

Quarterly Construction Cost Review

Singapore

Singapore

2022 | Q1

Arcadis Singapore Pte Ltd

Singapore Market Overview



On 25 May 2022, the Ministry of Trade and Industry (MTI) announced that Singapore's economy grew by 3.7% on a year-on-year basis in 1Q2022, and the GDP growth forecast for Singapore was maintained at "3.0 to 5.0%" with growth likely to come in at the lower half of the forecast range in 2022.

The construction sector grew by 2.1% year on year, easing from the 2.9% growth in the previous quarter due to higher base in 1Q2021 coupled with higher construction inflation cost in 1Q2022. On a quarter-on-quarter seasonally adjusted basis, the sector posted growth of 3.2%, a turnaround from the 2.1% contraction in 4Q2021.

MTI continues to expect Singapore's economy to grow by "3.0 to 5.0%" in 2022 although growth is now more likely to come in at the lower half of the forecast range. According to MTI, the external demand outlook for Singapore's economy weakened compared to three months ago with significant downside risk in the global economy.

The relaxation of domestic and border restrictions in 1Q2022 further all eviated labour shortages in the construction sector which is heavily reliant on migrant workers.

However, as border controls ease, more foreign workers have returned to their home countries for the first time in two years. This, according to many construction firms, has affected productivity because newcomers need more time to train while skilled workers are leaving for a short break. The growing demand for migrant labour, upcoming developments and ongoing projects contribute to the labour shortage that the market is still experiencing.

Furthermore, the external environment has deteriorated since February partly due to the onset of the Russia-Ukraine conflict which has exacerbated global inflationary pressures. The stringent measures implemented in China to contain its domestic COVID-19 outbreaks are likely to weigh on its economy and contribute to global supply disruptions, which may continue throughout 2022.

Based on Arcadis Singapore's data, tender prices for 1Q2022 increased by approximately 5% compared to 4Q2021. This is mainly driven by the continuing labour shortage, increased material prices due to higher raw material prices and supply disruptions caused by the Russia-Ukraine conflict, and elevated global inflation.

Looking ahead, material prices are expected to remain high and volatile. Although the progressive lifting of border restrictions alleviates the labour shortage, we forecast that construction costs in the next six months will increase by 5% to 10% mainly due to elevated global inflation and material cost. The actual cost increase will nevertheless be dependent on prevailing market sentiment and global supply situation.

Market Movement

Economy

INDICATOR	Q1/20 - Q1/21	Q4/20 - Q4/21	Q1/21 - Q1/22
GDP Growth per annum	(+) 2.0%	(+) 6.1%	(+) 3.7%
Inflation Rate (CPI) per annum	Mar 20 - 21 (+) 1.3%	Dec 20 - 21 (+) 4.0%	Mar 21 - 22 (+) 5.4%

Source: Ministry of Trade and Industry

Supply & Demand

INDICATOR	Q1/21	Q4/21	Q1/22
BCA Construction Demand	S\$5.98 Bn	S\$6.68 Bn	S\$8.00 Bn
BCA Construction Output	Q1/21 S\$6.33 Bn	Q4/21 S\$6.94 Bn	Q1/22 S\$7.03 Bn

Source: Building and Construction Authority

Basic Costs

INDICATOR	Jan 22	Feb 22	Mar 22
BCA Concrete Price Index	135.4	136.3	147.1
BCA Steel Reinforcement Price Index	144.4	149.6	162.0

Source: Building and Construction Authority

Construction Cost Trend

INDICATOR	Q1/21	Q4/21	Q1/22
BCA Tender Price Index	110.8	122.2	126.5
Arcadis Singapore Tender Price Index	Q1/21 113.5	Q4/21 121.6	Q1/22 127.7

Source: Building and Construction Authority



Market Analysis

Singapore's Construction Demand

According to the Building and Construction Authority (BCA)'s preliminary data as of 26 May 2022, total construction demand (based on actual contracts awarded) expanded by 33.2% year on year and 19.3% quarter on quarter to \$8.0 billion in 1Q2022, continuing the upward trend from 4Q2021 which recorded a 42% increase.

The expansion is attributed to the strong year-on-year growth of 71.1% in the public sector construction, contributed by robust demand in residential and civil engineering projects. On the other hand, the overall private sector construction demand fell by 20% year on year due to a major decline in demand for institutional developments and infrastructure projects.

