ARCADIS

Singapore

Quarterly construction cost review

Issue 50
Arcadis Singapore Pte Ltd

2021 | First Quarter

Contents

Singapore Market Overview

The Ministry of Trade and Industry (MTI) has announced that the Singapore economy expanded by 1.3% on a year-on-year basis in 1Q2021. MTI has maintained Singapore's GDP growth forecast for 2021 at "4.0% to 6.0%".

The construction sector contracted by 23% year-on-year in 1Q2021, a slight improvement from 4Q2020 where the contraction was 27%. This was attributed to a decline in both public and private sector construction activities.

The construction sector is projected to recover from the low base in 2020. With further tightening of border controls and immigration measures between Singapore and the wider South Asia region, re-entry of long-term pass holders has been postponed, restricting the entry of new labour and skills, exacerbating the labour shortage situation. This constraint, coupled with the requirement to comply with safe management measures, can make for a bumpy recovery.

With great uncertainty over the pandemic situation both globally and domestically, MTI has maintained the GDP growth forecast for 2021 at "4.0% to 6.0%".

Based on Arcadis Singapore's data, tender prices for 1Q2021 have increased by approximately 10% as compared to 4Q2020, mainly driven by increased labour prices due to shortage of labour and a rise in the cost of specialist works such as mechanical and electrical systems and metal work as well as construction material prices of steel bars and structural steel.

Looking ahead, construction costs in the next 6 to 12 months are anticipated to increase, possibly by an estimated 10% or more due to labour shortages, an increase in construction material prices and shortages of contracting resources (i.e. specialist sub-contractors and suppliers). The actual cost increase will nevertheless be dependent on the prevailing market sentiment and COVID-19 situation.

MARKET MOVEMENT

ECONOMY

Indicator	Q1/19 - Q1/20	Q4/19 - Q4/20	Q1/20 - Q1/21
GDP Growth per annum	0.0%	(-) 2.4%	(+) 1.3%
Inflation Rate (CPI) per annum	Mar 19 - 20 (-) 0.04%	Dec 19 - 20 (+) 0.02%	Mar 20 - 21 (+) 1.3%

Source: Ministry of Trade and Industry

SUPPLY & DEMAND

Indicator	Q1/20	Q4/20	Q1/21
BCA Construction Demand	S$6.50 Bn	S$5.71 Bn	S$5.29 Bn
BCA Construction Output	S$7.40 Bn	S$5.78 Bn	S$6.05 Bn

Source: Building and Construction Authority

BASIC COSTS

Indicator	Jan 21	Feb 21	Mar 21
BCA Concrete Price Index	121.7	121.7	122.5
BCA Steel Reinforcement Price Index	118.8	119.2	121.8

Source: Building and Construction Authority

CONSTRUCTION COST TREND

Indicator	Q1/20	Q4/20	Q1/21
BCA Tender Price Index	101.0	106.5	110.8
Arcadis Singapore Tender Price Index	100.2	103.2	113.5

Source: Building and Construction Authority

1 Market Analysis

Singapore's Construction Demand

The challenges and uncertainties brought about by the COVID-19 pandemic continues to disrupt project implementation schedules and investment decisions. According to the Building and Construction Authority (BCA)'s preliminary data, total construction demand (based on actual contracts awarded) declined by 19% on a year-on-year basis to $5.3 billion in 1Q2021, an improvement from the 29% decline in 4Q2020. On a quarter-on-quarter basis, it declined 7% as compared to 4Q2020.

Public sector construction demand shrank 5% on a year-on-year basis to $3.2 billion in 1Q2021. Apart from residential, all other development types have declined. On a quarter-on-quarter basis, it declined 17% as compared to 4Q2020 with most development types declining except for institutional & others which increased by 80%.

Likewise, private sector construction demand shrank 33% on a year-on-year basis to $2.1 billion in 1Q2021 with only civil engineering construction demand expanding. However, on a quarter-on-quarter basis, it increased 12% as compared to 4Q2020 with an increase in all development types except for industrial construction demand.

Key Construction Material Prices

Based on BCA's data, the average market prices of cement, granite, concreting sand and ready-mixed concrete have remained relatively stable in 1Q2021 except for steel bars which have been on the rise since September 2020.

The average market price of steel bars (16-32mm high tensile) in 1Q2021 continues to be on the rise. According to BCA's data, the average market price of steel bars in March 2021 has increased by approximately 15% to $933 per tonne compared to $809 per tonne in December 2020. It has increased by approximately 30% compared to $718 per tonne a year ago in March 2020. The increase in steel bar prices is attributed to the rising cost of raw material price of iron ore.

Similarly, prices of copper and aluminium have soared approximately 74% and 36% to US$9,005 per tonne and US$2,192 per tonne in March 2021 compared to US$5,178 per tonne and US$1,611 per tonne respectively a year ago in March 2020, according to data from London Metal Exchange.

The rise in raw material prices such as iron ore, copper and aluminium has been fuelled by strong demand from China and globally due to the reopening of economy, supply disruptions, and a weaker U.S. dollar.

Looking ahead, material prices are likely to remain high due to increased global demand as many countries have plans to ramp up infrastructure spending as part of their economic recovery roadmap.

Additional Measures to Support the Construction Sector

Construction Labour

Whilst the construction industry is still facing on-going labour shortages, the Multi-Ministry Taskforce has announced further tightening of border control and immigration measures with India and the wider South Asia region due to a surge in COVID-19 cases in these countries. This will no doubt further impact companies in the construction industry that are dependent on foreign labour and skills.

To help the construction sector tide over this difficult period, the Government has introduced a temporary scheme for six months from 7 May 2021 to allow new People's Republic of China (PRC) Work Permit Holders (WPHs) to obtain their skills certification in Singapore instead of enrolling in Overseas Testing Centres. With this temporary scheme, employers will be permitted to bring in PRC WPHs without skills certifications, but they must comply with other prevailing entry approval and work pass requirements.

