

Singapore

Quarterly construction cost review





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Singapore Market Overview

On 17 February 2022, the Ministry of Trade and Industry (MTI) announced that Singapore's economy expanded by 6.1% on a year-on-year basis in 4Q2021 and by 7.6% for the whole year of 2021. MTI maintained Singapore's GDP growth forecast at "3.0% to 5.0%" in 2022.

The construction sector grew by 2.9% on a year-on-year basis in 4Q2021, slowing from the 69.9% expansion in 3Q2021. For the whole year of 2021, the construction sector grew by 20.1%, a reversal from the 38.4% contraction in 2020, supported by the increase in both public and private sector construction activities.

According to MTI's forecast, Singapore's economy for 2022 is expected to grow by 3.0% to 5.0%. The outlook for various sectors remains uneven, as it will depend on both global and domestic economic performance, as well as how COVID-19 situation unfolds.

The construction sector is projected to recover with the progressive easing of border restrictions on the entry of migrant workers from South Asia. However, as it will take time to deal with the shortfall in labour required to meet business needs, labour shortages are likely to persist and will weigh on the recovery of the sector. The construction output throughout 2022 is expected to remain below pre-pandemic level.

Based on Arcadis Singapore's data, tender prices for 4Q2021 increased by approximately 18% compared to 4Q2020. This is mainly driven by increased labour prices due to shortage of labour, rise in the cost of specialist works, and increased material prices due to higher raw material prices and supply disruptions.

Looking ahead, we anticipate that material prices in 2022 are likely to remain high due to a combination of supply chain disruptions, increased freight charges and increased global demand driven by plans of many countries to ramp up infrastructure spending to stimulate economic growth. Higher global energy prices are also expected to add pressure to production cost.

We also anticipate labour cost to stabilise as labour shortages improve with the help of support measures

from the government and gradual reopening of borders. However, it is unlikely to return to pre-pandemic levels in the short term given the recent announcement of tightening measures on foreign workers' quotas. As explained in Budget Speech 2022, the Dependency Ratio Ceiling (DRC) will be reduced from 1:7 to 1:5 starting 1 January 2024 which will likely cause further strain on the labour market.

As such, the construction industry should brace itself for wider adoption of design alternatives to overcome shortages through the increased adoption of Design for Manufacturing and Assembly technologies and methodologies. Planning more construction processes off site can help shorten construction period and reduce required manpower on site, thus improving productivity and workmanship.

In January 2022, we forecast tender prices to increase by 3% to 6% for the whole year of 2022. This was based on several factors including increase in key construction materials prices, shortage in contracting resources and improvements in market sentiments due to the gradual reopening of borders.

Since the Russia-Ukraine conflict began in end February 2022, key construction material costs have surged due to an unprecedented spike in energy and commodities prices. At this juncture, it is difficult to predict how this crisis will unfold, how long it will last and what will be its impact on construction prices. We anticipate that tender prices will continue to be very volatile for another two or three years especially due to high energy prices and supply chain disruptions brought by the consequential slowdown in industrial production to reduce energy usage. Based on our forecast, we expect construction costs in the first half of 2022 to increase by 8% to 10%. The actual cost increase will depend on prevailing market sentiment, adverse ramifications of prevailing economic instability, geopolitical tensions and the COVID-19 pandemic situation.

MARKET MOVEMENT



ECONOMY

Indicator

	GDP Growth per annum	Q4/19 - Q4/20 (-) 0.9%	Q3/20 - Q3/21 (+) 7.5%	Q4/20 - Q4/21 (+) 6.1%
	Inflation Rate (CPI) per annum	Dec 19 - 20 (+) 0.02%	Sep 20 - 21 (+) 2.5%	Dec 20 - 21 (+) 4.0%

Source: Ministry of Trade and Industry



SUPPLY & DEMAND

Indicator

	BCA Construction Demand	Q4/20 S\$5.17 Bn	Q3/21 S\$8.17 Bn	Q4/21 S\$6.68 Bn
	BCA Construction Output	Q4/20 S\$5.78 Bn	Q3/21 S\$6.55 Bn	Q4/21 S\$6.89 Bn

Source: Building and Construction Authority



BASIC COSTS

Indicator

	BCA Concrete Price Index	Oct 21 133.7	Nov 21 134.0	Dec 21 134.8
	BCA Steel Reinforcement Price Index	Oct 21 145.2	Nov 21 145.3	Dec 21 144.3

Source: Building and Construction Authority



CONSTRUCTION COST TREND

Indicator

	BCA Tender Price Index	Q4/20 106.5	Q3/21 119.2	Q4/21 122.2
	Arcadis Singapore Tender Price Index	Q4/20 103.2	Q3/21 119.2 [#]	Q4/21 121.6

Source: Building and Construction Authority

[#] Arcadis Singapore TPI for 3Q21 is assumed unchanged from 2Q21 in view of a lack of representative data due to insufficient tenders for new works in 3Q21.



