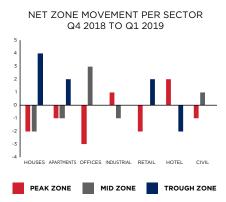
			OFFICE B	UILDING			RET	AIL		INDUS	TRIAL
	LOCAL	PREMIUM	OFFICES	GRADE A		MA	LL	STRIP SHOPPING		WARE	HOUSE
NORTH ASIA		LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH
BEIJING	RMB	8,500	14,000	7,900	12,000	9,300	14,250	8,200	12,750	4,800	6,100
CHENGDU	RMB	7,200	11,750	6,600	9,800	7,600	11,500	6,900	11,000	3,600	4,450
GUANGZHOU	RMB	7,700	12,250	7,100	10,750	8,800	12,500	7,600	11,500	4,450	5,500
HONG KONG	HKD	23,000	34,000	19,500	26,500	23,000	29,000	19,750	25,500	15,250	19,000
MACAU	MOP	18,250	26,250	16,000	22,500	20,000	24,500	17,000	21,500	NP	NP
SEOUL	KRK ('000)	2,575	3,350	1,950	2,400	1,750	2,525	1,450	2,225	1,300	1,625
SHANGHAI	RMB	8,200	13,000	7,300	11,250	8,600	13,750	7,600	12,500	4,350	5,700
SHENZHEN	RMB	7,600	12,250	7,000	10,750	8,000	12,500	7,100	11,000	4,200	5,200

				ELS			CAR PA	ARKING	KING		ENTIAL
	LOCAL	5 ST	TAR	3 S ⁻	TAR	MULTI STOREY		BASE	MENT	MULTIS	STOREY
NORTH ASIA		LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH
BEIJING	RMB	14,500	19,000	10,750	14,000	2,450	3,400	4,150	7,200	4,450	9,100
CHENGDU	RMB	12,000	15,500	9,100	11,500	2,150	2,950	3,750	6,200	3,600	7,100
GUANGZHOU	RMB	14,000	18,000	10,500	12,500	2,250	3,200	3,950	6,900	4,050	8,100
HONG KONG	HKD	34,750	42,500	28,750	33,500	9,000	11,000	19,000	25,750	21,500	42,750
MACAU	MOP	30,500	37,500	24,500	28,250	NP	NP	10,750	13,500	13,750	25,000
SEOUL	KRK ('000)	3,500	5,200	1,900	2,650	730	910	940	1,200	1,675	2,825
SHANGHAI	RMB	14,250	18,750	10,500	13,500	2,300	3,300	4,300	7,200	4,000	8,200
SHENZHEN	RMB	13,250	17,000	9,900	12,500	2,250	3,100	4,050	6,900	3,900	7,900
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The Singapore construction market is at the bottom of the cycle and barring any unforeseen circumstances, it is anticipated it will commence making a slight upturn this year.

Kuala Lumpur's construction industry is projected to be entering the trough zone over the next few years, given the reduction of public infrastructure expenditure.

Jakarta is on an upward trend phase. The development of public transportation will have flow-on affects to the property and construction markets, owing to the rapid growth of urban communities and the emergence of new satellite towns.

Ho Chi Minh City is on the upward trend as construction growth is forecast to perform strongly over the next five years.

Within the Philippines, the industrial and civil sectors are at their peak in Subic; while the apartment, office, hotel, and civil sectors are at their peak in Clark. Activity in Cebu is also at its peak driven by apartment, hotel, and civil sectors. According to the Asian Development Bank's 2019 forecasts, Southeast Asia anticipates growth to be maintained, with average yearly GDP growth estimated at 5.2% from 2019 to 2023, based on the continuation of fiscal expansionary policies, new infrastructure initiatives and increased domestic private expenditure.

The Philippines, Myanmar, Cambodia and Vietnam are expected to lead growth among the ASEAN nations with GDP growth forecast to be 6.5% to 7.0% for 2019. Strong economic growth is projected for Indonesia (5.3%), Malaysia (4.8%) and Singapore (2.9%). The most prominent risks to growth in Southeast Asia at this stage are the ongoing trade tensions between China and the US, global trade restrictions, political change and instability, fiscal policy changes and private-sector debt.

The ASEAN construction market is forecast to grow by 6.1% on an annual average basis over the next five years, substantially underpinned by infrastructure capital expenditure. Growing domestic demand and consumption will drive the continued expansion of the property and construction markets across the residential, in addition to the commercial, retail, healthcare and other sectors.

Total construction demand in Singapore for 2018 was \$\$30.5 billion, of which public sector work contributed 60%, due to major public housing and institutional building projects and infrastructure works. Private sector construction demand grew in 2018, supported by new residential projects, data centres, industrial plants and the new Mandai Bird Park.

Vietnam's construction industry grew 8.5% in real terms for 2018, with an output value of US\$57.5 billion. Growth is anticipated to continue over the next five years, based on projected investments in infrastructure, tourism and hospitality projects and residential developments. Residential construction, the largest market sector, accounted for 44.2% of the total construction output value in 2018. Previously, up to 70% of new FDI was invested in manufacturing, however, over the last two years, owing to a relaxation of foreign investment rules, investors have shifted capital into the real estate sector.

Malaysia's economy has been in a post-election lull. The economy is feeling the effects of falling crude oil prices, high public debt and shortfalls of the government's revenue after the zero rating of the Goods and Services Tax, which pushed the government to more cautious fiscal policies.

Several austerity measures continue, with the suspension / postponement of mega infrastructure projects.

SOUTH ASIA	HOUSES	APARTMENTS	OFFICES	INDUSTRIAL	RETAIL	HOTEL	CIVIL
CEBU	•		•				
CLARK				•			
HO CHI MINH CITY							▼
JAKARTA	A		•		•	•	
KUALA LUMPUR		•	•		•	•	•
MANILA	•					•	
SINGAPORE	•	•	•		•		
SUBIC		▼	•		•		

The Philippine economy is poised to continue its upwards trajectory, bucking the trend of a global growth slowdown in 2019. The prospects for higher consumer and business spending are a result of the government's headway in taming inflation and improving the ease of doing business. Current construction activity is strong, in part due to the government's aggressive pursuit of infrastructure development through the 'Build, Build, Build' program.

Tender prices in Singapore remain competitive, with tight tendering margins quoted. Commodity prices are relatively stable, while labour prices, particularly for skilled workers and tradesmen, are increasing due to limited supply, cost levies, accommodation and regulatory compliances. Forecast escalation for 2019 is seeing small uplifts of 1.0% to 1.5%.

Ho Chi Minh City's construction cost escalation is forecast at 3% for 2019, based on the current market and tendering trends. Construction tenders have largely remained at competitive levels and material and labour prices have been fairly stable over the last year.

The construction sector in Kuala Lumpur and other major cities remains weak, with project budgets seeing considerable reductions, such as the Light Rapid Transport 3 project being reduced by 47%, and the cost for the Mass Rapid Transport 2 project decreasing 22%. Construction companies are becoming more competitive in their tenders as the volume of projects shrinks, offsetting the slight increase in material costs due to the implementation of Sales and Service Tax.

Construction tenders in Jakarta remain generally competitive. Exchange rate fluctuations appear to be the biggest risk, with the provisions on the use of the Indonesian Rupee suppliers making price allowances for the exchange rate risk. Labour shortages are also impacting the increasing labour prices as contractors compete for limited resources. As a result, forecast construction cost escalation for 2019 is 3%.