However, the relief might not be sufficient to replace the high turnover. There is also no guarantee that the Chinese workers will choose to leave their home country with the evolving COVID-19 pandemic situation. With the uncertainties ahead, it is anticipated that labour cost is likely to remain high.

Extension of Time (EOT), Cost Sharing of Non-Manpower Related Cost Increase, Increase Foreign Worker Levy (FWL) Rebate and Reliefs for Construction Contracts Affected by Increase in Foreign Manpower Salary Costs

Government agencies will be granting a 49-day EOT, in addition to the earlier universal EOT of 122 days, to eligible public sector construction contracts that are delayed due to loss of productivity for the period from 7 August 2020 to 31 December 2020 to help ease contractor's cashflow and relieve stress caused by tight project timelines.

In addition, to facilitate quicker disbursement of prolongation cost sharing due to increased non-manpower related costs under Part 8B of COVID-19 (Temporary Measures) Act 2020 ("COTMA"). The public sector will provide 0.1% of the awarded contract sum for every month of delay (i.e. 50% of the monthly cap of 0.2%) as payment for qualifying costs for eligible contracts up to awarded contract sum of $100 million. Contractors will not be required to put up detailed substantiation on qualifying cost incurred for this 0.1%. Contractors who want to claim beyond the 0.1% can continue to submit claims with substantiation through a simplified computation method.

The Government has announced that the FWL rebate for each WPH will be increased from $90 per month to $250 per month, between May and December 2021.

On 11 May 2021, the Government has announced additional relief measures under Part 10A of the COTMA which provides a relief framework to allow adjustment to the construction contract sum affected by an increased foreign manpower salary costs between 1 October 2020 and 30 September 2021 due to the COVID-19 pandemic.

2 Approximate Building Costs

Singapore

BUILDING TYPE	S$/m² CFA
RESIDENTIAL	
Terraced Houses	2,700 - 3,000
Semi-Detached Houses	2,950 - 3,400
Detached Houses	3,450 - 4,550
Average Standard Condominium	2,100 - 2,300
Above Average Standard Condominium	2,400 - 3,150
Luxury Condominium	3,250 - 4,750
OFFICE	
Average Standard Offices	2,700 - 3,000
Prestige Offices	3,050 - 3,300
COMMERCIAL	
Shopping Centres, Average Quality	3,050 - 3,150
Shopping Centres, High Quality	3,250 - 3,500
CAR PARKS	
Multi-Storey Car Parks	1,000 - 1,450
Basement Car Parks	1,450 - 1,950
INDUSTRIAL	
Flatted Light Industrial Buildings	1,400 - 1,550
Flatted Heavy Industrial Buildings	1,600 - 2,150
Single Storey Industrial Buildings	1,300 - 1,450
Flatted Warehouses	1,300 - 1,450
Single Storey Warehouses	1,200 - 1,450
HOTEL (INCLUDING FURNITURE AND FITTINGS)	
3-Star Hotels	3,400 - 3,700
4-Star Hotels	3,650 - 4,250
5-Star Hotels	4,350 - 4,850
HEALTH	
Private Hospitals	4,350 - 4,550
Polyclinics, Non Air-conditioned	1,850 - 2,050
Nursing Homes, Non Air-conditioned	1,850 - 2,150
Medical Centres	3,350 - 3,500

The above costs are at 1st Quarter 2021 levels.

Notes:

The construction costs above serve only as a guide for preliminary cost appraisals and budgeting. It must be understood that the actual cost of a building will depend upon the design, site conditions and many other factors and may vary from the figures shown. The costs per square metre are based on **Construction Floor Areas (CFA)** measured to the outside face of the external walls / external perimeter including lift shafts, stairwells, plant rooms, water tanks and the like.

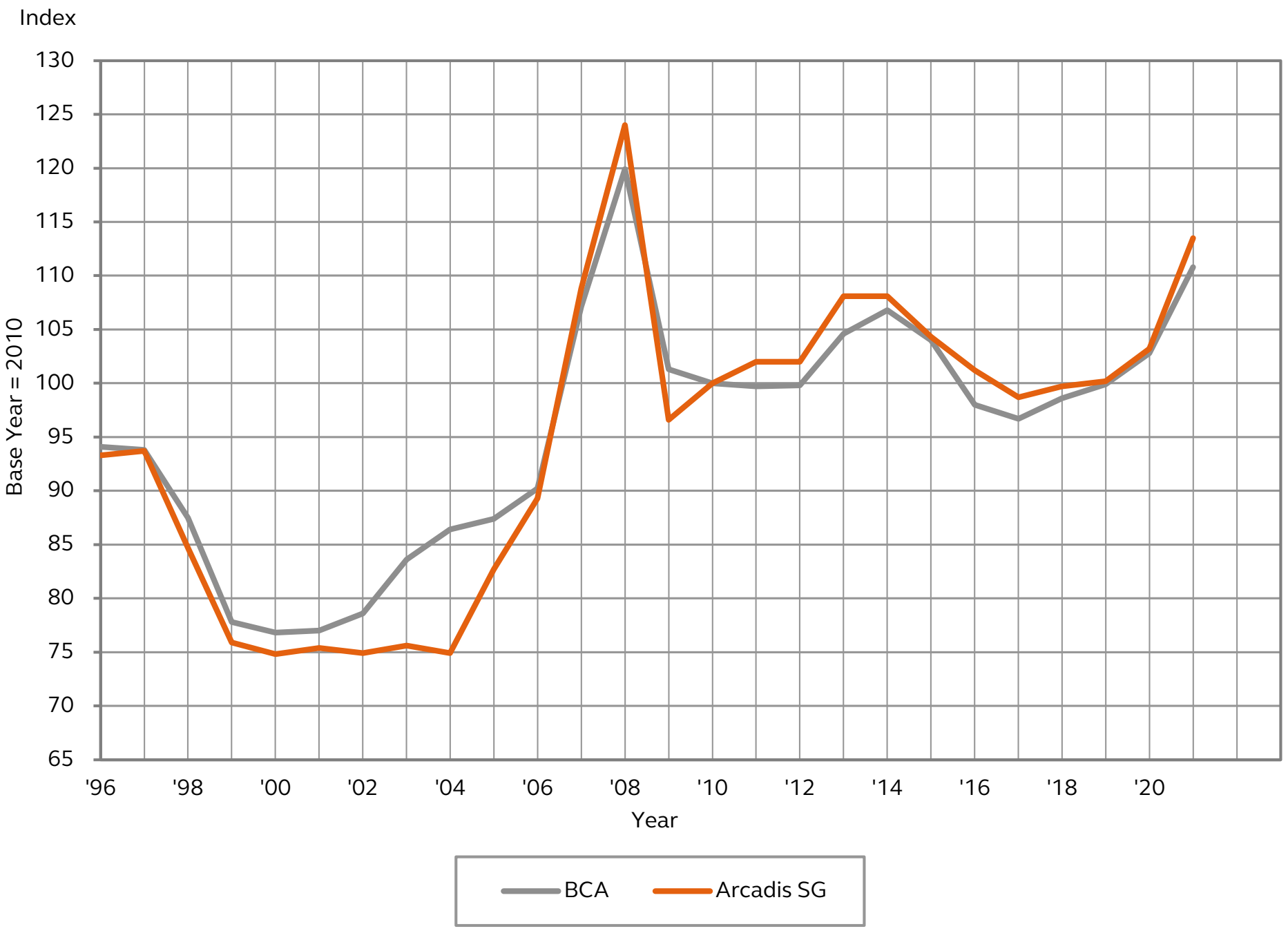
All buildings are assumed to have no basements (unless otherwise stated) and are built on flat ground with normal soil conditions. The costs exclude the following:

- Professional fees
- Authorities' plan processing charges
- Land cost
- Financing charges
- Site inspectorate
- Administrative expenses
- Legal cost & disbursements
- Demolition of existing building(s)
- Furniture and fittings (unless otherwise stated)
- Operating equipment
- External works
- Prefabricated Prefinished Volumetric Construction (PPVC) / Prefabricated Bathroom Units (PBUs) / Structural steel structure
- Cross Laminated Timber (CLT) / Glued Laminated Timber (Glulam)
- BCA Green Mark Gold and above
- Cost escalation
- Goods and Services Tax

3 Tender Price Index

Singapore

Arcadis Singapore TPI is a measure of the comparative tender price movements based on the projects handled by Arcadis Singapore Pte Ltd. The TPI reflects the tender price level of contracts let out over the years. Other than material and labour costs, it takes into account the elements of competition, risk and profits.



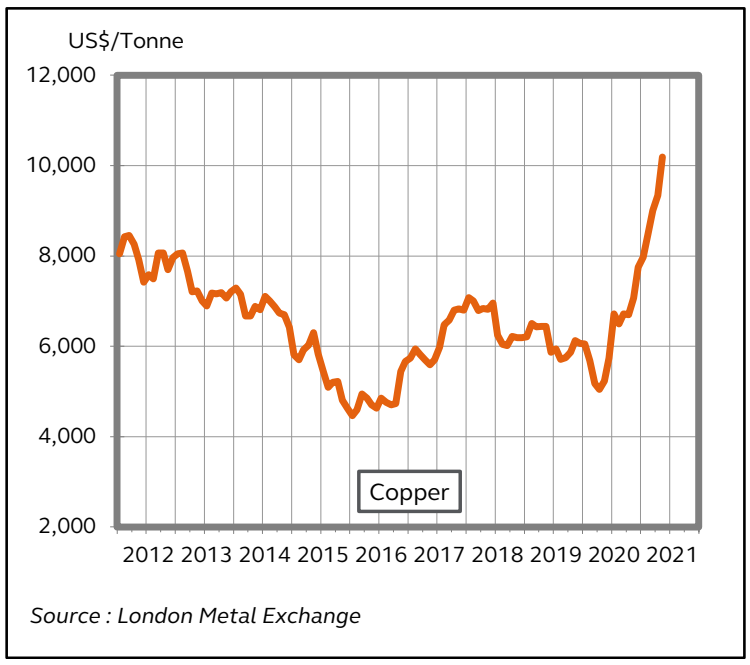
Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
BCA*	100.0	99.7	99.8	104.6	106.8	104.0	98.0	96.7	98.6	99.9
Arcadis SG^	100.0	102.0	102.0	108.1	108.1	104.3	101.2	98.7	99.7	100.2

Year	2020	1Q21
BCA*	102.8	110.8
Arcadis SG^	103.2	113.5

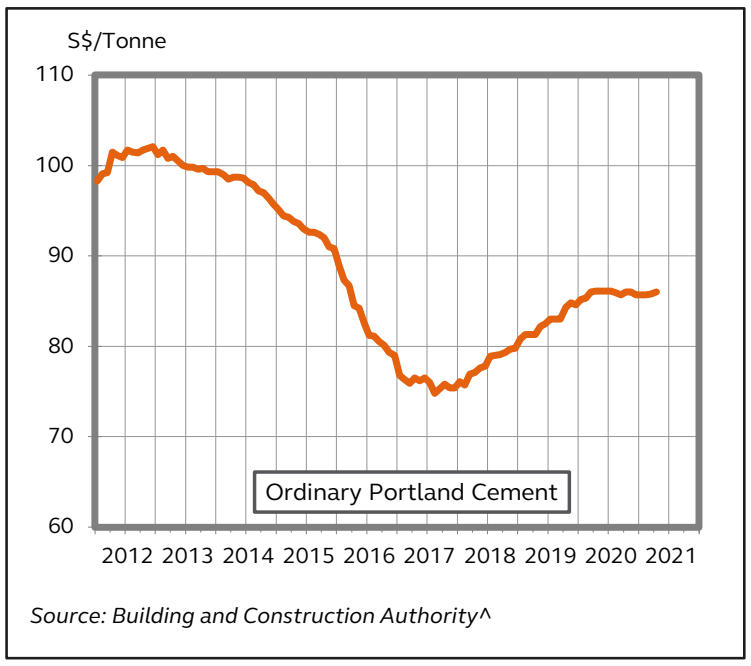
Source: * Building and Construction Authority (BCA TPI based on average for the whole year)
^ From 2009 onwards, Arcadis Singapore TPI based on 4th Quarter Index