Nearly 95% of the demand in public housing was from the Housing & Development Board (HDB)'s Build-To-Order (BTO) projects, which totalled 6,762 units at precincts in Tengah, Tampines, Geylang, Yishun, Hougang and Kallang/Whampoa. Major public infrastructure projects, including Sengkang-Punggol Light Rapid Transit Depot Expansion and Cross Island MRT Line, also boosted the construction demand in 1Q2022.

Looking ahead, public residential construction demand is expected to stay firm and contribute to the positive overall construction demand. Although many BTO projects experience delays from six to twelve months, HDB recently announced to ramp up its BTO supply in 2022/23. The impact of this announcement on construction demand will likely be felt only from 2023 due to the gap between project launch and start of construction.

Key Construction Material Prices

Based on BCA's data, the 1Q2022 average market price of cement, ready-mixed concrete and steel bar increased compared to 4Q2021. Concreting sand and granite, on the other hand, remained relatively stable during the same period.

According to BCA, the global supply chain disruption has caused the average market price of steel bars (16-32mm high tensile) to increase by 12.3% from \$1,105.50 per tonne in December 2021 to \$1,241.50 per tonne in March 2022. Market players expect steel bar price to remain elevated due to the high commodity and freight costs following the Russia-Ukraine conflict. Similarly, the average market price of bulk cement (with delivery) and ready-mixed concrete (Grade 40 Pump) increased by 13% and 8%, respectively.

Based on data from the London Metal Exchange, copper price increased by 7% from US\$9,548 per tonne in December 2021 to US\$10,236 per tonne in March 2022. Similarly, aluminium price increased by 31% from US\$2,694 per tonne in December 2021 to US\$3,537 in March 2022. On a year-on-year basis, copper and aluminium prices increased 14% and 61%, respectively.

Looking ahead, material prices are likely to remain elevated and volatile due to the supply chain bottleneck fuelled by the Russia-Ukraine conflict and intensified global inflationary pressures.

Industries Updates

- Streamlining of COVID-19 requirements for Construction Sector

On 25 April 2022, BCA announced that in line with the streamlining the safe management measures (SMM) below are no longer required:

- Staggered use of shared facilities
- Allocation of zones and use of visual identifiers for workers in different zones
- Cleaning and disinfection for areas visited by C+/Ag+ cases
- Cohorting workers/employees from different employers; and
- Providing dedicated transport and staggered pick up and drop off for workers/employees
- Group size limit and safe distancing between employees at construction sites.

In addition, following the Multi-Ministry Taskforce's announcement, the use of TraceTogether and SafeEntry is no longer required at worksites from 26 April onwards. Restrictions on unvaccinated persons would also be lifted, and they will be able to enter worksites in accordance with the lifting of vaccination differentiated SMMs.

Market Analysis



- Phasing out of Pre-Departure Preparatory Programme (PDPP)

From BCA's circular on 10 June 2022, the mandatory PDPP will be phased out to ease COVID-19 measures from 1 July 2022. However, existing PDPP providers will have to put in place business continuity plans for the PDPP regime if the PDPP is reinstated (eg., public health risks due to the emergence of new variants of concern). All non-Malaysian male Work Permit Holders (WPHs) from the Construction, Marine Shipyard and Process (CMP) sectors holding an in-principle approval (IPA) will still be required to undergo the residential onboarding programme at the Ministry of Manpower (MOM)'s Onboard Centres upon their arrival in Singapore.

Below is a summary of the entry requirements for vaccinated non-Malaysian CMP WPHs.

	Arrival up to 30 Jun 2359Hrs	Arrival from 1 Jul onwards
CMP WPHs on IPA from sources where the PDPP is available (currently Bangladesh, India and Myanmar)	<ul style="list-style-type: none"> • 2-day stay at dedicated facility at source countries applied through PDPP provider • Pre-departure testing • Up to 4 days of onboarding at MOM's Onboard Centres upon arrival in SG 	<ul style="list-style-type: none"> • Up to 4 days of onboarding at MOM's Onboard Centres upon arrival in SG
CMP WPHs on IPA from other sources (except Malaysians)	<ul style="list-style-type: none"> • Up to 4 days of onboarding at MOM's Onboard Centres upon arrival in SG 	
Existing CMP WPHs (holding valid work permit) from all sources	No PDPP or onboarding requirements	

Source: Building and Construction Authority

- Extension of Support Measures for Businesses in the CMP Sectors

According to BCA's circular on 28 March 2022, the Singapore government is extending support measures for companies in the CMP sectors in view of the continued manpower shortages and elevated business costs arising from COVID-19.