RLB TENDER PRICE INDEX

% CHANGE		2020 (F)
CEBU	1.6	NP
CLARK	1.6	NP
HO CHI MINH CITY	3.0	NP
JAKARTA	3.0	NP
KUALA LUMPUR	1.5	NP
MANILA	1.6	NP
SINGAPORE	1.3	2.0
SUBIC	1.6	NP

Escalation in Singapore for 2018 was 1.77%, and based upon market information and trends, escalation forecasts for 2019 are between 1.0% and 1.5%.

Ho Chi Minh City's property market experienced a good year in 2018. The forecast tender price index for 2019 is expected to range between 2% and 4%.

Notwithstanding internal and external factors, it appears that tender prices in Jakarta remain relatively stable and predictable. Escalation is forecast in the order of 3% for 2019.

Kuala Lumpur's escalation for 2019 is forecast between 1% and 2%, due to a reduced workload keeping tender pricing competitive.

Escalation within the Philippines for 2019 has risen from 2018 levels, however still remains below the forecast inflation rate of 3.7%.

			OFFICE B	UILDING			RET	AIL		INDUSTRIAL	
	LOCAL CURRENCY	PREMIUM	OFFICES	GRA	DE A	MA	LL	STRIP SH	IOPPING	WARE	HOUSE
SOUTH ASIA		LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH
CEBU	PHP	28,000	35,000	NP	NP	NP	NP	NP	NP	53,300	68,100
CLARK	PHP	28,000	35,000	NP	NP	NP	NP	NP	NP	53,300	68,100
HO CHI MINH CITY	VND ('000)	24,810	35,800	21,300	26,490	20,220	26,920	NP	NP	6,210	9,400
JAKARTA	RP ('000)	10,130	15,900	7,500	11,550	6,520	8,515	NP	NP	4,790	6,078
KUALA LUMPUR	RINGGIT	2,600	4,500	1,400	3,200	2,100	3,500	NP	NP	1,000	1,800
MANILA	PHP	37,600	55,400	NP	NP	NP	NP	NP	NP	53,300	68,100
SINGAPORE	SGD	2,900	4,150	2,050	3,300	2,000	3,350	NP	NP	1,100	1,600
SUBIC	PHP	28,000	35,000	NP	NP	NP	NP	NP	NP	53,300	68,100

			нот	ELS			CAR PA	RKING		RESIDENTIAL	
	LOCAL CURRENCY	5 S'	TAR	3 STAR		MULTI STOREY		BASE	MENT	MULTI S	STOREY
SOUTH ASIA		LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH
CEBU	PHP	NP	NP	NP	NP	NP	NP	NP	NP	31,000	72,500
CLARK	PHP	NP	NP	NP	NP	NP	NP	NP	NP	31,000	72,500
HO CHI MINH CITY	VND ('000)	34,880	41,850	24,500	31,690	8,960	13,380	18,420	25,170	15,900	24,340
JAKARTA	RP ('000)	18,000	23,000	13,500	18,000	3,500	4,500	6,000	8,000	6,870	16,000
KUALA LUMPUR	RINGGIT	5,000	7,000	2,500	3,500	800	1,200	1,400	3,400	1,900	4,500
MANILA	PHP	86,000	101,200	55,700	70,200	NP	NP	NP	NP	31,000	72,500
SINGAPORE	SGD	4,250	5,500	3,250	3,650	700	1,400	1,500	2,250	1,960	3,150
SUBIC	PHP	NP	NP	NP	NP	NP	NP	NP	NP	31,000	72,500

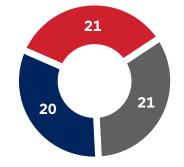
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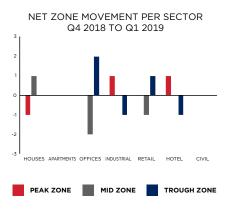
Adelaide Convention Centre, SA, Australia

Architect: Woods Bago



MARKET SECTOR ACTIVITY





Australia's market activity is similar to six months ago. Across the country market activity is spread evenly, with 34% of sectors in the peak zone, 34% in the mid zone and 32% in trough.

Market activity across cities is mixed, with Melbourne, Sydney and Canberra reporting over 50% of their sectors are in the peak zone, while Darwin, Gold Coast and Perth are more subdued, with no sectors in peak.

Melbourne's market appears to be the most heated, with 86% of sectors in the peak zone, followed closely by Sydney with 71%.

The apartment sector remains the strongest, with four of the nine RLB offices reporting they are in the peak zone.

The Australian economy recorded year-on-year GDP growth of 2.1% in CVM terms for the December 2018 Quarter, with the second half of 2018 having a markedly slower pace of growth than the first half.

The RBA Board meeting in March 2019 highlighted the modest growth in capital investment forecast for FY 2019 would continue into FY 2020, due to the current high levels of construction work yet to be done, notwithstanding the lower levels of building approvals.

The recent Q1 2019 RLB Crane Index[®] reflected these sentiments, with the number of cranes across Australia unchanged from six months ago. The stable number of cranes indicates that construction volumes in the vertical construction sector will continue for the immediate period.

Across the country, the effects of tighter domestic and foreign lending requirements, together with the imposition of increased foreign buyer duties are having an impact on residential commencements.

The volume of construction activity in New South Wales and Victoria grew for CY 2018, with strong growth recorded in both the building and engineering sectors.

Queensland activity saw a marginal decline in CY 2018, driven by falling activity for new apartments. There is an expectation that the slowdown in residential activity will continue in 2019.

Construction in South Australia has continued to strengthen, driven by strong public sector developments. The volume of activity in the state increased to over \$12 million for CY 2018.

Western Australia and the Northern Territory continue to see declines in activity as mining investment continues to taper off. Perth is showing signs of the economy rebounding, with the office leasing market increasing. The government is attempting to stimulate the economy in Darwin, however this is being hindered by their growing debt.

The Australian Capital Territory has seen a boost in activity, with strong growth in both the residential and non-residential building sectors, together with key infrastructure and urban renewal projects. There is an expectation that this growth will slow towards the end of 2019.

AUSTRALIA	HOUSES	APARTMENTS	OFFICES	INDUSTRIAL	RETAIL	HOTEL	CIVIL
ADELAIDE					•		•
BRISBANE	•	•			•	V	
CANBERRA	V				•		•
DARWIN					•		
GOLD COAST			•		•		•
MELBOURNE	▲				•		
PERTH		•				•	
SYDNEY		•					
TOWNSVILLE		•	•		•	NP	•

NP: NOT PUBLISHED

The increasing number of projects in Adelaide is seeing a rise in costs as workbooks for both head and trade contractors reach capacity. It is becoming increasingly difficult to source labour with pricing becoming more erratic within the structural, engineering services and ceiling and partition trades.

Brisbane's market has remained relatively flat so far during 2019. As the slowing in the residential boom is being offset by the lag in construction completions, prolonging the high level of activity.

Tender prices in Canberra remain heated in structural and services trades. There is an expectation in the market that new EBAs will see increases in labour costs moving forward.

Darwin's construction industry maintains spare capacity with low demand for construction output.

There has been a general easing in the market within the Gold Coast, with fewer developments commencing and continued uncertainty about largescale residential developments.

As work continues on significant infrastructure projects around Melbourne, pressure on trade pricing continues in the concrete, steel and piling/excavation trades.

In Perth it is anticipated that the next 6 months of activity will remain largely unchanged until the long anticipated large retail projects commence.

Contractors in Sydney still report difficulties in both the tendered spread of trade prices and the number of trade quotations received. Tendering for medium sized projects remains very competitive, however, projects with a high risk profile continue to attract cost premiums and in some cases, little interest in pricing from subcontractors.