4 Materials
Singapore

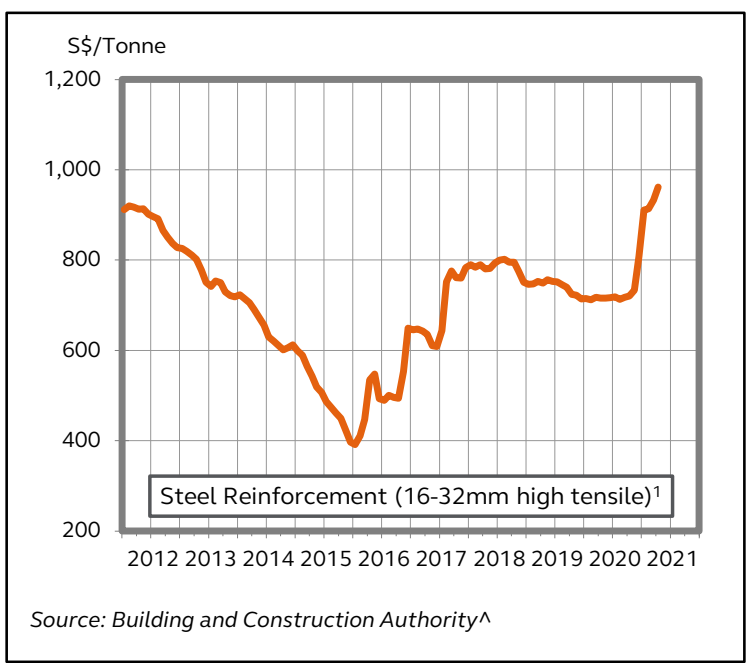
Basic Construction Materials



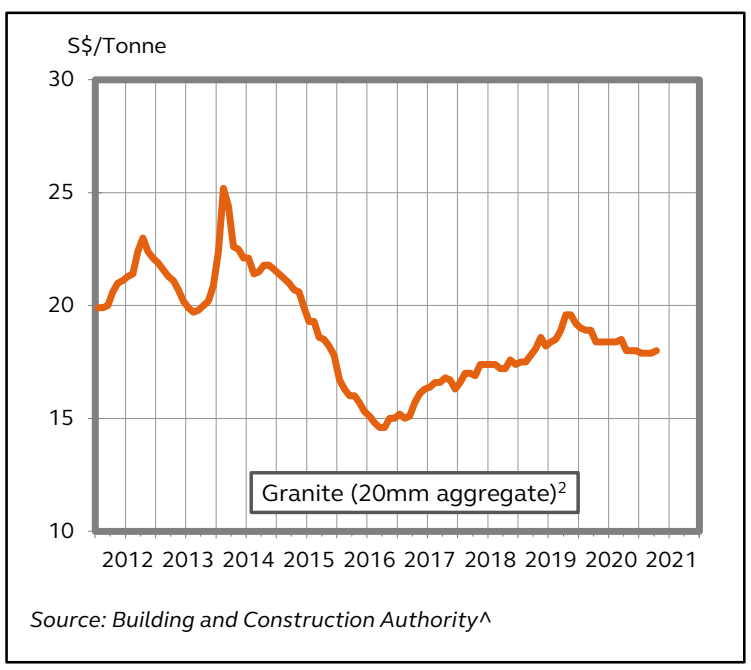
Source : London Metal Exchange



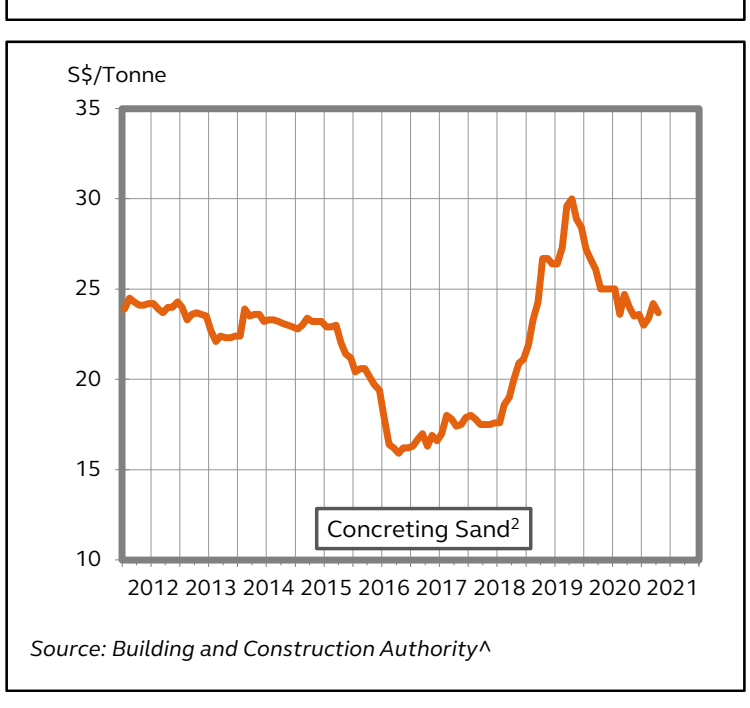
*Source: Building and Construction Authority^*