Firstly, the COVID-19 (Temporary Measures) Act (COTMA) Part 10A will be extended for an additional three months, to 30 June 2022. COTMA Part 10A allows contractors to seek a determination from an Assessor for the increase in foreign manpower salary costs of construction WPHs due to COVID-19. Secondly, the Foreign Worker Levy rebate for CMP WPHs is extended for another three months, at \$250 per month for April and May 2022, and \$200 for June 2022. Lastly, the removal of the minimum Period of Employment (POE) requirement will be permanent. All incoming or renewal of Non-Traditional Sources and People's Republic of China's WPHs will no longer need to meet the minimum POE requirement to qualify for the Man-Year Entitlement waiver.

Furthermore, BCA announced that it is extending the Productivity Innovation Project (PIP) Incentive Scheme by another two years, to 31 March 2024. The PIP Incentive Scheme allows firms to receive support of up to 70% of the qualifying costs for the adoption of Design for Manufacturing and Assembly and Integrated Digital Delivery technologies. BCA will also extend the iBuildSG Joint Scholarship and Sponsorship Scheme by a year, to 31 March 2023, to help young Singaporeans pursue fulfilling careers in the built environment sector.

Approximate Building Costs Singapore

Building Type	S\$/m ² CFA
Residential	
Terraced Houses	3,050 - 3,350
Semi-Detached Houses	3,300 - 3,800
Detached Houses	3,850 - 5,150
Average Standard Condominium	2,350 - 2,550
Above Average Standard Condominium	2,700 - 3,500
Luxury Condominium	3,600 - 5,350
Office	
Average Standard Offices	3,050 - 3,350
Prestige Offices	3,400 - 3,700
Commercial	
Shopping Centres, Average Quality	3,400 - 3,500
Shopping Centres, High Quality	3,600 - 3,950
Car parks	
Multi-Storey Car Parks	1,200 - 1,700
Basement Car Parks	1,700 - 2,250
Industrial	
Flatted Light Industrial Buildings	1,650 - 1,800
Flatted Heavy Industrial Buildings	1,850 - 2,450
Single Storey Industrial Buildings	1,550 - 1,700
Flatted Warehouses	1,550 - 1,700
Single Storey Warehouses	1,450 - 1,700
Hotel (including furniture and fittings)	
3-Star Hotels	3,800 - 4,200
4-Star Hotels	4,150 - 4,800
5-Star Hotels	4,900 - 5,450
Health	
Private Hospitals	4,900 - 5,150
Polyclinics, Non Air-conditioned	2,100 - 2,300
Nursing Homes, Non Air-conditioned	2,100 - 2,400
Medical Centres	3,750 - 3,950

The above costs are at 1st Quarter 2022 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.