RLB TENDER PRICE INDEX

% CHANGE F	ORECAST 2019 (F)	2020 (F)
ADELAIDE	3.9	4.0
BRISBANE	3.0	5.1
CANBERRA	3.5	3.3
DARWIN	0.8	1.2
GOLD COAST	2.5	3.0
MELBOURNE	4.0	4.0
PERTH	1.5	2.8
SYDNEY	4.4	4.2
TOWNSVILLE	3.5	3.5

Escalation forecasts for 2019, show uplifts in excess of inflation with the exception of Darwin and Perth. Looking forward to 2020, Darwin remains the only city with escalation below inflation.

The majority of cities are forecasting gradual increases in escalation for 2019 and 2020 from 2018 levels. Canberra and Sydney are the only cities forecasting declines from 2019, with 2020 at 3.3% and 4.2% respectively.

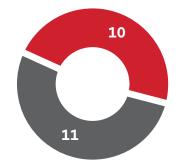
Escalation in Melbourne and Sydney remains above all other cities in 2019, with 4.0% and 4.4% respectively.

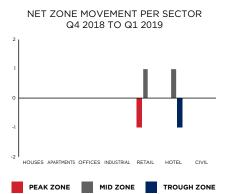
For 2020, Brisbane's escalation forecast is above all other cities, with 5.1%.

			OFFICE B	UILDING		RETAIL				INDUSTRIAL	
		PREMIUM	OFFICES	GRA	DE A	MA	LL	STRIP SH	IOPPING	WARE	HOUSE
AUSTRALIA		LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH
ADELAIDE	AUD	2,700	3,800	2,250	3,150	1,600	3,000	1,300	1,840	650	1,100
BRISBANE	AUD	3,000	4,400	2,500	3,800	2,200	3,600	1,400	2,000	750	1,200
CANBERRA	AUD	3,500	5,500	2,800	4,300	2,400	4,050	1,260	2,550	740	1,400
DARWIN	AUD	3,100	4,150	2,400	3,800	1,760	2,650	1,260	2,150	800	1,420
GOLD COAST	AUD	2,600	4,000	1,900	3,200	2,500	3,500	1,200	1,800	700	1,100
MELBOURNE	AUD	3,250	4,350	2,500	3,450	2,200	3,200	1,240	1,680	660	1,220
PERTH	AUD	3,000	4,700	2,400	3,750	1,900	2,900	1,000	2,500	550	1,060
SYDNEY	AUD	3,750	5,500	2,850	4,050	2,100	4,400	1,600	2,100	770	1,240
TOWNSVILLE	AUD	3,250	4,750	2,700	4,100	2,400	3,900	1,500	2,150	810	1,300

			нот	ELS			CAR PA	RKING		RESIDENTIAL	
		5 ST	ΓAR	3 S1	TAR	MULTIS	STOREY	BASE	MENT	MULTI S	STOREY
AUSTRALIA		LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH
ADELAIDE	AUD	3,700	4,550	2,750	3,550	680	980	1,340	1,960	2,300	3,550
BRISBANE	AUD	4,200	5,700	3,000	4,200	1,000	1,500	1,700	2,200	2,400	4,400
CANBERRA	AUD	4,250	6,400	3,100	5,300	790	1,320	1,060	1,840	2,950	5,200
DARWIN	AUD	3,600	4,450	2,850	3,550	750	1,260	1,180	1,540	2,050	2,650
GOLD COAST	AUD	3,400	5,500	2,600	4,000	700	1,200	1,500	2,100	1,600	4,500
MELBOURNE	AUD	4,150	5,600	2,950	3,800	810	1,280	1,280	1,680	2,500	4,400
PERTH	AUD	3,600	4,800	2,600	3,600	650	1,000	1,800	3,100	1,900	4,100
SYDNEY	AUD	4,650	6,300	3,350	4,200	810	1,240	1,180	1,900	2,750	5,900
TOWNSVILLE	AUD	4,500	6,100	3,250	4,500	1,080	1,620	1,820	2,400	2,600	4,750

MARKET SECTOR ACTIVITY





Market activity has remained strong across all sectors within Auckland, with only some softening in the housing and residential sectors, predominantly relating to high density residential construction. Given housing shortages and the high value of home consents, residential construction is expected to remain in the peak zone.

Wellington is in the growth phase for all sectors with the exception of retail.

Christchurch is coming off peak civil construction and has reduced residential and commercial activity, consistent with the volumes of post-earthquake work undertaken in this sector. The New Zealand economy continues to grow despite a backdrop of low business confidence and capacity constraints across many industries, including construction. Headline inflation remains contained within the 1% to 3% range and is forecast to remain low in the short term. There has been a slowing in net migration with net inflows dropping below 62,000 for the first time since September 2015. A housing shortage is widely acknowledged and for the year ending January 2019 the number of new home consents issued was at a 44-year high. Coupled with the introduction of KiwiBuild in 2018 it is unlikely that the level of residential construction activity will fall. The commercial and industrial property sectors are strong with high demand for space and offering good returns. Despite some negative sentiment within the retail sector there is a high level of development underway or in planning. The government recently released a report on the implementation of a Capital Gains Tax (CGT). The report includes several recommendations which if adopted will affect the investment property market, although the timing of this is likely to be some years away.

Across New Zealand several large projects including road and rail, which share resources with the vertical construction sector are fuelling the labour shortage issues. There is also a pipeline of national health and hospital projects which will assist in underpinning construction activity across the regions. Auckland activity is strong across all sectors with the major projects being the Skycity Convention Centre, Commercial Bay, City Rail Link and Westfield Newmarket. There are also several university projects and large apartment and hotel projects under construction. A high level of activity is forecast to remain, driven predominantly by population growth in the region.

The Wellington region is also extremely busy with new projects continually coming to market, some to replace demolished stock following the 2016 Kaikoura earthquake. There is significant activity in the commercial office sector and new civic projects, such as the Wellington Town Hall project which is about to commence. Multiple smaller education and social housing projects are also adding to a full order book for local contractors.

Christchurch activity remains busy but is down from the peak earthquake rebuild of recent years. This year the Town Hall, Acute Services Building and a number of other large projects have been completed or are due for completion whilst the Convention Centre and Metro Sports facility continue.

NEW ZEALAND	HOUSES	APARTMENTS	OFFICES	INDUSTRIAL	RETAIL	HOTEL	CIVIL
AUCKLAND	•	•	•				
CHRISTCHURCH	•	•	▼				•
WELLINGTON	▲ · · · ·	A		A	•	A	A

Len Lye Centre and Govett-Brewster Gallery, New Plymouth

Architect: Patterson Associates

26

Capacity constraints continue to impact the construction market. Recently Arrow International, a large national construction company, entered voluntary administration. This follows a number of other large main contractors who have failed over the last two years. Whilst onerous contract conditions are one of the factors being blamed, the underlying issue remains a labour and skills shortage in the sector, leading to lower productivity, poor management and higher costs.

The construction industry is forecast to require 57,600 more skilled workers by 2026. With an ageing population and continued high levels of construction activity, labour capacity issues will remain.

Construction escalation in Auckland is predicted to stabilise this year to around 3.5% from recent high increases over the last few years. Predominantly this softening is due to high prices leading to cooling demand.

In Wellington building cost escalation is continuing to outstrip inflation levels by some margin. Subcontract resources are stretched, and there are significant price increases in various trades due more to a lack of competitive tension rather than market inflation. Many companies are continuing to experience labour shortages due to a lack of resources coming into the Wellington market given the prevailing conditions in most other regions of New Zealand. Cost escalation is likely to stay in the 4% to 6% per annum range this year but could spike higher in mid-2019 if planned new projects come into the market.

