

China and Hong Kong

Quarterly construction cost review



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China and Hong Kong Market Overview

The economic and construction activities in Hong Kong was recovering from the adverse effects of the global COVID-19 pandemic in 2021. After the trough in the previous year, the Gross Domestic Product (GDP) recorded 8%, 7.6% and 5.5% growth YoY between Q1 and Q3 2021 and moderated with 4.8% growth in Q4 2021. Construction activity levels was also in upswing over 2021. The overall gross value of work performed rose by 2.4% YoY based on Q3 2021.

The limited operation of the authorities had led to low consent approval for private construction works in the previous year. Consequently, total completion of private construction works in the year of 2021 dropped by 29.4% YoY. With resumed public services, total commencement of private construction works in 2021 increased by 7.7% YoY. The gross value of performed private works increased by 7.4% YoY based on Q3 2021, while that of performed public works increased by 4.3% YoY. Up to the third quarter of financial year of

2021/22, the Hong Kong Legislative Council approved HK\$129 billion Capital Works Reserve Fund for proposed public works, which is 31% more than the approved fund in the same period last year. The proposals include large scale development projects such as the Chinese Medicine Hospital at Tseung Kwan O, the New Acute Hospital at Kai Tak, and the Expansion of North District Hospital, which are commencing in 2021/22.

MARKET MOVEMENT

ECONOMY

Indicator	Q4/19 - Q4/20	Q3/20 - Q3/21	Q4/20 - Q4/21
GDP Growth per annum	Q4/19 - Q4/20 (-) 2.8%	Q3/20 - Q3/21 (+) 5.5%	Q4/20 - Q4/21 (+) 4.8%
Inflation Rate (CPI) per annum	Dec 19 - 20 (-) 1.0%	Sep 20 - 21 (+) 1.4%	Dec 20 - 21 (+) 2.4%

SUPPLY & DEMAND

Indicator	Q3/20	Q2/21	Q3/21
Activity Level (Gross output; new + A&A)	HK\$57.214 Bn	HK\$55.061 Bn	HK\$58.600 Bn*

BASIC COSTS

Indicator	Sep - Nov 20	Jun - Aug 21	Sep - Nov 21
Highways Material Index	Sep - Nov 20 852.1	Jun - Aug 21 1102.7	Sep - Nov 21 1132.9
Labour Wages Index	Sep - Nov 20 152.8	Jun - Aug 21 154.9	Sep - Nov 21 155.1

CONSTRUCTION COST TREND

Indicator	Q4/20	Q3/21	Q4/21
Tender Price Index (Arcadis)	Q4/20 1740	Q3/21 1780	Q4/21 1780

*Provisional



1 Market Analysis

China

In the first three quarters of 2021, China's GDP growth was (+)9.8% YoY, and the quarterly GDP growths of Q1 to Q3 were (+)11.8%, (+)7.9% and (+)4.9% respectively. The declining growth rate matched the significant GDP drop caused by the lock down period of Covid-19 in Q1 2020 and the rebound in the following quarters. Vaccine rollouts across China and government anti-epidemic measures provided some relief about the pandemic and well controlled the threat to the people and economy. However, the worldwide rapid spread of Delta and Omicron variants have increased the uncertainty of risks. COVID-19 outbreaks in certain areas of China are still occurring. In October 2021, the IMF (International Money Fund) announced that the China 2021 GDP was forecast to be 8.0%.

Up to November 2021, real estate investment and the sales of commercial buildings reached an increase of (+)6.0% and (+)8.5% respectively, while the area of land sale decreased by (-)11.2% YoY. The completed construction areas and new commencement areas increased by (+)6.3% and decreased by (-)9.1% respectively (according to National Bureau of Statistics (NBS)). Land sales area has been in continuing decline for three consecutive years, and the construction output is anticipated to reduce accordingly.

The construction wages have an increase of (+)3% - (+)4% in different cities of mainland China. Basic construction product costs fluctuated in price with rebar (+)15%, steel (+)15%, concrete (+)6%, cement (+)26%, Copper (+)20%, Aluminium (+)17% YoY. Tender prices recorded an increase of (+)5.5% in 2021.