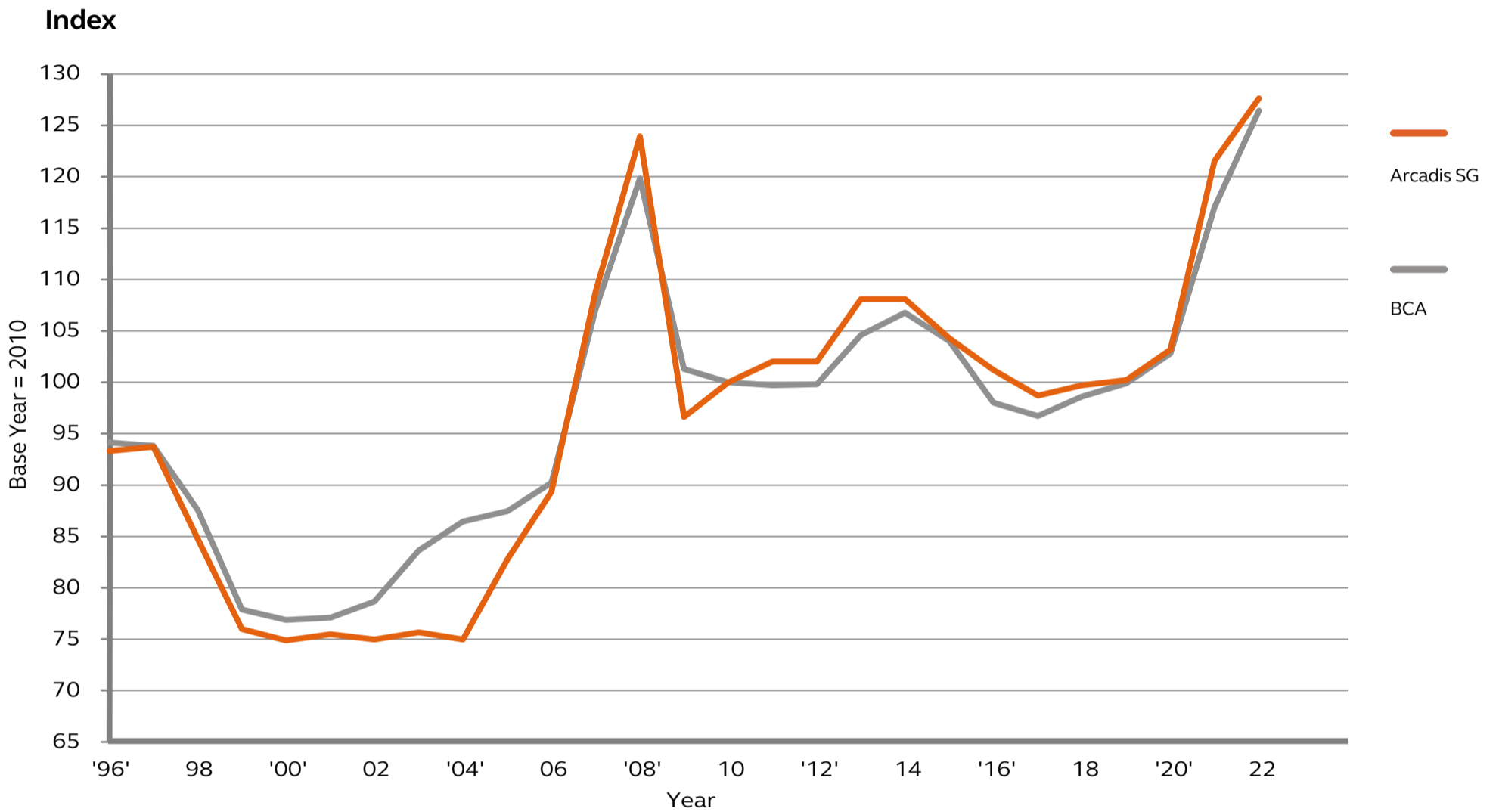
All buildings are assumed to have no basements (unless otherwise stated) and are built on flat ground with normal soil conditions. The costs exclude the following:

- 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

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	102.0	108.1	108.1	104.3	101.2	98.7	99.7	100.2

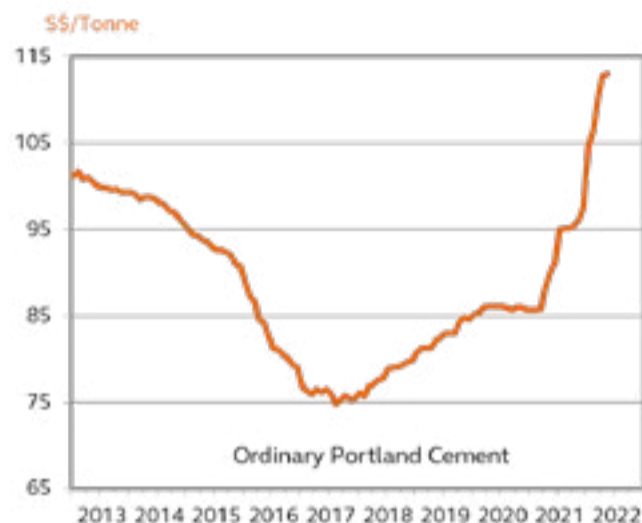
Year	2020	2021	1Q22
BCA*	102.8	117.1	126.5
Arcadis SG^	103.2	121.6	127.7