In Christchurch escalation has slowed considerably from peak but complex projects with high risk profiles continue to see isolated cost pressures. Forecast cost escalation is 2% for 2019.

RLB TENDER PRICE INDEX

% CHANGE F	ODECAST	
% CHANGE I	2019 (F)	2020 (F)
AUCKLAND	3.5	3.0
CHRISTCHURCH	2.0	2.0
WELLINGTON	4.0	4.0

Across the three New Zealand cities, forecasts for 2019 and 2020 remain fairly constant, with only Auckland recording a slight fall in escalation levels.

The Auckland TPI appears to be stabilising from the highs of the last few years, falling from 8.0% in 2017, to 3.0% in 2020. That said, poorly managed and procured projects of high complexity continue to attract high market pricing.

The Wellington market is forecasting higher levels of escalation due to a high volume of work and a limited supply capacity, whilst Christchurch is easing following a slowdown in activity.

			OFFICE B	UILDING			RET		INDUSTRIAL		
		PREMIUM OFFICES		GRADE A MALL		STRIP SHOPPING		WAREHOUSE			
NEW ZEALAND		LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH
AUCKLAND	NZD	3,700	4,900	3,100	4,650	2,850	3,200	1,660	2,050	780	1,060
CHRISTCHURCH	NZD	3,600	4,500	2,800	4,250	2,500	2,800	1,400	1,800	720	1,100
WELLINGTON	NZD	4,200	5,000	3,050	4,300	2,950	3,150	NP	NP	1,020	1,400

		ELS		CAR PARKING				RESIDENTIAL			
	LOCAL CURRENCY	5 STAR		3 STAR		MULTIS	STOREY	BASE	MENT	MULTI STOREY	
NEW ZEALAND		LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH
AUCKLAND	NZD	6,500	7,200	4,200	4,750	1,060	1,360	2,300	2,800	4,000	4,900
CHRISTCHURCH	NZD	5,000	6,000	4,000	4,500	950	1,360	2,000	2,500	3,300	4,000
WELLINGTON	NZD	5,100	6,700	4,100	4,600	1,440	1,640	2,850	3,050	3,900	4,800

NP: NOT PUBLISHED

Greater Columbus Convention Center, Columbus, OH

TEC

Architect: LMN Architects

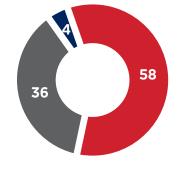
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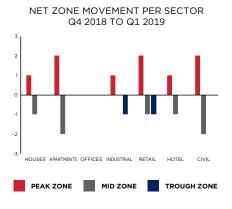
EXCITENT HELL &

TATION

11 en 1







The US construction industry has continued to expand since the end of the Great Recession. As evidence mounts that the current economic cycle is coming to an end, it appears that most major US cities have reached the peak of the construction cycle and can expect construction activity to slow in the second half of 2019 and through 2020.

Market activity in Canada picked up from six months ago, however still remains fairly subdued, with only three out of 14 sectors in the peak zone. The expansionary effects of the 2018 Federal tax cuts have run their course and, in the face of national and global economic headwinds, the rate of expansion has slowed to the point that the U.S. Federal Reserve announced that it would not boost its benchmark interest rate again in the near term. The announcement sparked a quick drop in mortgage interest rates which should provide a boost for the housing industry.

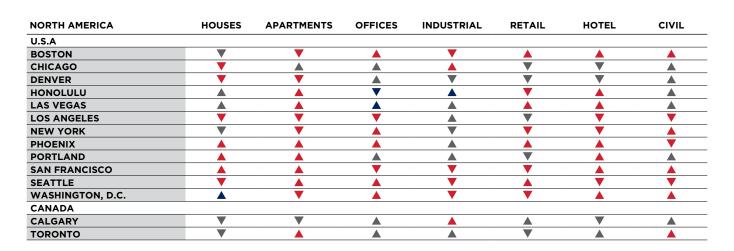
The Federal Reserve's 'Beige Book' of March 2019 reported that, at a national level:

"Labor markets remained tight for all skill levels, including notable worker shortages for positions relating to construction. Contacts reported labor shortages were restricting employment growth in some areas. Wages continued to increase for both low skilled and high skilled positions across the nation, and a majority of Districts reported moderately higher wages".

The stiff tariffs on imported steel and aluminium have largely been absorbed by the construction industry and now rarely attract comment in the press. The USMCA (the replacement for NAFTA) is yet to pass Congress and will probably only do so with amendments. At the present, resolution of the underlying trade tensions between China and the US remain elusive and the prospect of the US imposing a further level of tariffs on Chinese imports remains real.

The Canadian economy is entering a period of slower economic growth, with GDP for the December 2018 Quarter practically coming to a halt. While a slowdown was anticipated for the final months of 2018, on the back of a fall in oil prices, the slowdown is bleaker than anticipated with the impact extending beyond the energy sector. Construction GDP felt a large decline in growth, from 4.4% in CY 2017 to 0.5% in CY 2018. Investment in building construction fell 2.7% for CY 2018 in unadjusted constant terms, driven by a 5.4% decline in residential investment.

The construction industry is busy almost everywhere. Contractors remain confident and activity in most major cities is either at, or near, its cyclical peak. It is hard to determine the effect the Federal Reserve's temporary pause in interest rate hikes will have on the general construction industry beyond housing, which should benefit.



Since the end of the Great Recession, the private sector has fuelled the growth in activity. Public sector activity remains flat at 7%, below the 2009 peak.

Labor shortages continue to negatively affect the availability of subtrades, the on-time performance of contractors and, in some cases, the quality of workmanship, as inexperienced or under-experienced personnel are brought on to fill the need for people.

Intertwined with this is the Trump Administration's restrictive immigration policy which exacerbates these problems and causes concerns for those involved in construction related to tourism (fewer foreign tourists) and higher education (fewer full-tuition foreign students).

According to The Associated General Contractors of America (AGC), in the first quarter of 2019, 79% of its member firms surveyed were planning to add workers in 2019, 78% reported difficulty in hiring and a staggering 68% expected that the difficulty in hiring would continue to be as bad or become worse. At the same time, 33% reported that costs had been higher than they had expected and 34% reported that projects had taken longer than anticipated.

RLB TENDER PRICE INDEX

% CHANGE F	ORECAST 2019 (F)	2020 (F)
BOSTON	4.5	4.0
CALGARY	5.0	4.0
CHICAGO	5.0	4.0
DENVER	4.0	3.5
HONOLULU	4.0	3.0
LAS VEGAS	5.0	4.0
LOS ANGELES	4.0	3.5
NEW YORK	5.0	4.0
PHOENIX	5.0	4.0
PORTLAND	5.5	4.0
SAN FRANCISCO	5.5	5.0
SEATTLE	5.0	4.0
TORONTO	2.0	2.3
WASHINGTON, D.C.	5.0	4.0

RLB's US Construction Cost Index shows that construction costs have continued to rise faster than the general cost of living. All US cities had construction cost escalation greater than 4% (annualized) and, Chicago and Portland, had rates greater that 7%.

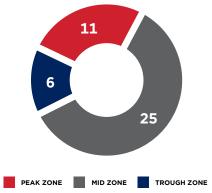
Calgary and Toronto have seen dramatic falls in escalation from their peak in 2018 of 8.9% and 9.5%.