1 Market Analysis

Singapore's Construction Demand

According to the Building and Construction Authority (BCA)'s data as at 7 February 2022, total construction demand (based on actual contracts awarded) in 2021 was \$29.9 billion, an increase of approximately 42% compared to \$21.0 billion in 2020. This is about 7% higher than the upper bound of BCA's earlier forecast of \$23 billion to \$28 billion mainly attributed to higher tender prices resulting from labour and materials cost inflation.

The public sector construction demand increased from \$12.2 billion in 2020 to \$17.8 billion in 2021 driven by public residential projects, as well as infrastructure projects such as Cross Island MRT Line, Jurong Region MRT Line and Tuas Water Reclamation Plant. Similarly, private sector construction demand expanded from \$8.9 billion in 2020 to \$12.1 billion in 2021 underpinned by strong demand for residential, commercial and industrial projects.

Looking ahead, BCA forecasts total construction demand to return to near pre-COVID levels and reach between \$27 billion and \$32 billion. Public sector projects are expected to contribute about 60% on the back of strong demands from public residential projects, as well as infrastructure works such as Cross Island MRT Line (Phase 1) and Sengkang Punggol Light Rapid Transit (LRT) Depot Expansion. On the other hand, private sector construction demand is expected to be between \$11 billion and \$13 billion which is consistent with 2021 levels.

Key Construction Material Prices

Based on BCA's data, the average market prices of cement, steel bars, granite, concreting sand and ready-mixed concrete have remained relatively stable in 4Q2021 on a quarter-on-quarter basis.

According to BCA, the average market price of steel bars (16-32mm high tensile) remained stable at \$1,105.50 per tonne in December 2021 and \$1,105.40 per tonne in September 2021. However, on a year-on-year basis, average market price of steel bars increased by 37% from \$808.52 per tonne.

Similarly, the average market price of ready-mixed concrete (Grade 40 Pump) remained stable at \$104.20 per cubic metre in December 2021 and \$104.10 per cubic metre in September 2021. It increased by 10% compared to the previous year's average market price of \$94.50 per cubic metre.

Based on data from the London Metal Exchange, copper price increased by 2% from US\$9,323 per tonne in September 2021 to US\$9,548 per tonne in December 2021. Aluminium price, on the other hand, declined by 7% from US\$2,839 per tonne in September 2021 to US\$2,634 per tonne in December 2021. On a year-on-year basis, copper and aluminium prices increased 23% and 31%, respectively.

Looking ahead, material prices are likely to remain elevated due to strong global demand, rising energy prices caused by escalating geopolitical tensions which would exacerbate inflationary pressures and lead to higher production cost, and supply chain disruptions.

Construction Labour

The labour shortage situation has gradually improved thanks to the government's support measures and gradual reopening of borders. However, as it will take time to deal with the shortfall in labour required to meet business needs, labour shortages are likely to persist and will weigh on the recovery of the sector.

To alleviate labour shortages in the Construction, Marine shipyard and Process (CMP) sectors, the entry requirements for vaccinated new Work Permit Holders (WPHs) with in-principal approval (IPA) will be streamlined starting 13 March 2022 as announced by BCA, the Ministry of Manpower (MOM) and the Economic Development Board (EDB) on 6 March 2022.

Below is a summary of the entry requirements for vaccinated new CMP WPHs where Pre-departure Preparatory Programme is available.

From 13 March to 30 April 2022	From 1 May 2022 onwards
Pre-departure Preparatory Programme (PDPP) riding on the Industry-led end to end process <i>(prioritised for entry approval)</i> <ul style="list-style-type: none"> 2 Day stay at dedicated facility at source countries applied through PDPP provider Pre-departure testing 3D Stay-Home Notice with onboarding at MOM's Onboard centres upon arrival in SG 	Single Entry Lane with Pre-departure Preparatory Programme <ul style="list-style-type: none"> 2 Day stay at dedicated facility at source countries applied through PDPP provider Pre-departure testing 3D Stay-Home Notice with onboarding at MOM's Onboard centres upon arrival in SG
Work Pass Holder General Lane <i>(based on border measures as of 6 March 2022)</i> <ul style="list-style-type: none"> Pre-Departure Test before arrival 7D Stay-Home Notice and additional 2D programme at MOM's Onboard centres upon arrival in SG 	Work Pass Holder General Lane <p>Not applicable for new CMP WPHs who hold IPAs where PDPP is required; they should enter under PDPP.</p> <p>All other CMP WPHs may enter under this General Lane.</p>

Source: BCA, MOM and EDB

To further support the construction sector improve its activities and industry-level output to pre-pandemic levels, the government has further streamlined the COVID-19 requirements for the sector.