In October 2021, the Central Committee of the Communist Party of China and the State Council released a guideline to implement the carbon peak and neutrality under the new development philosophy. The guideline stressed upgrading the industrial structure, including promoting green agriculture, and advancing peak carbon in steel, non-ferrous metals, petrochemical, building materials, transportation, construction, and other industries. This could further increase building construction costs.

The growth of construction wages is anticipated to be (+)4% and above in the coming year. Moreover, due to the advancing peak carbon in construction materials anticipate that major material will rise in price. We anticipate that construction costs will increase by 3% in 2022 and 2023.

Hong Kong

Recovery in economy

Gross Domestic Product (GDP) grew by 4.8% YoY based on Q4 2021, further moderating from the surge between Q1 and Q3 2021. Deflation in the second half of 2020 ended in January 2021. The Consumer Price Index (CPI) reached the peak of (+)3.7% YoY in July 2021 and recorded (+)2.4% YoY in December 2021.

Housing and land supply

Pursuant to the Policy Address 2021, the government has identified 350 hectares of land to provide 330,000 public housing units in the coming 10-year period, slightly higher than the figure announced in the last year, i.e. 301,000 units. Nonetheless, it is anticipated by the government that only one-third of the expected provision of public housing units would be completed in the first five years. In order to accelerate the construction of housing, the Policy Address 2021 mentioned the intention to widely adopt Modular Integrated Construction (MiC) and other innovative construction technology by the Housing Authority and the Housing Society.

For private housing, the expected provision in the coming 10-year period is 100,000 units, which is fewer than the announced figure of last year, i.e. 129,000 units. Railway property development and land sales are expected to continue to be the main source of private housing supply in the coming years.

Cost of materials and labour

The Tender Price Index (TPI) increased by 2.3% YoY based on Q4 2021. The price of steel continued to soar throughout 2021 and increased significantly by 57% YoY based on November 2021. Meanwhile, the price of diesel fuel and concrete blocks also notably rose by 18% and 27% YoY. Prices of cement, sand and basic materials increased slightly in the same period.

The construction labour wages remained stable in 2021. Wages of plumber and painter marginally increased while wage of concreter dropped. It is anticipated that the construction costs will rise by 3% in 2022 and 1.5% in 2023.



2

Approximate Building Costs Hong Kong

Notes:

1. The cost for the respective categories given 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 cost per square metre are based on the 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.