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

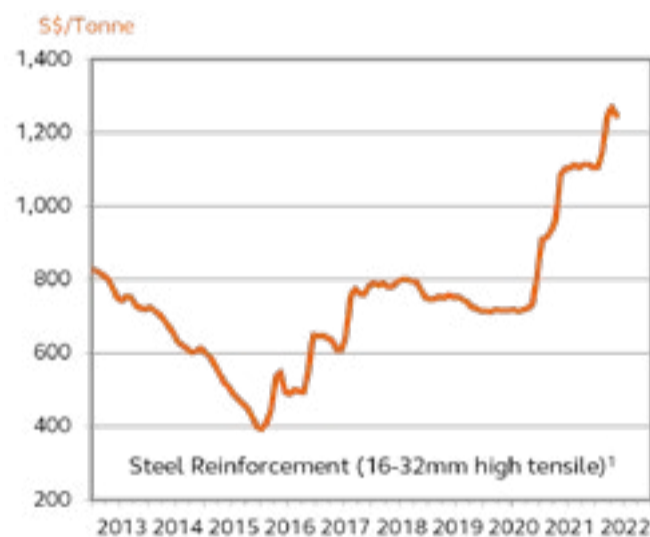
Basic Construction Materials



Source : London Metal Exchange



Source: Building and Construction Authority[^]



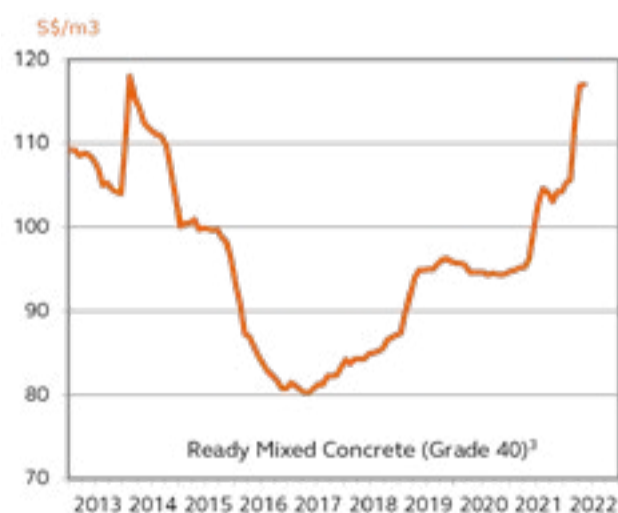
Source: Building and Construction Authority[^]



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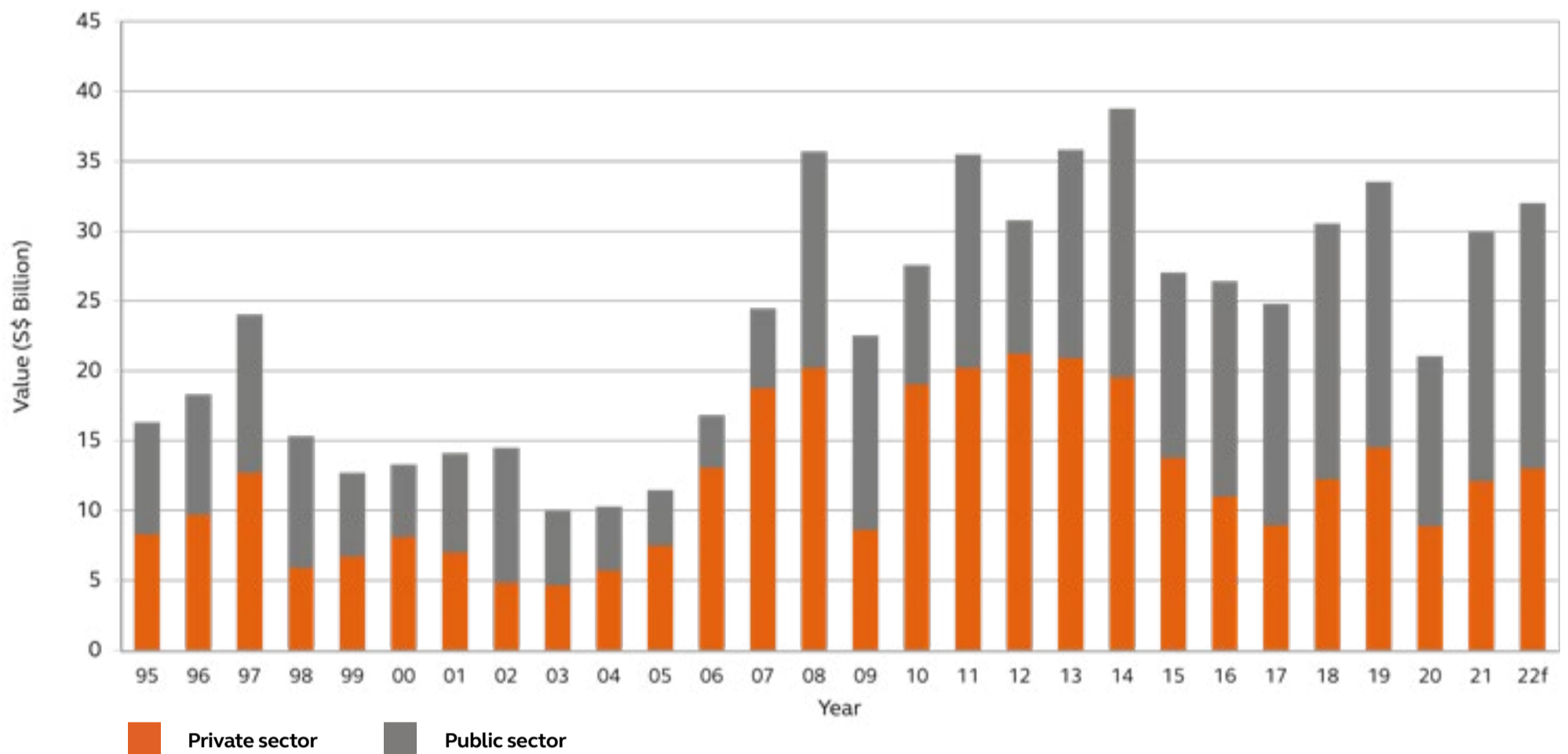
Source: Building and Construction Authority[^]