With effect from 15 March 2022, BCA will be removing all sectoral COVID-19 rules for the construction sector. Construction worksites and supply works premises will be subject to the same Safe Management Measures (SMM) requirements that apply to any other workplace regulated under the Workplace Safety and Health Regulations 2021, with no additional sectoral requirements imposed. In addition, BCA's COVID-19 Safe Restart Criteria and Conditions of Approval for Restart will also be completely removed. Construction companies will no longer need to apply to BCA for approval of resumption and/or commencement of works and deployment of personnel to construction worksites and supply works premises.

There has been a long-term aim to increase the productivity of the construction sector in Singapore and to increase the use of game-changing construction methods to reduce the reliance on foreign labour. New measures are being introduced to incentivize the recruitment of foreign workers with higher skill levels. From 2024, contractors will only be able to recruit five foreign workers for each local employee. A new employment levy structure framework will also encourage more off-site work.

In the short term, rising labour and material cost pressures are expected to intensify as the industry progressively adapts to the need for less labour-intensive methods of construction. In addition, many countries are ramping up their construction activities as economies reopen and demand for foreign workers are expected to rise globally.

Ex-Gratia Extension of Time (EOT) for Public Sector Construction Contracts due to COVID-19

On 3 March 2022, BCA issued a circular to announce the grant of ex-gratia EOT of 33 days for delay in public sector construction contracts due to COVID-19 for the period from 1 July 2021 to 28 February 2022.

The eligibility criteria are as follows:

- in which the tender was closed on or before 1 June 2020
- that were not terminated by the Employer on or before 7 August 2020 under Clause 31 of PSSCOC (or equivalent clause under the contract); and
- that was not certified to be substantially completed on or before 7 August 2020 under Clause 17 of PSSCOC (or equivalent clause under the contract)

The EOT of 33 days to be granted are shown in the table below:

Period	EOT to be granted
1 July 2021 to 30 September 2021	5 days per month (Total of 15 days for 3Q2021)
1 October 2021 to 31 December 2021	4 days per month (Total of 12 days for 4Q2021)
1 January 2022 to 28 February 2022	3 days per month (Total of 6 days for Jan-Feb 2022)

Source: BCA

This will be the final broad-based grant of ex-gratia EOT for public sector construction contracts arising from COVID-related delay. For EOT after 28 February 2022, contractors can request for EOT arising from COVID-related delay with substantiation for their respective government agency clients to assess.

Parties in private sector contracts are encouraged to refer to the ex-gratia EOT provided and provide similar reliefs to contractors, where appropriate.



2 Approximate Building Costs

Singapore

BUILDING TYPE	S\$/m ² CFA
RESIDENTIAL	
Terraced Houses	2,900 - 3,200
Semi-Detached Houses	3,150 - 3,600
Detached Houses	3,650 - 4,900
Average Standard Condominium	2,250 - 2,450
Above Average Standard Condominium	2,550 - 3,350
Luxury Condominium	3,450 - 5,100
OFFICE	
Average Standard Offices	2,900 - 3,200
Prestige Offices	3,250 - 3,500
COMMERCIAL	
Shopping Centres, Average Quality	3,250 - 3,350
Shopping Centres, High Quality	3,450 - 3,750
CAR PARKS	
Multi-Storey Car Parks	1,150 - 1,600
Basement Car Parks	1,600 - 2,150
INDUSTRIAL	
Flatted Light Industrial Buildings	1,550 - 1,700
Flatted Heavy Industrial Buildings	1,750 - 2,350
Single Storey Industrial Buildings	1,450 - 1,600
Flatted Warehouses	1,450 - 1,600
Single Storey Warehouses	1,350 - 1,600
HOTEL (INCLUDING FURNITURE AND FITTINGS)	
3-Star Hotels	3,600 - 4,000
4-Star Hotels	3,950 - 4,550
5-Star Hotels	4,650 - 5,200
HEALTH	
Private Hospitals	4,650 - 4,900
Polyclinics, Non Air-conditioned	2,000 - 2,200
Nursing Homes, Non Air-conditioned	2,000 - 2,300
Medical Centres	3,550 - 3,750

The above costs are at 4th 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 / Prefabricated Mechanical, Electrical and Plumbing (MEP) systems
- 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