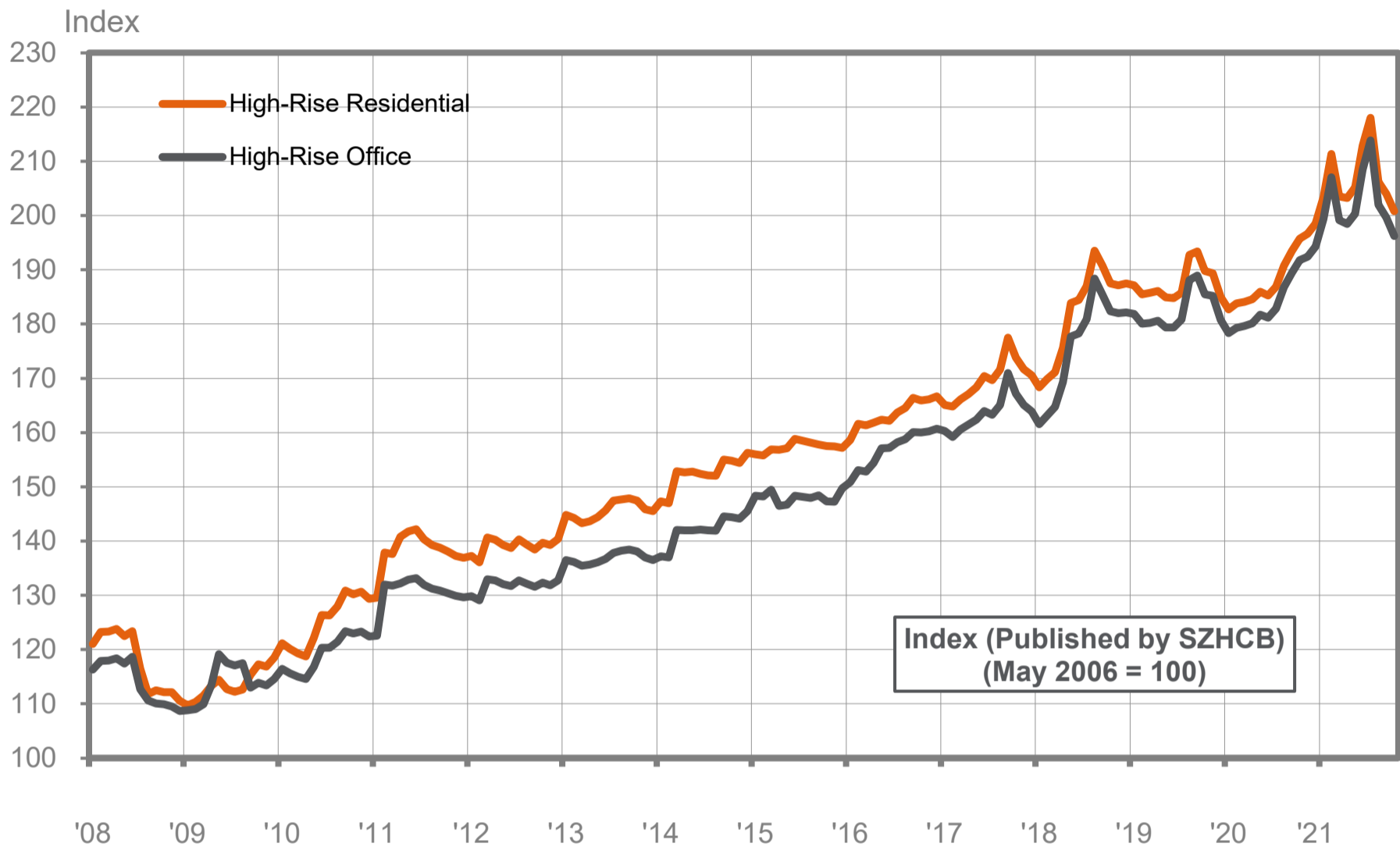
BUILDING TYPE	HK\$/m ² CFA	OUTLINE SPECIFICATION
DOMESTIC		
Apartments, high rise, public authority standard	10,800 - 13,000	Apartment units with fit-out, based on Hong Kong Housing Authority Non-standard Cruciform Block design (Rental Housing)
Apartments, high rise, average standard	23,600 - 27,300	Apartment units with fit-out, including air-conditioning, kitchen cabinets and home appliances, but excluding decorative light fittings and loose furniture
Apartments, high rise, high end	30,600 - 35,600	Apartment units with good quality fit-out, including air-conditioning, kitchen cabinets and home appliances, but excluding decorative light fittings and loose furniture
Terraced houses, average standard	32,500 - 37,500	Houses with fit-out, including air-conditioning, kitchen cabinets and home appliances, but excluding decorative light fittings, loose furniture, garden and parking
Detached houses, high end	47,200 up	Houses with good quality fit-out, including 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	23,500 - 26,800	RC structure, curtain wall/window wall, including public area fit-out, tenant area with screeded floor, painted wall and ceiling
High rise offices, prestige quality	28,000 - 32,200	RC structure, curtain wall, including public area fit-out, tenant area with raised floor/carpet, painted wall and false ceiling
Out-of-town shopping centre, average standard	23,200 - 27,100	Including public area fit-out and M&E, but excluding shop fit-out
Retail malls, high end	30,000 - 35,700	
INDUSTRIAL		
Owner operated factories, low rise, light weight industry	18,000 - 22,600	RC structure, including small office with simple fit-out and M&E, but excluding a/c and heating
HOTEL		
Budget hotels - 3-star, mid market	29,700 - 31,600	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	30,700 - 35,800	
Luxury hotels - 5-star	35,800 - 40,900	
OTHERS		
Underground/basement car parks (<3 levels)	25,400 - 30,300	RC structure
Multi storey car parks, above ground (<4 levels)	15,200 - 18,000	RC structure, natural ventilation, no facade enclosure
Schools (primary and secondary)	19,800 - 21,300	Public authority standard, including fit-out, no a/c, complete with basic external works but excluding educational equipment
Students' residences	22,600 - 25,400	Including fit-out, loose furniture and a/c
Sports clubs, multi purpose sports/ leisure centres (dry sports)	29,600 - 33,700	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	37,600 - 41,500	Excluding medical and operating equipment

*The above cost are at 4th Quarter 2021 levels.