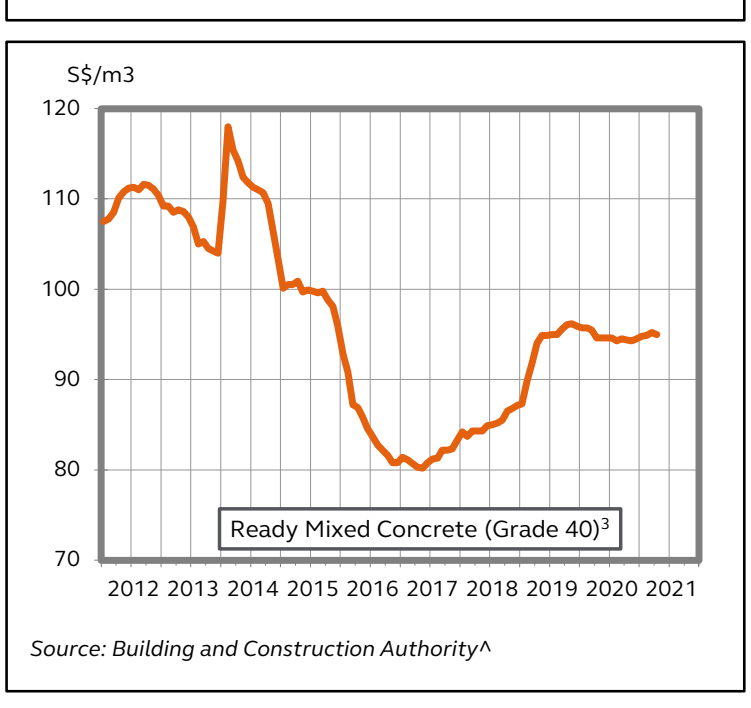
*Source: Building and Construction Authority^*



*Source: Building and Construction Authority^*



*Source: Building and Construction Authority^*

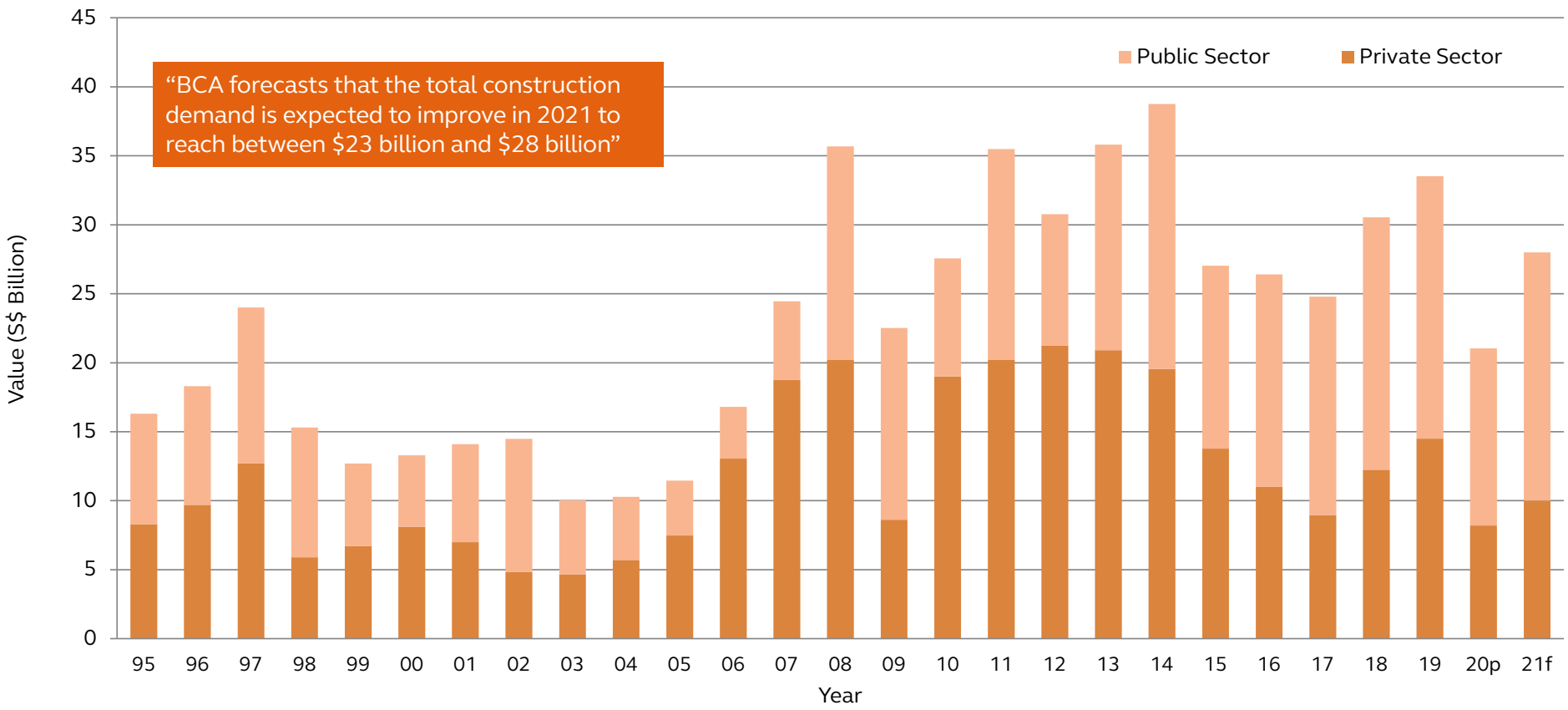


*Source: Building and Construction Authority^*

Notes:

[1] Prices of rebar other than 16-32mm dimensions may subject to surcharge
[1] With effect from Jan 2015, the market prices of rebar (without cut & bend) are based on fixed price supply contracts with contract period 1 year or less
[2] Prices of granite and concreting sand exclude local delivery charges to concrete batching plants
[3] The market prices of ready mixed concrete are based on contracts with non-fixed price, fixed price and market retail price for Grade 40 pump
^ In view of the lack of business transactions for materials due to a stoppage/slowdown of most construction activities on the back of the Covid-19 fallout, the BCA construction material market prices in May, Jun and Jul 2020 (except for rebar prices in Jun and Jul 2020) are assumed unchanged from those of Apr 2020