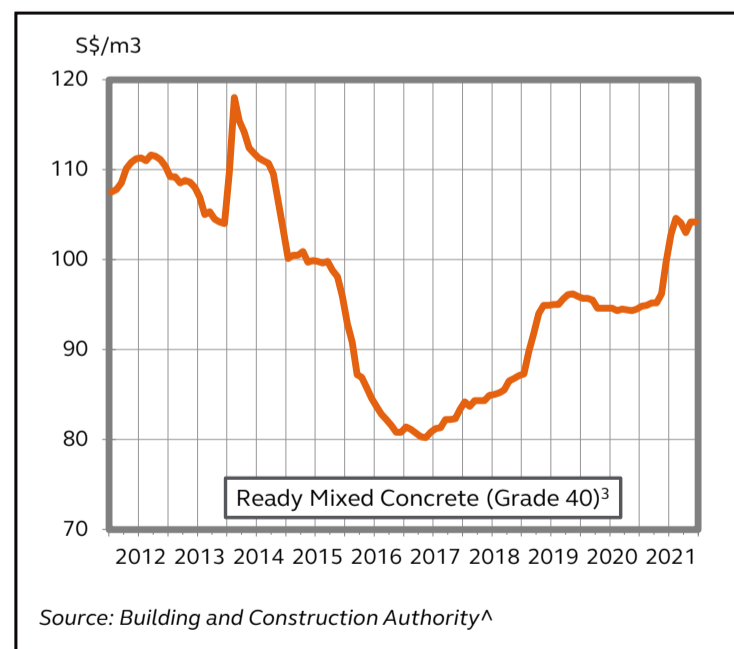
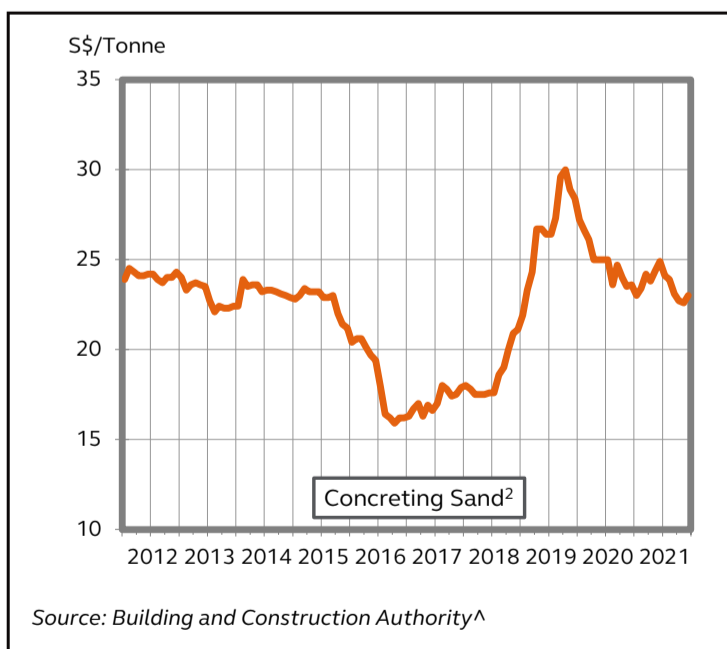
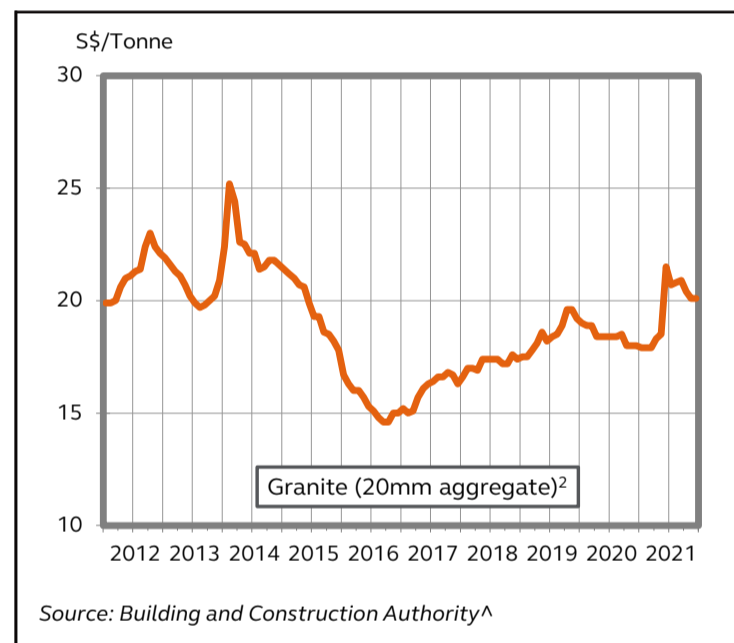
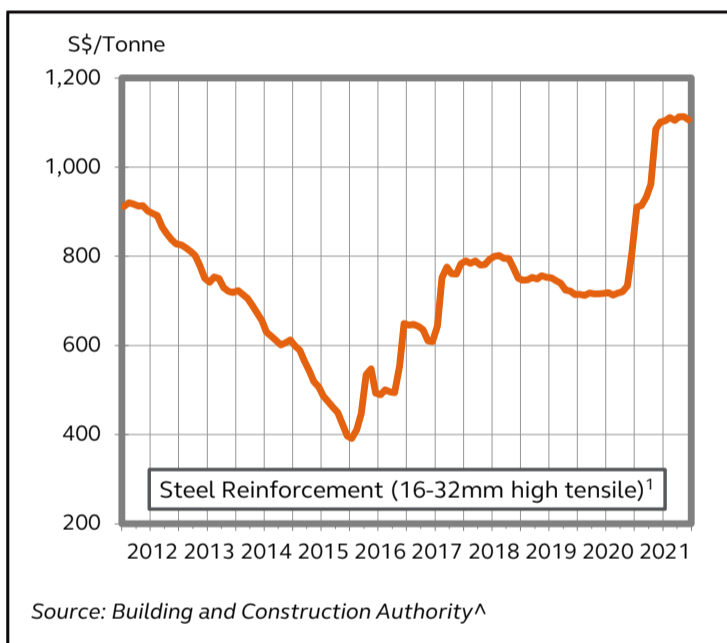