3 Building & Building Services Price Index

Mainland China



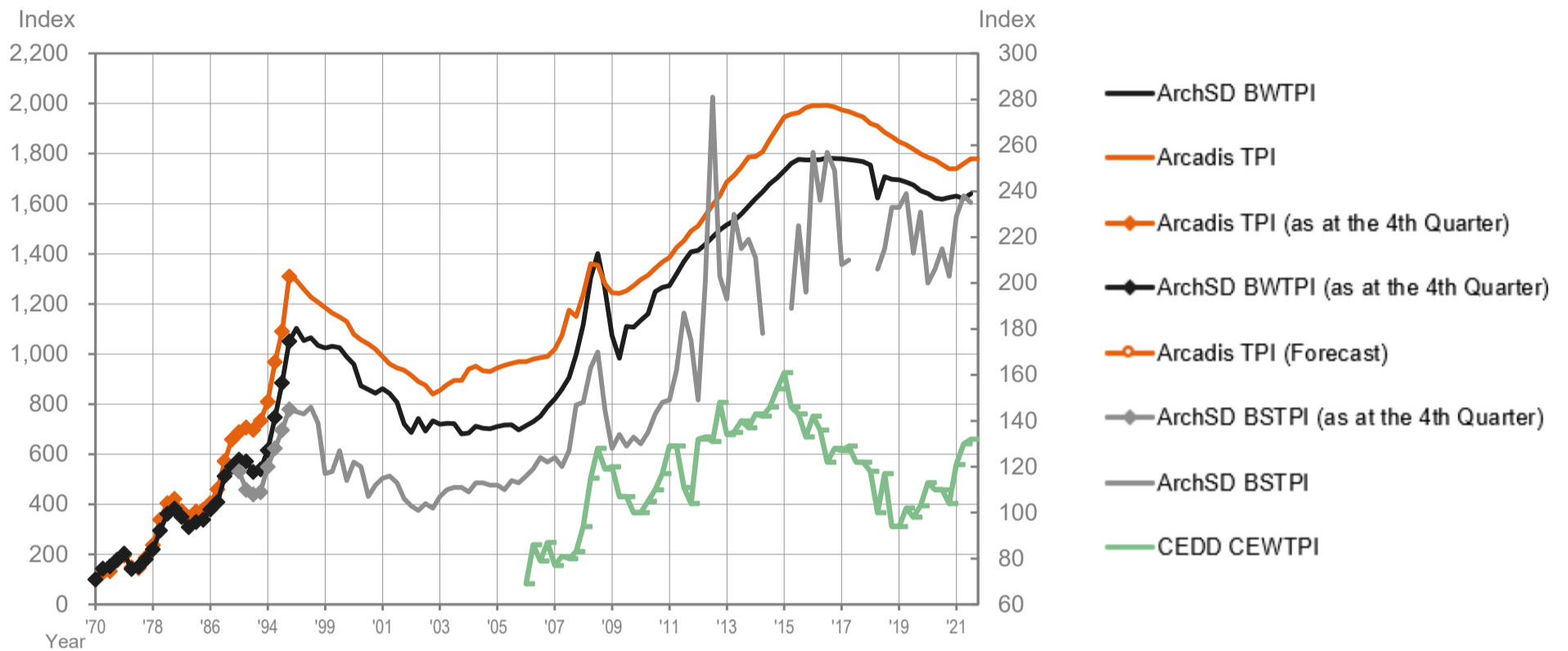
BUILDING & BUILDING SERVICES PRICE INDEX								
Index	(Base Index: May 2006 = 100)							
	High-Rise Residential				High-Rise Office			
Month / Year	2019	2020	2021	2022	2019	2020	2021	2022
January	187.5	189.8	195.8	200.8	182.4	185.5	191.8	196.3
February	187.2	189.4	196.6		182.0	185.2	192.4	
March	187.5	185.0	198.5		182.1	180.8	194.3	
April	187.2	182.7	203.4		181.9	178.3	199.3	
May	185.5	183.8	211.4		180.1	179.3	207.0	
June	185.7	184.1	203.5		180.2	179.7	199.1	
July	186.1	184.6	203.3		180.6	180.1	198.4	
August	184.9	186.0	205.2		179.4	181.7	200.3	
September	184.8	185.3	212.9		179.3	181.2	208.4	
October	185.7	186.8	218.0		180.8	182.8	213.8	
November	192.8	190.8	206.2		188.1	186.8	202.0	
December	193.4	193.4	204.0		189.0	189.4	199.6	