			OFFICE B	UILDING			RET	TAIL		INDUS	TRIAL
		PREMIUM	OFFICES	GRA	DE A	MA	LL	STRIP SH	IOPPING	WARE	HOUSE
NORTH AMERICA	CORRENCT	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH
U.S.A											
BOSTON	USD	325	500	225	325	200	300	150	240	110	190
CHICAGO	USD	280	450	175	280	185	290	135	220	110	185
DENVER	USD	200	260	165	200	95	150	80	175	90	150
HONOLULU	USD	285	525	240	395	210	490	175	430	145	230
LAS VEGAS	USD	160	295	105	190	115	480	80	145	60	100
LOS ANGELES	USD	235	355	175	260	155	340	130	190	120	185
NEW YORK	USD	400	600	300	400	275	425	175	300	115	200
PHOENIX	USD	190	290	140	195	120	200	80	150	60	100
PORTLAND	USD	200	270	150	200	160	260	150	210	100	160
SAN FRANCISCO	USD	280	400	250	350	250	400	240	350	150	200
SEATTLE	USD	210	255	145	205	140	310	115	165	100	130
WASHINGTON, D.C.	USD	325	550	225	325	175	300	140	200	120	190
CANADA											
CALGARY	CAD	235	295	190	285	220	310	110	160	85	145
TORONTO	CAD	200	260	180	250	225	275	115	150	115	150

		HOTELS					CAR PA	RKING		RESIDENTIAL		
	LOCAL CURRENCY	5 S	TAR	3 S1	ΓAR	MULTIS	STOREY	BASE	MENT	MULTI	STOREY	
NORTH AMERICA	CONNENCT	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	
U.S.A									*			
BOSTON	USD	400	580	275	390	85	140	100	160	185	315	
CHICAGO	USD	400	660	290	410	80	125	125	170	165	400	
DENVER	USD	285	370	200	275	75	100	100	135	90	200	
HONOLULU	USD	510	735	320	410	100	145	140	260	195	440	
LAS VEGAS	USD	350	550	150	300	50	85	60	150	90	405	
LOS ANGELES	USD	375	540	280	360	105	125	130	180	210	325	
NEW YORK	USD	400	600	300	400	95	175	125	200	200	375	
PHOENIX	USD	350	520	170	250	45	70	70	110	90	210	
PORTLAND	USD	205	295	165	200	105	135	120	195	160	250	
SAN FRANCISCO	USD	450	630	380	520	125	160	220	275	375	520	
SEATTLE	USD	275	390	230	240	95	115	140	170	165	275	
WASHINGTON, D.C.	USD	400	600	250	390	90	130	110	140	200	350	
CANADA												
CALGARY	CAD	400	500	190	245	75	90	75	120	140	215	
TORONTO	CAD	400	500	195	260	70	90	115	150	180	225	
			500	195	200	70	90	115	150	100	225	

ALL NORTH AMERICA COSTS ARE \$ PER FT²





Market activity in the United Kingdom is unchanged from the previous edition.

The majority of sectors are within the mid zone, with 60%, followed by the peak zone with 26% and trough with 14%.

Market sector activity is strongest in Manchester, with four of the sectors in the peak zone, and all in the growth phase. Moving beyond the original 29 March 2019 deadline for the UK leaving the EU, the shape and substance of the final outcome and effects of the Brexit experience were re-focussed on 12 April (agreed deal, hard leave or alternative option) with 22 May for passing legislation to leave, then to a deferral until as late as 31 October.

The sticking point in the deal was always what was called the Irish backstop, an agreement mechanism by which the EU preserved the integrity of its single market against a third-party country, the UK, at the same time avoiding imposition of a hard border between the EU and the UK at the only on-land meeting point.

Aside from the political machinations and the myriad possibilities for eventual outcomes, the effect of the Brexit process has been to inject into business and commerce amounts of risk and uncertainty at an unprecedented level. From a business perspective, the realities of trying to maintain normal operations, including forward-planning, while also planning for what Donald Rumsfeld called 'unknown unknowns', has absorbed huge amounts of human resource, time, and money. Moreover, the unknown unknowns in terms of the UK economy involve not only the outcome of the process itself, but its subsequent and consequent effects, a dual uncertainty.

All certainty as to living and working rights of UK citizens in Europe and vice versa have been dependent on EU Treaty arrangements. Much energy has been expended seeking to produce an outcome that respects the concept of leaving the EU, alongside UK industry's need for EU labour. Leaving the EU brings with it the demise of reciprocal rights to live, work, etc. However, regardless of the eventual outcome, and given the widespread skilled-labour shortages in Europe, it is easy to imagine workers returning to their country of origin, rather than staying in a country in which they may have, or come to have, few rights. Already numbers of EU workers in the UK have fallen, and replacement numbers too. The final outcome for labour availability in the UK is unclear.

Amidst all of this, London's construction workload volume remains high, both within the city itself and through the boroughs. While the ongoing political concerns are expected to have affected the market, there is little evidence of slowdown, although there is a general awareness and concern for continuing availability of workforce and skills.

In Birmingham, current activity levels are also high, together with a strong project pipeline. The upcoming Commonwealth Games and nearby Coventry City of Culture events provide a backdrop of imminent large-scale project activity. With tier two contractors operating at or near capacity, tier one bidders are having to reach beyond their normal supply chains, an effect which may be unsustainable without significant price inflation.

UNITED KINGDOM	HOUSES	APARTMENTS	OFFICES	INDUSTRIAL	RETAIL	HOTEL	CIVIL
BIRMINGHAM					•		
BRISTOL				•	▼	•	•
LEEDS			A		▼	A	
LONDON					▼		
MANCHESTER							
SHEFFIELD					•		

Blossom Street, Manchester, UK

Architect: Tim Groom Architects

BAR

In Bristol, there is also a strong pipeline of work, set against high levels of ongoing activity. The industry in and around Bristol is operating near capacity, with workload available across the full range of contracting and sub-contracting specialisms. For now, the main issue is that of rising builders' input costs versus the uncertain political position, resulting in a constraining effect on bids, to maintain full order books.

Continuing high levels of construction workload across the whole building spectrum exemplifies Manchester's Northern Powerhouse status. This applies to both new and repair and maintenance work, resulting in the industry nearing capacity levels. Although there are as yet no obvious areas of cost blowout, resource costs continue to rise.

In Yorkshire and Humber, workloads in the infrastructure and housing sectors remain high, although commercial and industrial activity levels have tapered. However, looking forward, Hull and Humberside could benefit from proposed Supercharged Free Port Status for Immingham. Contractors are reporting, as key issues, a drop in overall tender activity in addition to rising input costs.

The Thames Valley construction market retains its positive market sentiment, with a steady stream of new development inquiries across multiple sectors, particularly commercial, residential and higher education. However, there are signs of some strain around the Brexit outcome, given the concentration of EU-based businesses' HQs. From an input cost perspective over and above the remaining unanswered political questions, there are also clear concerns about increasing labour and materials costs.

RLB TENDER PRICE INDEX

% CHANGE	FORECAST 2019 (F)	2020 (F)
BIRMINGHAM	2.3	3.3
BRISTOL	3.0	3.0
LEEDS	4.2	4.7
LONDON	1.0	1.5
MANCHESTER	1.0	2.5
SHEFFIELD	3.8	4.3
THAMES VALLEY	1.5	2.5

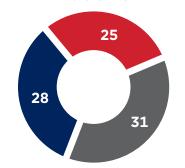
Across the UK, tender price escalation is generally muted, with the exception of the significantly active Leeds and Sheffield markets, running at or around the level of general economy-wide inflation. However, underlying this relative stability is a potent mix of increasing materials costs, labour costs and availability issues, industry total capacity concerns and capacity considerations for sub-contractors and main contractors alike. All of this is set alongside the workload pipeline concerns arising from an economy-wide Brexit-fuelled investment hiatus.