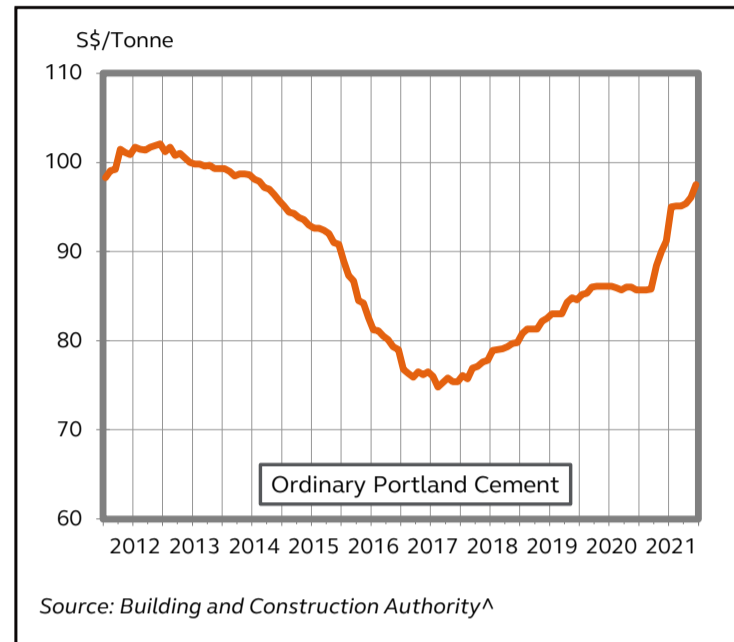
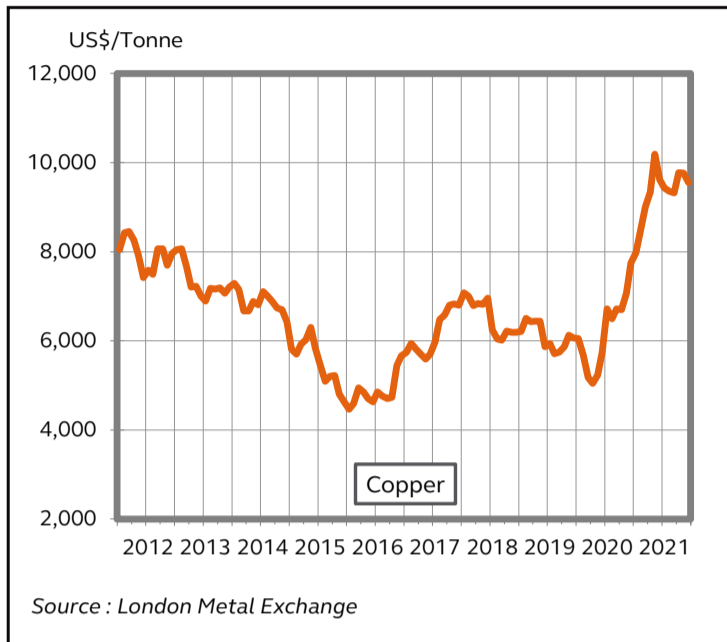
Year	2020	2021
BCA*	102.8	117.1
Arcadis SG^	103.2	121.6