Notes:

1. Prices of rebar other than 16-32mm dimensions may subject to surcharge
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

Construction Demand Singapore



BCA Construction Demand (Excludes Reclamation Works) (\$ 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

Approximate Building Costs For Major Cities In Asia

Building Type	Shanghai	Beijing	Guangzhou/ Shenzhen	Chongqing/ Chengdu
	Q1/2022	Q1/2022	Q1/2022	Q1/2022
	RMB/ m ² CFA			
Domestic				
Apartments, high rise, average standard				
- Shell and core	3,171 - 3,615	2,885 - 3,327	2,753 - 3,162	2,747 - 3,181
- Full fit	5,184 - 5,715	4,563 - 5,011	4,368 - 5,011	4,200 - 4,959
Apartments, high rise, high end				
- Shell and core	3,812 - 4,129	3,437 - 4,986	2,873 - 3,896	3,395 - 4,399
- Full fit	11,706 - 12,762	11,059 - 12,589	7,096 - 8,090	6,781 - 8,468
Terraced houses, average standard				
- Shell and core	3,550 - 3,851	3,330 - 3,889	2,893 - 3,285	3,436 - 4,109
- Full fit	7,162 - 7,802	6,534 - 7,078	6,617 - 7,910	5,814 - 6,827
Detached houses, high end				
- Shell and core	5,220 - 5,769	5,015 - 5,581	4,026 - 4,572	4,503 - 5,140
- Full fit	12,595 - 13,363	12,557 - 13,101	12,695 - 14,874	7,398 - 8,403
Office / Commercial				
Medium/high rise offices, average standard	6,650 - 8,787	6,509 - 8,768	6,203 - 7,085	6,710 - 7,710
High rise offices, prestige quality	8,544 - 11,686	10,579 - 14,400	9,081 - 11,411	8,461 - 11,246
Out-of-town shopping centre, average standard	N/A	4,864 - 6,502	5,911 - 6,720	5,423 - 6,864
Retail malls, high end	9,030 - 12,173	8,800 - 12,115	8,745 - 12,672	8,056 - 11,120
Industrial				
Industrial units, shell only (Conventional single storey framed units)	2,048 - 2,509	2,010 - 2,451	2,303 - 2,829	3,328 - 4,138
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	7,959 - 9,024	7,281 - 8,901
Business hotels - 4/5-star	11,725 - 15,872	12,269 - 16,198	12,863 - 18,931	13,050 - 16,143
Luxury hotels - 5-star	15,853 - 18,950	15,616 - 20,102	17,488 - 19,872	16,063 - 19,100
Others				
Underground/basement car parks (<3 levels)	5,434 - 7,578	5,562 - 6,112	4,100 - 6,707	3,155 - 4,371
Multi storey car parks, above ground (<4 levels)	2,784 - 3,891	3,347 - 3,379	2,920 - 3,309	2,515 - 3,074
Schools (primary and secondary)	4,154 - 5,242*	3,872 - 4,998*	3,234 - 3,667*	3,335 - 3,673*
Students' residences	3,040 - 4,147	2,739 - 3,872	2,043 - 2,323	2,334 - 3,339
Sports clubs, multi purpose sports/leisure centres (dry sports) with a/c and including FF&E	7,008 - 8,608	6,630 - 6,688	5,637 - 6,387	5,262 - 5,768
General hospitals - public sector	10,707 - 13,805	8,717 - 10,918	8,536 - 11,002	8,409 - 10,412