5 Construction Demand
Singapore



BCA Construction Demand (Excludes Reclamation Works) (S$ Billion)												
	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Private Sector	8.3	9.7	12.7	5.9	6.7	8.1	7.0	4.8	4.6	5.7	7.5	13.1
Public Sector	8.0	8.6	11.3	9.4	6.0	5.2	7.1	9.6	5.4	4.6	4.0	3.7
Total Value	16.3	18.3	24.0	15.3	12.7	13.3	14.1	14.5	10.0	10.3	11.5	16.8

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Private Sector	18.8	20.2	8.6	19.0	20.2	21.2	20.9	19.5	13.8	11.0	9.0	12.2
Public Sector	5.7	15.5	13.9	8.6	15.3	9.5	14.9	19.2	13.3	15.4	15.8	18.3
Total Value	24.5	35.7	22.5	27.6	35.5	30.8	35.8	38.8	27.0	26.4	24.8	30.5

	2019	2020p	2021f	1Q21
Private Sector	14.5	8.2	8.0 - 10.0	2.1
Public Sector	19.0	12.8	15.0- 18.0	3.2
Total Value	33.5	21.0	23.0 - 28.0	5.3

Source: Building and Construction Authority as at 6 May 2021

Notes:

1. Construction demand refers to the total value of construction contracts awarded. It is a leading market indicator for the construction industry.
2. p - denotes preliminary; f - denotes forecast

6 Approximate Building Costs For Major Cities

Asia

BUILDING TYPE	Shanghai	Beijing	Guangzhou/ Shenzhen	Chongqing/ Chengdu
	RMB/ m2 CFA			
DOMESTIC				
Apartments, high rise, average standard				
- Shell and core	3,049 - 3,476	2,801 - 3,230	2,732 - 3,012	2,710 - 3,155
- Full fit	5,034 - 5,548	4,432 - 4,868	4,262 - 4,691	4,100 - 4,879
Apartments, high rise, high end				
- Shell and core	3,666 - 3,971	3,337 - 4,841	2,850 - 3,710	3,309 - 4,338
- Full fit	11,366 - 12,388	10,734 - 12,223	6,859 - 7,505	6,638 - 8,368
Terraced houses, average standard				
- Shell and core	3,446 - 3,668	3,233 - 3,776	2,895 - 3,189	3,335 - 4,022
- Full fit	6,955 - 7,573	6,343 - 6,873	6,390 - 7,410	5,663 - 6,696
Detached houses, high end				
- Shell and core	5,019 - 5,548	4,869 - 5,419	3,953 - 4,354	4,380 - 5,029
- Full fit	12,229 - 12,971	12,189 - 12,719	12,257 - 13,929	7,213 - 8,239
OFFICE/COMMERCIAL				
Medium/high rise offices, average standard	6,394 - 8,452	6,200 - 8,348	5,955 - 6,635	6,511 - 7,533
High rise offices, prestige quality	8,296 - 11,348	10,074 - 13,711	8,701 - 10,496	8,226 - 11,071
Out-of-town shopping centre, average standard	N/A	4,725 - 6,315	5,738 - 6,295	5,253 - 6,725
Retail malls, high end	8,796 - 11,348	8,545 - 11,761	8,334 - 11,652	7,833 - 10,964
INDUSTRIAL				
Industrial units, shell only (Conventional single storey framed units)	1,991 - 2,434	1,951 - 2,379	2,223 - 2,651	3,200 - 4,029
Owner operated factories, low rise, light weight industry	3,078 - 3,849	3,773 - 4,324	N/A	N/A
HOTELS				
Budget hotels - 3-star, mid market	7,064 - 8,615	6,988 - 8,613	7,546 - 8,300	7,054 - 8,705
Business hotels - 4/5-star	11,380 - 15,412	11,686 - 15,425	12,196 - 17,410	12,694 - 15,846
Luxury hotels - 5-star	15,390 - 18,400	14,874 - 19,143	16,580 - 18,273	15,639 - 18,734
OTHERS				
Underground/basement car parks (<3 levels)	5,278 - 7,357	5,398 - 5,935	3,936 - 6,281	3,107 - 4,365
Multi storey car parks, above ground (<4 levels)	2,705 - 3,776	3,249 - 3,283	2,808 - 3,100	2,471 - 3,050
Schools (primary and secondary)	4,033 - 5,091*	3,759 - 4,854*	3,120 - 3,433*	3,285 - 3,636*
Students' residences	2,953 - 4,026	2,658 - 3,759	1,971 - 2,175	2,291 - 3,331
Sports clubs, multi purpose sports/leisure centres (dry sports) with a/c and including FF&E	6,804 - 8,355	6,438 - 6,492	5,438 - 5,982	5,200 - 5,724
General hospitals - public sector	10,395 - 13,403	8,464 - 10,598	8,239 - 10,299	8,328 - 10,401

The above costs are at 1st Quarter 2021 levels.