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



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

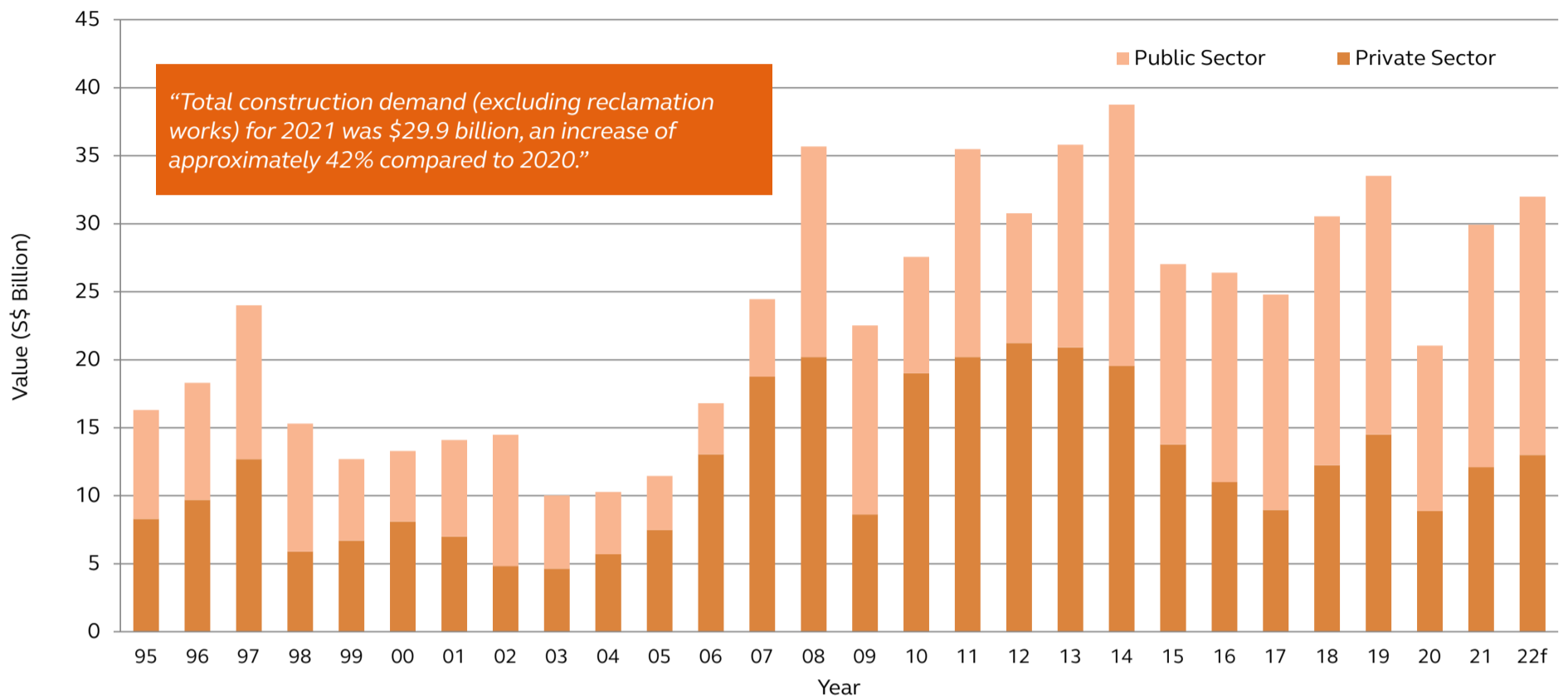
² Prices of granite and concreting sand exclude local delivery charges to concrete batching plants

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	2020	2021	2022f
Private Sector	14.5	8.9	12.1	11.0 - 13.0
Public Sector	19.0	12.2	17.8	16.0 - 19.0
Total Value	33.5	21.0	29.9	27.0 - 32.0

Source: Building and Construction Authority as at 7 February 2022

Notes:

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



6 Approximate Building Costs For Major Cities

Asia

BUILDING TYPE	Shanghai	Beijing	Guangzhou/ Shenzhen	Chongqing/ Chengdu
	Q4/2021	Q4/2021	Q4/2021	Q4/2021
	RMB/ m ² CFA			
DOMESTIC				
Apartments, high rise, average standard				
- Shell and core	3,171 - 3,615	2,885 - 3,327	2,868 - 3,162	2,787 - 3,228
- Full fit	5,184 - 5,715	4,563 - 5,011	4,550 - 5,011	4,262 - 5,033
Apartments, high rise, high end				
- Shell and core	3,812 - 4,129	3,437 - 4,986	2,993 - 3,896	3,446 - 4,464
- Full fit	11,706 - 12,762	11,059 - 12,589	7,392 - 8,090	6,882 - 8,594
Terraced houses, average standard				
- Shell and core	3,550 - 3,851	3,330 - 3,889	2,982 - 3,285	3,472 - 4,152
- Full fit	7,162 - 7,802	6,534 - 7,078	6,822 - 7,910	5,875 - 6,898
Detached houses, high end				
- Shell and core	5,220 - 5,769	5,015 - 5,581	4,151 - 4,572	4,550 - 5,194
- Full fit	12,595 - 13,363	12,557 - 13,101	13,088 - 14,874	7,475 - 8,491
OFFICE/COMMERCIAL				
Medium/high rise offices, average standard	6,650 - 8,787	6,509 - 8,768	6,362 - 7,085	6,786 - 7,798
High rise offices, prestige quality	8,544 - 11,686	10,579 - 14,400	9,459 - 11,411	8,557 - 11,373
Out-of-town shopping centre, average standard	N/A	4,864 - 6,502	6,125 - 6,720	5,487 - 6,945
Retail malls, high end	9,030 - 12,173	8,800 - 12,115	9,062 - 12,672	8,151 - 11,250
INDUSTRIAL				
Industrial units, shell only (Conventional single storey framed units)	2,048 - 2,509	2,010 - 2,451	2,374 - 2,829	3,368 - 4,188
Owner operated factories, low rise, light weight industry	3,168 - 3,968	3,885 - 4,454	N/A	N/A
HOTELS				
Budget hotels - 3-star, mid market	7,277 - 8,870	7,200 - 8,870	8,205 - 9,024	7,347 - 8,981
Business hotels - 4/5-star	11,725 - 15,872	12,269 - 16,198	13,261 - 18,931	13,168 - 16,289
Luxury hotels - 5-star	15,853 - 18,950	15,616 - 20,102	18,029 - 19,872	16,208 - 19,272
OTHERS				
Underground/basement car parks (<3 levels)	5,434 - 7,578	5,562 - 6,112	4,205 - 6,707	3,234 - 4,479
Multi storey car parks, above ground (<4 levels)	2,784 - 3,891	3,347 - 3,379	2,995 - 3,309	2,578 - 3,151
Schools (primary and secondary)	4,154 - 5,242*	3,872 - 4,998*	3,334 - 3,667*	3,418 - 3,765*
Students' residences	3,040 - 4,147	2,739 - 3,872	2,106 - 2,323	2,392 - 3,422
Sports clubs, multi purpose sports/leisure centres (dry sports) with a/c and including FF&E	7,008 - 8,608	6,630 - 6,688	5,811 - 6,387	5,393 - 5,911
General hospitals - public sector	10,707 - 13,805	8,717 - 10,918	8,800 - 11,002	8,618 - 10,671