The above costs are at 1st Quarter 2022 levels.

Approximate Building Costs For Major Cities In Asia

Building Type	Hong Kong	Macau	Singapore	Kuala Lumpur
	Q1/2022	Q1/2022	Q1/2022	Q1/2022
	USD/ m2 CFA (See also exchange rates per U.S. dollar below)			
	HK\$ 7.81	MOP 8.010	S\$ 1.35	RM 4.20
Domestic				
Apartments, high rise, average standard				
- Shell and core	N/A	1,874 - 2,778	N/A	N/A
- Full fit	3,073 - 3,547	2,414 - 2,952	1,740 - 1,890	335 - 675 \$
Apartments, high rise, high end				
- Shell and core	N/A	2,778 - 4,166	N/A	N/A
- Full fit	3,969 - 4,609	3,371 - 5,151	2,665 - 3,965	770 - 1,605
Terraced houses, average standard				
- Shell and core	N/A	3,291 - 4,085	N/A	N/A
- Full fit	4,225 - 4,878	4,113 - 4,908	2,260 - 2,480	240 - 395 \$\$
Detached houses, high end				
- Shell and core	N/A	3,978 - 5,730	N/A	N/A
- Full fit	6,146 up	5,016 - 6,527	2,850 - 3,815	815 - 1,120
Office / Commercial				
Medium/high rise offices, average standard	3,047 - 3,470&	2,778 - 3,587	2,260 - 2,480@	645 - 855 \$\$\$
High rise offices, prestige quality	3,649 - 4,187	3,587 - 3,925	2,520 - 2,740@	1,005 - 1,455 \$\$\$\$
Out-of-town shopping centre, average standard	3,009 - 3,521	2,616 - 3,925	2,520 - 2,595	475 - 715
Retail malls, high end	3,905 - 4,635	4,113 - 4,963	2,665 - 2,925	745 - 1,145
Industrial				
Industrial units, shell only (Conventional single storey framed units)	N/A	N/A	1,075 - 1,260	350 - 495 \$\$\$\$\$
Owner operated factories, low rise, light weight industry	2,330 - 2,932	N/A	N/A	460 - 590
Hotels				
Budget hotels - 3-star, mid market	3,867 - 4,110	3,655 - 4,140	2,815 - 3,110	1,085 - 1,605
Business hotels - 4/5-star	3,995 - 4,648	4,963 - 5,932	3,630 - 4,035	1,420 - 2,495
Luxury hotels - 5-star	4,661 - 5,314	5,932 - 7,012	3,630 - 4,035	2,080 - 2,795
Others				
Underground/basement car parks (<3 levels)	3,316 - 3,944	2,170 - 3,182	1,260 - 1,665	335 - 600
Multi storey car parks, above ground (<4 levels)	1,972 - 2,343	1,200 - 1,578	890 - 1,260@@	225 - 390
Schools (primary and secondary)	2,574 - 2,778*	2,401 - 2,778	N/A	270 - 350 \$\$\$\$\$\$
Students' residences	2,945 - 3,316	1,901 - 2,212	2,110 - 2,220	325 - 410 \$\$\$\$\$\$\$
Sports clubs, multi purpose sports/leisure centres (dry sports) with a/c and including FF&E	3,854 - 4,379	N/A	2,555 - 2,740	645 - 825
General hospitals - public sector	4,904 - 5,403	N/A	3,630 - 3,815	905 - 1,325

The above costs are at 1st Quarter 2022 levels.