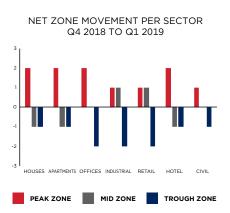
			OFFICE B	UILDING			RE1	AIL		INDUSTRIAL		
		PREMIUM	OFFICES	GRA	DE A	MA	LL	STRIP SHOPPING		WARE	HOUSE	
UNITED KINGDOM		LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	
BELFAST	GBP	1,440	2,050	1,260	2,050	2,250	3,100	700	1,320	290	520	
BIRMINGHAM	GBP	1,960	2,900	1,600	2,900	2,950	4,150	930	1,780	430	600	
BRISTOL	GBP	2,100	3,000	1,700	3,000	2,950	4,150	930	1,760	430	690	
CARDIFF	GBP	1,760	2,500	1,540	2,500	2,700	3,800	860	1,620	360	650	
EDINBURGH	GBP	1,880	2,650	1,640	2,650	2,900	4,050	920	1,720	390	700	
LEEDS	GBP	2,050	3,500	1,460	2,550	2,700	3,800	870	1,620	380	690	
LONDON	GBP	3,000	3,900	2,700	3,700	3,600	5,100	1,160	2,150	510	910	
MANCHESTER	GBP	2,200	2,850	1,880	2,850	3,050	4,300	980	1,840	510	740	
SHEFFIELD	GBP	2,050	3,500	1,460	2,500	2,700	3,800	860	1,620	380	690	
THAMES VALLEY	GBP	2,700	2,900	2,050	2,800	3,000	4,750	1,100	2,000	500	900	

			нот	ELS			CAR PA	RKING		RESIDENTIAL		
	LOCAL CURRENCY	5 S'	TAR	3 S'	ſAR	MULTIS	STOREY	BASE	MENT	MULTI S	STOREY	
UNITED KINGDOM	CONTENCT	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	
BELFAST	GBP	1,680	2,300	1,060	1,560	265	530	670	1,140	1,320	1,860	
BIRMINGHAM	GBP	2,250	3,200	1,360	2,100	380	720	850	1,460	1,680	2,350	
BRISTOL	GBP	2,450	3,300	1,440	1,920	430	850	1,020	1,600	1,240	1,760	
CARDIFF	GBP	2,100	2,850	1,300	1,920	330	650	820	1,420	1,640	2,300	
EDINBURGH	GBP	2,200	3,050	1,400	2,050	360	700	870	1,500	1,720	2,450	
LEEDS	GBP	2,050	3,250	1,280	1,700	330	990	630	1,020	1,620	2,350	
LONDON	GBP	2,850	3,800	1,920	2,450	460	920	1,220	1,980	2,550	4,450	
MANCHESTER	GBP	2,350	3,200	1,580	1,960	580	740	1,100	1,600	1,820	2,650	
SHEFFIELD	GBP	2,050	3,250	1,280	1,700	330	990	630	1,020	1,620	2,350	
THAMES VALLEY	GBP	2,700	3,500	1,800	2,350	450	900	1,100	1,900	1,900	3,000	

RLB MARKET ACTIVITY CYCLE

MARKET SECTOR ACTIVITY





For this edition, four new cities provided market activity information, these were Budapest, Podgorica, Athens and Copenhagen.

Market activity is fairly well spread between the three zones, with 30% in peak, 37% in the mid and 33% in trough.

The office sector was the strongest with 50% of cities reported in the peak zone. This was followed by the house and apartment sectors with 42% of cities in the peak zone.

Madrid, Budapest and Copenhagen had the most sectors within the peak zone with six for Madrid and five for Budapest and Copenhagen. European Union growth rates have been slowing recently, with much attention focussed on the outcome of the UK leaving the EU. Much time and effort has been expended in extensive contingency planning. Unfortunately, in a construction context, this has resulted in risk-costs being added to constructors' pricing. However, although ordinarily this would result in cost blow-outs, the need on the part of contractors to re-fill order books at a time of uncertainty has mitigated the problem. Despite rising material costs and significant labour cost increases, tender prices have remained subdued for the most part, with only a few standout uplifts.

Economic activity in Ireland is projected to remain robust in 2019, with GDP forecast at 4.2% and the government expected to remain committed to improving the fiscal position, allowing for potential negative shocks such as Brexit. The construction sector continues to flourish, particularly in Dublin and Cork, with the commercial, hotel and residential sectors being particularly strong. Build-to-let residential schemes are continuing to arise, along with custom-built student accommodation. Weaker sectors include civil, infrastructural and state-funded projects, although Budget 2019 foretold of a significant increase in government expenditure, particularly on capital projects. New major projects about to commence will further increase pressure on the available pool of already limited resources, which will have a significant effect on costs and project delivery.

In Norway, Oslo continues to show solid tender price growth, although retail has slowed somewhat, offset by an increase in infrastructure project works. The overall effect may have reduced pressure on labour availability, as heavy engineering works tend to be less labour-intensive than building projects.

In Denmark, the Copenhagen market remains busy. However, it is now looking to be slowing slightly, with a lesser volume of transactions, as well as lower activity levels on construction and renovation work. In neighbouring Germany, the economy continues to perform well across the board, although construction output levels are now overstretched, beyond the market's maximum capacity.

Meanwhile, in Athens, a key feature of the Greek market is the now booming hotel industry. Some international clients are investing in converting apartments or blocks of apartments into AirB&B units, which is of course feeding workload throughout the building sector.

For the Netherlands, a number of large organisations have spoken of relocating from the UK to the Netherlands pre and post-Brexit, while the Amsterdam construction market as a whole is experiencing ongoing pressure on tender prices.

IRELAND & MAINLAND EUROPE	HOUSES	APARTMENTS	OFFICES	INDUSTRIAL	RETAIL	HOTEL	CIVIL
AMSTERDAM			•				•
ATHENS	▼						•
BERLIN	A	A	•	•			
BUDAPEST	A	A	A		•		
COPENHAGEN	•	▼	A		\blacksquare	A	
DUBLIN	A						
MADRID	•	▼	•	•	•	•	
MILAN			▼		▼	▼	\blacksquare
MOSCOW			▼		▼	\blacksquare	A
OSLO	A	A			\blacksquare	A	A
PARIS	A		A		A	•	
PODGORICA			▼	•	▼		

Belgian markets are reasonably stable at present, although there is a workload issue around replacement of nuclear power generation capacity. The upgrading of buildings, to reduce energy consumption, has been targeted as a means of reducing energy requirements, and will provide further construction workload.

Despite France's relatively high level of unemployment, there remains a skills shortage across the country, a situation which exists in parallel with forecast 1% tender price uplift for Paris last year and this. Italy's market slowed in 2018, showing a slight fall in overall tender prices, while Milan remains a main hub of activity and investment.

Although levels of construction activity remain high in Spain, muted price inflation suggests upcoming concern over replacement workload, whereas in Portugal there has been a significant increase of construction costs due to the lack of labour to meet the significant increase of activity.

The Bulgarian and Romanian construction economies continue to perform strongly, although now with attendant skills shortages affecting tender pricing. Likewise, the Hungarian construction industry boom continues, although growth is projected to taper toward European norms. Budapest is experiencing ongoing development, particularly industrial, with attendant skills shortages. Montenegro, in common with much of the rest of Europe, is showing low levels of building cost inflation, although in this case alongside almost static consumer price growth.