The above costs are at 4th Quarter 2021 levels.



6 Approximate Building Costs For Major Cities

Asia

BUILDING TYPE	Hong Kong	Macau	Singapore	Kuala Lumpur
	Q4 / 2021	Q4 / 2021	Q4 / 2021	Q4 / 2021
	USD/ m ² CFA (See also exchange rates per U.S. dollar below)			
	HK\$ 7.79	MOP 8.010	S\$ 1.35	RM 4.15
DOMESTIC				
Apartments, high rise, average standard				
- Shell and core	N/A	1,926 - 2,853	N/A	N/A
- Full fit	3,030 - 3,500	2,479 - 3,032	1,665 - 1,815	320 - 635 [§]
Apartments, high rise, high end				
- Shell and core	N/A	2,853 - 4,278	N/A	N/A
- Full fit	3,930 - 4,570	3,462 - 5,290	2,555 - 3,780	725 - 1,520
Terraced houses, average standard				
- Shell and core	N/A	3,380 - 4,197	N/A	N/A
- Full fit	4,170 - 4,810	4,224 - 5,041	2,150 - 2,370	230 - 375 ^{§§}
Detached houses, high end				
- Shell and core	N/A	4,085 - 5,885	N/A	N/A
- Full fit	6,060 up	5,152 - 6,703	2,705 - 3,630	770 - 1,060
OFFICE/COMMERCIAL				
Medium/high rise offices, average standard	3,020 - 3,440 [®]	2,853 - 3,684	2,150 - 2,370 [®]	605 - 815 ^{§§§}
High rise offices, prestige quality	3,590 - 4,130	3,684 - 4,030	2,405 - 2,595 [®]	950 - 1,380 ^{§§§§}
Out-of-town shopping centre, average standard	2,980 - 3,480	2,687 - 4,030	2,405 - 2,480	550 - 775
Retail malls, high end	3,850 - 4,580	4,224 - 5,097	2,555 - 2,780	705 - 1,085
INDUSTRIAL				
Industrial units, shell only (Conventional single storey framed units)	N/A	N/A	1,000 - 1,185	330 - 470
Owner operated factories, low rise, light weight industry	2,310 - 2,900	N/A	N/A	435 - 560
HOTELS				
Budget hotels - 3-star, mid market	3,810 - 4,060	3,754 - 4,252	2,665 - 2,965	1,030 - 1,520
Business hotels - 4/5-star	3,940 - 4,600	5,097 - 6,093	3,445 - 3,850	1,350 - 2,360
Luxury hotels - 5-star	4,600 - 5,250	6,093 - 7,202	3,445 - 3,850	1,970 - 2,650
OTHERS				
Underground/basement car parks (<3 levels)	3,260 - 3,890	2,229 - 3,268	1,185 - 1,595	320 - 570
Multi storey car parks, above ground (<4 levels)	1,950 - 2,310	1,232 - 1,621	850 - 1,185 [®]	220 - 370
Schools (primary and secondary)	2,540 - 2,730*	2,465 - 2,853	N/A	255 - 330 ^{§§§§§}
Students' residences	2,900 - 3,260	1,953 - 2,271	2,000 - 2,110	305 - 390 ^{§§§§§§}
Sports clubs, multi purpose sports/leisure centres (dry sports) with a/c and including FF&E	3,800 - 4,330	N/A	2,445 - 2,595	610 - 785
General hospitals - public sector	4,830 - 5,330	N/A	3,445 - 3,630	860 - 1,255

Singapore: Rates are nett of GST
The above costs are at 4th Quarter 2021 levels.