6 Approximate Building Costs For Major Cities

Asia

BUILDING TYPE	Hong Kong	Macau	Singapore	Kuala Lumpur
	USD/ m2 CFA (See also exchange rates per U.S. dollar below)			
	HK$ 7.75	MOP 7.980	S$ 1.33	RM 4.16
DOMESTIC				
Apartments, high rise, average standard				
- Shell and core	N/A	1,753 - 2,599	N/A	N/A
- Full fit	2,990 - 3,460	2,258 - 2,762	1,580 - 1,730	315 - 600 $
Apartments, high rise, high end				
- Shell and core	N/A	2,599 - 3,897	N/A	N/A
- Full fit	3,870 - 4,520	3,154 - 4,819	2,445 - 3,570	710 - 1,425
Terraced houses, average standard				
- Shell and core	N/A	3,079 - 3,822	N/A	N/A
- Full fit	4,080 - 4,720	3,848 - 4,592	2,030 - 2,255	225 - 355 $$
Detached houses, high end				
- Shell and core	N/A	3,722 - 5,361	N/A	N/A
- Full fit	5,970 up	4,693 - 6,106	2,595 - 3,420	755 - 1,005
OFFICE/COMMERCIAL				
Medium/high rise offices, average standard	2,950 - 3,390&	2,599 - 3,356	2,030 - 2,255@	595 - 770 $$$
High rise offices, prestige quality	3,540 - 4,080	3,356 - 3,672	2,295 - 2,480@	930 - 1,300 $$$$
Out-of-town shopping centre, average standard	2,930 - 3,430	2,447 - 3,672	2,295 - 2,370	550 - 730
Retail malls, high end	3,790 - 4,520	3,848 - 4,643	2,445 - 2,630	690 - 1,025
INDUSTRIAL				
Industrial units, shell only (Conventional single storey framed units)	N/A	N/A	900 - 1,090	320 - 440
Owner operated factories, low rise, light weight industry	2,270 - 2,850	N/A	N/A	440 - 530
HOTELS				
Budget hotels - 3-star, mid market	3,750 - 4,000	3,419 - 3,873	2,555 - 2,780	1,030 - 1,430
Business hotels - 4/5-star	3,880 - 4,530	4,643 - 5,550	3,270 - 3,645	1,350 - 2,220
Luxury hotels - 5-star	4,530 - 5,210	5,550 - 6,560	3,270 - 3,645	1,970 - 2,500
OTHERS				
Underground/basement car parks (<3 levels)	3,200 - 3,830	2,030 - 2,977	1,090 - 1,465	320 - 540
Multi storey car parks, above ground (<4 levels)	1,910 - 2,270	1,123 - 1,476	750 - 1,090@@	220 - 350
Schools (primary and secondary)	2,490 - 2,680*	2,246 - 2,599	N/A	250 - 315 $$$$$
Students' residences	2,850 - 3,210	1,778 - 2,069	1,880 - 1,990	300 - 370 $$$$$$
Sports clubs, multi purpose sports/leisure centres (dry sports) with a/c and including FF&E	3,740 - 4,270	N/A	2,330 - 2,480	600 - 745
General hospitals - public sector	4,750 - 5,280	N/A	3,270 - 3,420	845 - 1,190

Singapore: Rates are nett of GST
The above costs are at 1st Quarter 2021 levels.

6 Approximate Building Costs For Major Cities

Asia

BUILDING TYPE	Bangkok	Bangalore	Manila	Ho Chi Minh
	USD/ m2 CFA (See also exchange rates per U.S. dollar below)			
	BAHT 31.60	INR 74.39	PHP 48.47	VND 23,450
DOMESTIC				
Apartments, high rise, average standard				
- Shell and core	557 - 712	520 - 580	N/A	N/A
- Full fit	800 - 947	585 - 665	1,019 - 1,438	653 - 810
Apartments, high rise, high end				
- Shell and core	649 - 842	765 - 910	N/A	N/A
- Full fit	1,066 - 1,312	880 - 1,060	1,417 - 2,615	831 - 953
Terraced houses, average standard				
- Shell and core	316 - 411	345 - 375	N/A	N/A
- Full fit	500 - 614	405 - 425	993 - 1,214	440 - 517
Detached houses, high end				
- Shell and core	554 - 791	460 - 490	N/A	N/A
- Full fit	866 - 1,046	530 - 560	1,927 - 3,268	503 - 613
OFFICE/COMMERCIAL				
Medium/high rise offices, average standard	800 - 947	460 - 500	1,009 - 1,259	764 - 885
High rise offices, prestige quality	999 - 1,279	580 - 610	1,460 - 1,841	882 - 1,201
Out-of-town shopping centre, average standard	683 - 880	450 - 490	858 - 1,068	N/A
Retail malls, high end	916 - 963	630 - 675	1,171 - 1,641	714 - 935
INDUSTRIAL				
Industrial units, shell only (Conventional single storey framed units)	533 - 664	365 - 420	571 - 736	313 - 395
Owner operated factories, low rise, light weight industry	N/A	385 - 450	768 - 960	355 - 468
HOTELS				
Budget hotels - 3-star, mid market	1,249 - 1,378	865 - 960	1,281 - 1,428	1,417 - 1,734
Business hotels - 4/5-star	1,599 - 1,827	1,350 - 1,600	1,450 - 2,412	N/A
Luxury hotels - 5-star	1,866 - 2,159	1,705 - 1,870	1,992 - 3,836	1,790 - 2,148
OTHERS				
Underground/basement car parks (<3 levels)	600 - 797	295 - 320	600 - 790	648 - 774
Multi storey car parks, above ground (<4 levels)	200 - 325	245 - 265	509 - 732	417 - 458
Schools (primary and secondary)	N/A	305 - 340	751 - 1,036	548 - 598
Students' residences	N/A	335 - 370	795 - 1,020	548 - 703
Sports clubs, multi purpose sports/leisure centres (dry sports) with a/c and including FF&E	N/A	620 - 650	1,271 - 1,849	810 - 866
General hospitals - public sector	N/A	675 - 740	1,527 - 1,770	N/A

Bangkok: Rates are nett of VAT.
Bangalore: Rates are nett of GST.
Manila: Rates include 12% VAT.
Ho Chi Minh: Rates are nett of VAT.
The above costs are at 1st Quarter 2021 levels.