RLB TENDER PRICE INDEX

% CHANGE F		2020 (F)
ATHENS	3.0	3.0
BERLIN	2.0	NP
BUDAPEST	6.0	4.0
COPENHAGEN	2.2	2.5
DUBLIN	8.0	7.5
MADRID	0.1	NP
MOSCOW	1.5	2.0
OSLO	4.0	4.0
PARIS	1.0	NP

The major issue of skills shortages in Europe, set against the backcloth of the UK's Brexit, and its associated uncertainty, together provide a complex interaction of market facets. The end-result is generally low levels of tender price inflation, as contractors experience input-cost inflation, but at the same time, need to replace workload for the sake of security going forward.

			OFFICE B	E BUILDING RET			TAIL		INDUSTRIAL		
IRELAND &		PREMIUM	OFFICES	GRA	DE A	MA	LL	STRIP SH	IOPPING	WARE	HOUSE
MAINLAND EUROPE		LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH
AMSTERDAM	EUR	1,320	1,680	960	1,420	760	960	610	810	380	540
ATHENS	EUR	1,300	1,500	1,100	1,300	800	1,000	1,200	1,500	600	800
BERLIN	EUR	1,400	1,830	1,020	1,200	1,180	1,510	870	1,080	380	750
BUDAPEST	EUR	1,390	1,680	1,080	1,430	1,390	1,920	690	1,310	710	980
COPENHAGEN	EUR	3,000	4,000	3,000	4,000	2,000	3,000	1,500	2,500	1,000	1,500
DUBLIN	EUR	2,600	2,900	2,400	2,600	3,300	3,500	1,200	1,600	610	765
LISBON	EUR	1,300	1,500	1,100	1,300	2,200	2,500	850	1,300	500	700
MADRID	EUR	2,000	2,500	1,800	2,200	2,000	2,700	1,500	2,000	800	900
MOSCOW	EUR	1,520	2,050	1,320	1,620	1,720	2,150	1,220	1,520	510	610
OSLO	EUR	2,960	3,830	2,300	2,960	1,860	2,450	1,490	1,940	1,630	2,140
PARIS	EUR	2,300	2,600	2,600	2,900	2,400	2,600	1,300	1,600	1,300	2,300
PODGORICA	EUR	1,820	1,820	1,220	1,220	1,420	1,420	NP	NP	510	510
VIENNA	EUR	1,880	2,350	1,400	1,720	1,820	2,250	1,020	1,180	590	750

			нот	ELS CAR PAR			ARKING		RESIDENTIAL		
IRELAND &		5 S	TAR	3 ST	TAR	MULTI S	STOREY	BASE	MENT	MULTI	STOREY
MAINLAND EUROPE	CONTENT OF	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH
AMSTERDAM	EUR	1,520	1,920	1,220	1,520	410	610	660	1,020	860	1,380
ATHENS	EUR	1,500	2,000	1,200	1,500	400	500	550	700	950	1,150
BERLIN	EUR	2,090	2,850	1,400	1,830	490	700	810	1,080	1,020	1,470
BUDAPEST	EUR	1,590	2,320	1,120	1,420	460	620	580	790	880	1,150
COPENHAGEN	EUR	3,500	4,500	1,700	2,300	500	1,000	1,200	2,500	2,200	3,000
DUBLIN	EUR	2,700	3,100	2,400	2,600	665	815	970	1,630	1,900	2,100
LISBON	EUR	1,500	2,000	1,200	1,350	450	600	550	750	1,100	1,600
MADRID	EUR	2,200	3,000	1,500	2,000	700	1,000	800	1,500	1,800	2,500
MOSCOW	EUR	2,850	3,550	1,720	2,250	440	560	810	1,020	1,220	1,520
OSLO	EUR	4,080	5,310	3,060	3,980	710	910	920	1,300	2,500	3,270
PARIS	EUR	3,000	3,800	2,500	3,200	520	700	1,250	1,700	1,900	2,900
PODGORICA	EUR	2,150	2,150	1,320	1,320	910	910	550	750	1,350	1,550
VIENNA	EUR	3,050	3,450	1,720	2,200	540	590	1,180	1,340	1,500	1,780

NP: NOT PUBLISHED

SOUTH AFRICA	2018	2019 (F)	2020 (F)	2021 (F)	2022 (F)	2023 (F)
GDP	0.8 %	1.4 %	1.7 %	1.8 %	1.8 %	1.8 %
GDP PER CAPITA - ZAR	R 54,832	R 54,730	R 54,810	R 54,924	R 55,054	R 55,184
EXCHANGE RATE (AS AT 29 DECEMBER PER USD)	14.39	14.44	15.09	15.86	16.74	17.75
PPP RATE	6.21	6.40	6.62	6.85	7.10	7.35
INFLATION	4.8 %	5.3 %	5.4 %	5.5 %	5.5 %	5.5 %
UNEMPLOYMENT	27.9 %	28.3 %	28.6 %	28.8 %	28.9 %	29.1 %
SUB SAHARAN AFRICA						
GDP	3.1 %	3.8 %	3.9 %	3.9 %	3.9 %	4.1 %
GDP PER CAPITA (INT \$)	4,086	4,221	4,356	4,496	4,638	4,796
INFLATION	8.6 %	8.5 %	7.8 %	7.9 %	7.8 %	7.6 %
MIDDLE EAST & NORTH AFRICA						
GDP	2.0 %	2.5 %	2.9 %	3.0 %	3.0 %	3.0 %
GDP PER CAPITA (INT \$)	18,961	19,450	20,007	20,588	21,205	21,854
INFLATION	11.8 %	10.6 %	8.5 %	7.0 %	6.3 %	6.2 %
CHINA						
GDP	6.6 %	6.2 %	6.2 %	6.0 %	5.8 %	5.6 %
GDP PER CAPITA - CNY	¥60,832	¥64,294	¥68,008	¥71,816	¥75,688	¥79,843
EXCHANGE RATE (AS AT 29 DECEMBER PER USD)	6.85	6.71	7.14	6.61	6.92	7.24
PPP RATE	3.50	3.50	3.52	3.52	3.53	3.54
INFLATION	2.2 %	2.4 %	2.7 %	2.8 %	2.9 %	3.0 %
UNEMPLOYMENT	4.0 %	4.0 %	4.0 %	4.0 %	4.0 %	4.0 %
HONG KONG						
GDP	3.8 %	2.9 %	3.0 %	3.0 %	3.1 %	3.1 %
GDP PER CAPITA - HKD	\$359,118	\$366,625	\$374,693	\$383,681	\$393,220	\$403,149
EXCHANGE RATE (AS AT 29 DECEMBER PER USD)	7.83	7.85	7.89	7.93	7.98	8.02
PPP RATE	5.83	5.80	5.78	5.78	5.78	5.78
INFLATION	2.3 %	2.1 %	2.2 %	2.4 %	2.5 %	2.5 %
UNEMPLOYMENT	2.6 %	2.6 %	2.6 %	2.6 %	2.6 %	2.6 %
SINGAPORE						
GDP	2.9 %	2.5 %	2.7 %	2.7 %	2.7 %	2.6 %
GDP PER CAPITA - SGD	\$76,851	\$78,136	\$79,581	\$81,045	\$82,527	\$83,991
EXCHANGE RATE (AS AT 29 DECEMBER PER USD)	1.37	1.35	1.37	1.29	1.31	1.35
PPP RATE	0.84	0.83	0.83	0.82	0.82	0.81
INFLATION	1.0 %	1.4 %	1.4 %	1.3 %	1.3 %	1.3 %
UNEMPLOYMENT	2.0 %	1.9 %	1.9 %	1.9 %	1.9 %	1.9 %
ASEAN-5						
GDP	5.3 %	5.2 %	5.2 %	5.2 %	5.3 %	5.3 %
GDP PER CAPITA (INT \$)	13,161	13,964	14,788	15,662	16,591	17,597

NOTES

Forecasts for years after 2018.