Source : Housing and Construction Bureau of Shenzhen



4 Tender Price Index

Hong Kong



Quarter/Year	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
ArchSD BWTPI (Base = 100, at Year 1970)										
1 st Quarter	1414	1516	1621	1732	1775	1779	1755	1695	1641	1631
2 nd Quarter	1438	1532	1648	1761	1776	1776	1727	1686	1623	1620
3 rd Quarter	1467	1559	1679	1777	1783	1773	1708	1675	1618	1640
4 th Quarter	1496	1590	1703	1775	1781	1768	1698	1652	1625	
ArchSD BSTPI (Base = 100, at Year 1989)										
1 st Quarter	149	193	211	(N/A)	257	208	(N/A)	233	200	229
2 nd Quarter	200	230	178	189	236	210	258	239	206	238
3 rd Quarter	281	215	(N/A)	225	257	(N/A)	247	213	215	235
4 th Quarter	203	219	(N/A)	196	249	287	233	231	203	
Arcadis TPI (Base = 100, at Year 1970)										
1 st Quarter	1511	1688	1789	1946	1992	1975	1920	1848	1785	1740
2 nd Quarter	1552	1713	1808	1958	1992	1968	1910	1835	1775	1760
3 rd Quarter	1595	1747	1857	1963	1993	1957	1885	1818	1757	1780
4 th Quarter	1632	1786	1903	1984	1986	1946	1868	1800	1740	1780
CEWTPI (Base = 100, at Year 2010)										
1 st Quarter	132	134	143	161	142	127	118	94	113	121
2 nd Quarter	133	135	142	146	136	129	100	102	110	130
3 rd Quarter	131	140	146	143	122	122	117	98	110	132*
4 th Quarter	148	137	154	133	128	122	94	103	104	

Source : Competitive tenders received by Arcadis, Building Works Tender Price Index (BWTPI) and Building Services Tender Price Index (BSTPI) of Architectural Services Department (ArchSD) of HKSAR, and Civil Engineering Works Tender Price Index (CEWTPI) of Civil Engineering and Development Department (CEDD) of HKSAR