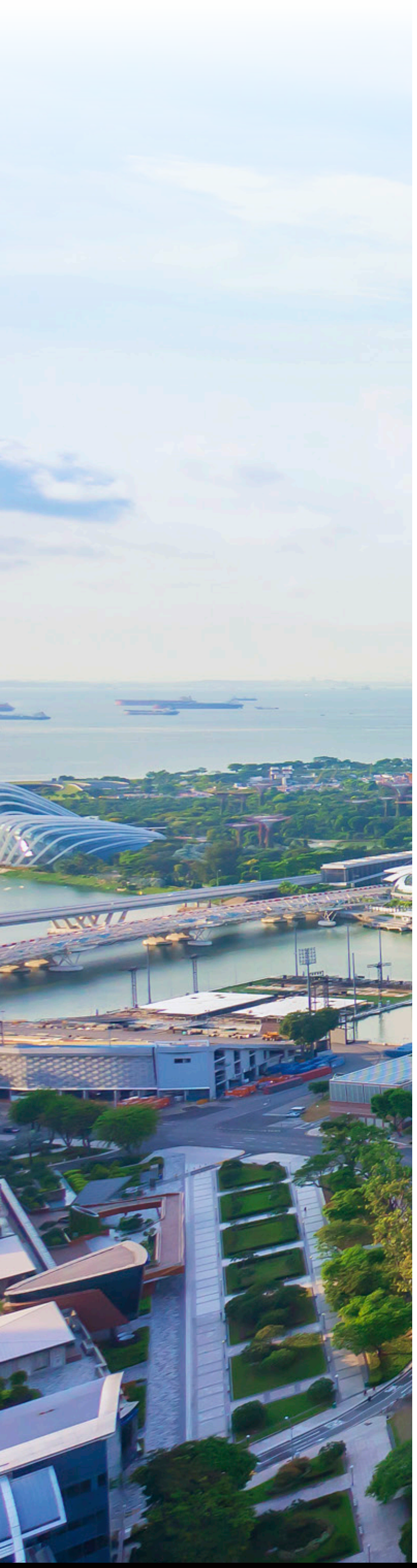
6 Approximate Building Costs For Major Cities

Asia

BUILDING TYPE	OUTLINE SPECIFICATION
DOMESTIC	
Apartments, high rise, average standard	Shell and core, including finishes to public area, but excluding finishes to apartment units Full fit, with air-conditioning, kitchen cabinets and home appliances, but excluding decorative light fittings and loose furniture
Apartments, high rise, high end	Shell and core, including finishes to public area, but excluding finishes to apartment units Full fit, good quality provisions, with air-conditioning, kitchen cabinets and home appliances, but excluding decorative light fittings and loose furniture
Terraced houses, average standard	Shell and core, joined houses in row(s), excluding garden, parking, finishes and fittings to house interior Full fit, joined houses in row(s), with air-conditioning, kitchen cabinets and home appliances, but excluding decorative light fittings, loose furniture, garden and parking
Detached houses, high end	Shell and core, good quality facade, excluding garden, parking, finishes and fittings to house interior Full fit, good quality provisions, with air-conditioning, kitchen cabinets and home appliances, but excluding decorative light fittings, loose furniture, garden and parking
OFFICE / COMMERCIAL	
Medium/high rise offices, average standard	RC structure, curtain wall, including public area fit-out, tenant area with raised floor/ carpet, painted wall and false ceiling
High rise offices, prestige quality	
Out-of-town shopping centre, average standard	Including public area fit-out and M&E, but excluding shop fit-out
Retail malls, high end	
INDUSTRIAL	
Industrial units, shell only (Conventional single storey framed unit)	RC structure with steel roof and M&E to main distribution, but excluding a/c, heating and lighting
Owner operated factories, low rise, light weight industry	RC structure, including small office with simple fit-out and M&E, but excluding a/c and heating
HOTELS	
Budget hotels - 3-star, mid market	1) Interior decoration 2) Furniture (fixed and movable) 3) Special light fittings (chandeliers, etc.) 4) Operating Supplies and Equipment (OS&E) excluded
Business hotels - 4/5-star	
Luxury hotels - 5-star	
OTHERS	
Underground/basement car parks (<3 levels)	RC structure
Multi storey car parks, above ground (<4 levels)	RC structure, natural ventilation, no facade enclosure
Schools (primary and secondary)	Including fit-out and a/c, but excluding educational equipment
Students' residences	Including fit-out, loose furniture and a/c
Sports clubs, multi purpose sports/leisure centres (dry sports) with a/c and including FF&E	Dry sports (no swimming pool) and are for 'leisure centre' type schemes including main sports hall, ancillary sports facilities, changing and showers, restaurant / cafe, bar, etc. Costs include a/c, Furniture, Fittings and Equipment (FF&E)
General hospitals - public sector	Excluding medical and operating equipment

Notes :

1. The costs for the respective categories given above are averages based on fixed price competitive tenders. It must be understood that the actual cost of a building will depend upon the design and many other factors and may vary from the figures shown.
2. The costs per square metre are based on Construction Floor Areas (CFA) measured to the outside face of the external walls / external perimeter including lift shafts, stairwells, balconies, plant rooms, water tanks and the like.
3. All buildings are assumed to have no basements (except otherwise stated) and are built on flat ground, with normal soil and site conditions. The cost excludes site formation works, external works, land cost, professional fees, finance and legal expenses.
4. The standard for each category of building varies from region to region and do not necessarily follow that of each other.
5. "Shell and core" generally covers ONLY base building elements. "Shell" refers to overall structure and foundations, exterior walls, floors and roof, completing with common areas, staircases, lift shafts, service ducts and fire services systems to local statutory requirements. "Core" refers to fully-fitted public areas (like lobbies, corridors and lavatories) and M&E main plant and upfeed, with tenant or occupant areas unfurnished.
6. "Full fit" buildings should complete with all elements that allow the buildings to be ready for operation, including public and tenants' (or occupants') areas (i.e. with ALL finishes, fittings and M&E distributions).
7. Fluctuation in exchange rates may lead to changes in construction costs expressed in U.S. dollars.
8. Shanghai, Beijing, Guangzhou/Shenzhen, Chongqing/Chengdu: * Public authority standard, no a/c and complete with basic external works.
9. Hong Kong: & Excluding raised floor/ carpet and false ceiling but including screeded floor and painted ceiling * Public authority standard, no a/c and complete with basic external works.
10. Singapore: @ Excluding carpet @@ Open on all sides with parapet.
11. Kuala Lumpur: $ 6-12 units per floor, 46m2 - 83m2 per unit; excluding air-conditioning equipment, kitchen cabinets and home appliances $$ Excluding air-conditioning, kitchen cabinets and home appliances $$$ Exclude Tenant fit-out and raised floor $$$$ Exclude Tenant fit-out $$$$$ Standard government provisions $$$$$$ University standard.
12. The data for Bangalore / India is provided by Arkind LS Private Limited, an Arcadis Alliance Partner.



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