Exchange rates are quoted as currency units per U.S. dollar (USD).

Euro Area comprises 19 countries: Austria, Belgium, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Portugal, Slovak Republic, Slovenia, and Spain.

Asean-5 comprises 5 countries: Indonesia, Malaysia, Philippines, Thailand, and Vietnam.

Latin America and Caribbean comprises 32 countries: Antigua and Barbuda, Argentina, The Bahamas, Barbados, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominica, Dominican Republic, Ecuador, El Salvador, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago, Uruguay, and Venezuela.

Middle East and North Africa comprises 21 countries: Algeria, Bahrain, Djibouti, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Libya, Mauritania, Morocco, Oman, Qatar, Saudi Arabia, Somalia, Sudan, Syria, Tunisia, United Arab Emirates, and Yemen.

Sources: Economic data & historical exchange rates - International Monetary Fund World Economic Outlook Database (Oct 18), Forecast exchange rates - Scotiabank, Deutsche Bank, CME Group

AUSTRALIA	2018	2019 (F)	2020 (F)	2021 (F)	2022 (F)	2023 (F)
GDP	3.2 %	2.8 %	2.7 %	2.6 %	2.6 %	2.6 %
GDP PER CAPITA - AUD	\$70,327	\$71,091	\$71,796	\$72,478	\$73,153	\$73,819
EXCHANGE RATE (AS AT 29 DECEMBER PER USD)	1.42	1.41	1.40	1.39	1.38	1.38
PPP RATE	1.43	1.43	1.43	1.44	1.44	1.46
INFLATION	2.2 %	2.3 %	2.5 %	2.5 %	2.5 %	2.5 %
UNEMPLOYMENT	5.3 %	5.0 %	5.0 %	4.9 %	4.9 %	4.9 %
NEW ZEALAND						
GDP	3.1 %	3.0 %	3.1 %	3.1 %	2.6 %	2.5 %
GDP PER CAPITA - NZD	\$50,280	\$50,778	\$51,425	\$52,114	\$52,677	\$53,273
EXCHANGE RATE (AS AT 29 DECEMBER PER USD)	1.49	1.46	1.45	1.44	1.44	1.44
PPP RATE	1.49	1.49	1.49	1.50	1.50	1.50
INFLATION	1.4 %	1.7 %	1.9 %	2.0 %	2.0 %	2.0 %
UNEMPLOYMENT	4.5 %	4.4 %	4.4 %	4.3 %	4.3 %	4.4 %
USA						
GDP	2.9 %	2.5 %	1.8 %	1.7 %	1.5 %	1.4 %
GDP PER CAPITA - USD	\$56,600	\$57,674	\$58,353	\$58.988	\$59,488	\$59,928
EXCHANGE RATE (AS AT 29 DECEMBER PER USD)	1.00	1.00	1.00	1.00	1.00	1.00
PPP RATE	1.00	1.00	1.00	1.00	1.00	1.00
INFLATION	2.4 %	2.1 %	2.3 %	2.2 %	2.2 %	2.2 %
UNEMPLOYMENT	3.8 %	3.5 %	3.4 %	3.6 %	3.6 %	3.7 %
CANADA						
GDP	2.1 %	2.0 %	1.8 %	1.8 %	1.6 %	1.6 %
GDP PER CAPITA - USD	\$51,070	\$51,618	\$52,062	\$52,500	\$52,872	\$53,232
EXCHANGE RATE (AS AT 29 DECEMBER PER USD)	1.36	1.33	1.31	1.31	1.31	1.30
PPP RATE	1.21	1.21	1.21	1.21	1.21	1.21
INFLATION	2.6 %	2.2 %	2.1 %	2.1 %	2.1 %	2.0 %
UNEMPLOYMENT	6.1 %	6.2 %	6.2 %	6.3 %	6.4 %	6.5 %
LATIN AMERICA AND THE CARRIBEAN						
GDP	1.2 %	2.2 %	2.7 %	2.7 %	2.8 %	2.9 %
GDP PER CAPITA (INT \$)	16,287	16,866	17,514	18,164	18,853	19,596
INFLATION	6.1 %	5.9 %	4.4 %	4.0 %	3.7 %	3.5 %
GDP	1.4 %	1.5 %	1.5 %	1.6 %	1.6 %	1.6 %
GDP PER CAPITA - GBP	£30,532	£30,812	£31,123	£31,466	£31,853	£32,249
EXCHANGE RATE (AS AT 29 DECEMBER PER USD)	0.79	0.75	0.74	0.73	0.72	0.72
PPP RATE	0.69	0.69	0.69	0.69	0.69	0.69
INFLATION	2.5 %	2.2 %	2.0 %	2.0 %	2.0 %	2.0 %
UNEMPLOYMENT	4.1 %	4.2 %	4.5 %	4.5 %	4.5 %	4.5 %
EURO AREA						
GDP	2.0 %	1.9 %	1.7 %	1.6 %	1.5 %	1.4 %
EXCHANGE RATE	0.87	0.88	0.85	0.83	0.81	0.79
INFLATION	1.7 %	1.7 %	1.8 %	1.9 %	2.0 %	2.1 %

NOTES

Forecast exchange rates for 2019 and beyond have been calculated using the 12, 24, 36 and 48 month forward bid rates as published on the 19th March 2019.

GDP, PPP, inflation and unemployment rates have been compiled from the IMF World Economic Outlook (WEO) databases as at October 2018. In January and July of each year an update is released, which updates previous indicator forecasts, however, the WEO databases are not updated with this revised information. Some economic statistics referenced within the body of this International Report reflect the WEO update published in January 2019 and may not align with the table above.

INDEPENDENT CONSULTANTS, LOCAL KNOWLEDGE AND EXPERTISE, GLOBAL NETWORK

Information contained within this report has been compiled from numerous global sources and RLB offices.

Data contained within the report has been compiled from information published and is referenced within the text of the report

BUILDING COST RANGE NOTES

Generally all rates are in national currency per square metre of Gross Floor Area except as follows:

North Asian cities - rates are per square metre of Construction Floor Area, measured to outer face of external walls.

South Asian cities - rates are per square metre of Construction Floor Area, measured to outer face of external walls and inclusive of covered basement and above ground parking areas.

For both North Asian and South Asian cities all hotel rates are inclusive of Furniture Fittings and Equipment (FF&E).

North America building costs are national currency per square foot.

GLOSSARY OF TERMS USED IN THIS PUBLICATION

billion	Billions (109)	million	Millions (106)
СРІ	Consumer Price Index	Q1	1st Quarter (1 Jan – 31 March)
СҮ	Calendar Year (1 Jan - 31 Dec)	Q2	2nd Quarter (1 April - 30 June)
СУМ	Chain Volume Measure	Q3	3rd Quarter (1 July – 30 Sep)
FY	Financial Year (1 July - 30 June)	Q4	4th Quarter (1 Oct - 31 Dec)
GDP	Gross Domestic Product	qoq	quarter on quarter
H1	1st half of year (1 Jan - 30 June)	RBA	Reserve Bank of Australia
IMF	International Monetary Fund	ТРІ	RLB Tender Price Index
mom	month on month	уоу	year on year

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RIDERS DIGESTS

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MIDDLE EAST

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Saudi Arabia Riyadh

United Arab Emirates Abu Dhabi

Dubai