Approximate Building Costs For Major Cities In Asia

Building Type	Bangkok	Bangalore	Manila	Ho Chi Minh
	Q1/2022	Q1/2022	Q1/2022	Q1/2022
	USD/ m2 CFA (See also exchange rates per U.S. dollar below)			
	BAHT 34.52	INR 75.22	PHP 51.96	VND 23,450
Domestic				
Apartments, high rise, average standard				
- Shell and core	513 - 652	604 - 678	N/A	N/A
- Full fit	701 - 831	709 - 847	1,023 - 1,383	667 - 827
Apartments, high rise, high end				
- Shell and core	597 - 771	998 - 1,212	N/A	N/A
- Full fit	936 - 1,150	1,126 - 1,406	1,394 - 2,457	849 - 973
Terraced houses, average standard				
- Shell and core	290 - 377	412 - 476	N/A	N/A
- Full fit	440 - 542	494 - 545	926 - 1,134	450 - 528
Detached houses, high end				
- Shell and core	507 - 724	535 - 620	N/A	N/A
- Full fit	762 - 921	636 - 713	1,799 - 3,052	513 - 626
Office / Commercial				
Medium/high rise offices, average standard	776 - 921	535 - 584	946 - 1,234	780 - 903
High rise offices, prestige quality	971 - 1,243	664 - 694	1,369 - 1,750	900 - 1,226
Out-of-town shopping centre, average standard	663 - 858	532 - 581	805 - 1,003	N/A
Retail malls, high end	889 - 936	716 - 812	1,098 - 1,539	729 - 954
Industrial				
Industrial units, shell only (Conventional single storey framed units)	516 - 646	451 - 540	537 - 691	320 - 404
Owner operated factories, low rise, light weight industry	N/A	478 - 582	721 - 906	362 - 478
Hotels				
Budget hotels - 3-star, mid market	1,211 - 1,341	1,030 - 1,096	1,200 - 1,485	1,447 - 1,772
Business hotels - 4/5-star	1,550 - 1,779	1,457 - 1,845	1,370 - 2,272	N/A
Luxury hotels - 5-star	1,808 - 2,100	2,027 - 2,333	1,896 - 3,599	1,828 - 2,193
Others				
Underground/basement car parks (<3 levels)	582 - 776	351 - 399	598 - 800	662 - 790
Multi storey car parks, above ground (<4 levels)	194 - 316	289 - 331	480 - 729	426 - 467
Schools (primary and secondary)	N/A	363 - 424	705 - 974	560 - 611
Students' residences	N/A	379 - 461	746 - 959	560 - 719
Sports clubs, multi purpose sports/leisure centres (dry sports) with a/c and including FF&E	N/A	706 - 776	1,188 - 1,730	827 - 885
General hospitals - public sector	N/A	804 - 923	1,431 - 1,672	N/A

The above costs are at 1st Quarter 2022 levels.

Approximate Building Costs For Major Cities In 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 , to apartment units, 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 , to house interior, 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 units)	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	<ol style="list-style-type: none"> Interior decoration Furniture (fixed and movable) Special light fittings (chandeliers, etc.) 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)	Dry sports (no swimming pool) and are for 'leisure centre' type schemes including main sports hall, ancillary sports facilities, changing and showers, restaurant / café, bar, etc. Costs include Furniture, Fittings and Equipment (FF&E)
General hospitals - public sector	Excluding 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.
- Hong Kong, Beijing, Shanghai, 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. **Singapore:** @ Excluding carpet @@ Open on all sides with parapet. **Kuala Lumpur:** \$ 6-12 units per floor, 46m² - 83m² per unit; excluding air-conditioning, kitchen cabinets and home appliances \$\$ Excluding air-conditioning, kitchen cabinets and home appliances \$\$\$ Excluding tenant fit-out and raised floor \$\$\$\$ Exclude tenant fit-out \$\$\$\$\$ RC structure with steel roof and M&E but excluding a/c and heating \$\$\$\$\$\$ Standard government provisions \$\$\$\$\$\$\$ University standard.
- The data for Bangalore / India is provided by Arkind LS Private Limited, an Arcadis Alliance Partner.
- Singapore:** Rates are nett of GST. **Kuala Lumpur:** Rates are exclusive of GST and contingencies. **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.



About Arcadis

Arcadis is the leading global design & consultancy organization for natural and built assets. We maximize impact for our clients and the communities they serve by providing effective solutions through sustainable outcomes, focus and scale, and digitalization. We are 29,000 people, active in over 70 countries that generate €3.4 billion in revenues. We support UN-Habitat with knowledge and expertise to improve quality of life in cities around the world.

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