6 Approximate Building Costs For Major Cities

Asia

BUILDING TYPE	Bangkok	Bangalore	Manila	Ho Chi Minh
	Q4 / 2021	Q4 / 2021	Q4 / 2021	Q4 / 2021
	USD/ m ² CFA (See also exchange rates per U.S. dollar below)			
	BAHT 33.89	INR 74.38	PHP 50.77	VND 23,450
DOMESTIC				
Apartments, high rise, average standard				
- Shell and core	519 - 664	604 - 678	N/A	N/A
- Full fit	714 - 846	652 - 779	1,047 - 1,384	662 - 821
Apartments, high rise, high end				
- Shell and core	605 - 785	878 - 1,066	N/A	N/A
- Full fit	952 - 1,172	990 - 1,185	1,427 - 2,514	842 - 965
Terraced houses, average standard				
- Shell and core	295 - 384	397 - 438	N/A	N/A
- Full fit	446 - 549	454 - 479	948 - 1,160	446 - 524
Detached houses, high end				
- Shell and core	516 - 738	515 - 570	N/A	N/A
- Full fit	774 - 935	585 - 627	1,841 - 3,123	509 - 621
OFFICE/COMMERCIAL				
Medium/high rise offices, average standard	790 - 937	515 - 562	968 - 1,263	774 - 895
High rise offices, prestige quality	988 - 1,267	640 - 668	1,401 - 1,791	892 - 1,216
Out-of-town shopping centre, average standard	674 - 873	512 - 560	824 - 1,026	N/A
Retail malls, high end	905 - 954	690 - 782	1,124 - 1,575	723 - 946
INDUSTRIAL				
Industrial units, shell only (Conventional single storey framed units)	526 - 659	415 - 475	549 - 707	317 - 400
Owner operated factories, low rise, light weight industry	N/A	439 - 512	737 - 927	359 - 474
HOTELS				
Budget hotels - 3-star, mid market	1,234 - 1,365	992 - 1,008	1,229 - 1,520	1,436 - 1,757
Business hotels - 4/5-star	1,579 - 1,810	1,403 - 1,696	1,402 - 2,325	N/A
Luxury hotels - 5-star	1,842 - 2,139	1,952 - 2,145	1,939 - 3,683	1,813 - 2,175
OTHERS				
Underground/basement car parks (<3 levels)	593 - 790	338 - 367	612 - 819	657 - 784
Multi storey car parks, above ground (<4 levels)	197 - 322	278 - 304	490 - 746	422 - 463
Schools (primary and secondary)	N/A	350 - 390	722 - 996	555 - 606
Students' residences	N/A	365 - 424	763 - 982	555 - 713
Sports clubs, multi purpose sports/leisure centres (dry sports) with a/c and including FF&E	N/A	680 - 713	1,216 - 1,771	821 - 877
General hospitals - public sector	N/A	774 - 849	1,464 - 1,712	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 4th Quarter 2021 levels.



6 Approximate Building Costs For Major Cities

Asia

BUILDING TYPE	OUTLINE SPECIFICATION
DOMESTIC	
Apartments, high rise, average standard	<u>Shell and core</u> , including finishes to public area, but <u>excluding</u> finishes to apartment units <u>Full fit</u> , with air-conditioning, kitchen cabinets and home appliances, but <u>excluding</u> decorative light fittings and loose furniture
Apartments, high rise, high end	<u>Shell and core</u> , including finishes to public area, but <u>excluding</u> finishes to apartment units <u>Full fit</u> , good quality provisions, with air-conditioning, kitchen cabinets and home appliances, but <u>excluding</u> decorative light fittings and loose furniture
Terraced houses, average standard	<u>Shell and core</u> , joined houses in row(s), <u>excluding</u> garden, parking, finishes and fittings to house interior <u>Full fit</u> , joined houses in row(s), with air-conditioning, kitchen cabinets and home appliances, but <u>excluding</u> decorative light fittings, loose furniture, garden and parking
Detached houses, high end	<u>Shell and core</u> , good quality facade, <u>excluding</u> garden, parking, finishes and fittings to house interior <u>Full fit</u> , good quality provisions, with air-conditioning, kitchen cabinets and home appliances, but <u>excluding</u> 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 <u>excluding</u> 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 <u>excluding</u> 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 <u>excluding</u> a/c and heating
HOTEL	
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 <u>excluding</u> educational equipment
Students' residences	Including fit-out, loose furniture and a/c
Sports clubs, multi purpose sports/leisure centres (dry sports)	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 hospital - public sector	<u>Excluding</u> medical and operating equipment

Notes :

- 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.
- 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.
- 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.
- The standard for each category of building varies from region to region and do not necessarily follow that of each other.
- "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.
- "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).
- Fluctuation in exchange rates may lead to changes in construction costs expressed in U.S. dollars.
- Shanghai, Beijing, Guangzhou/Shenzhen, Chongqing/Chengdu: * Public authority standard, no a/c and complete with basic external works.
- 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.
- Singapore: @ Excluding carpet @@ Open on all sides with parapet.
- 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.
- The data for Bangalore / India is provided by Arkind LS Private Limited, an Arcadis Alliance Partner.



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