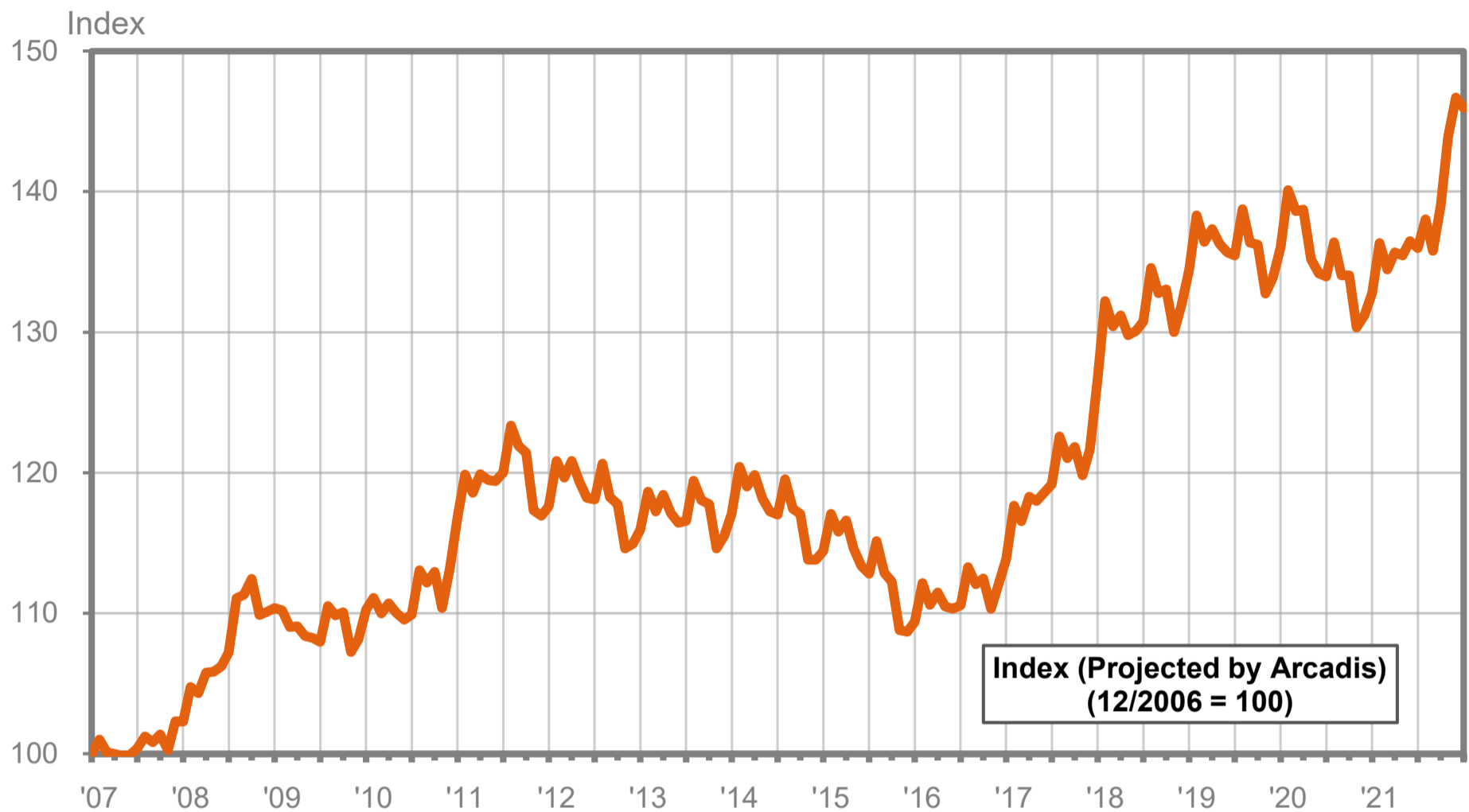
Notes:

- [*] denotes forecast figures
- Both BWTPI (ArchSD) and Arcadis TPI measure the trend of general builder's works only. Special works and Mechanical and Electrical Services would have to be considered separately.
- All indices were published quarterly. For reference purpose, only indices from 1st quarter of 1998 and onwards are given in detail, whereas indices between year 1970 to 1997 are shown with their 4th Quarter figures.



5 Materials

Mainland China



CONSTRUCTION MATERIAL PRICE INDEX								
Index	Published (by NBS of China) (Base: Corresponding Month in Preceding Year = 100)				Projected (by Arcadis) (Base: 12/2006 = 100) (see explanatory notes below)			
	2018	2019	2020	2021	2018	2019	2020	2021
Month / Year								
January	112.4	104.6	101.3	97.3	132.2	138.3	140.1	136.3
February	111.9	104.6	101.6	97.0	130.4	136.4	138.6	134.5
March	110.9	104.7	101.0	97.8	131.2	137.3	138.7	135.7
April	110.0	105.0	99.2	100.2	129.8	136.3	135.2	135.5
May	109.7	104.3	98.9	101.7	130.1	135.7	134.2	136.5
June	109.7	103.6	98.9	101.5	130.7	135.5	134.0	136.0
July	109.8	103.1	98.3	101.2	134.6	138.8	136.4	138.0
August	109.7	102.7	98.3	101.3	132.8	136.4	134.0	135.8
September	109.2	102.4	98.4	103.7	133.0	136.2	134.0	139.0
October	108.5	102.1	98.2	110.4	130.0	132.7	130.3	143.9
November	108.4	101.5	98.0	111.8	131.9	133.9	131.2	146.7
December	106.1	101.2	97.6	109.9	134.5	136.1	132.8	146.0

Source : National Bureau of Statistics (NBS) of China

Notes:

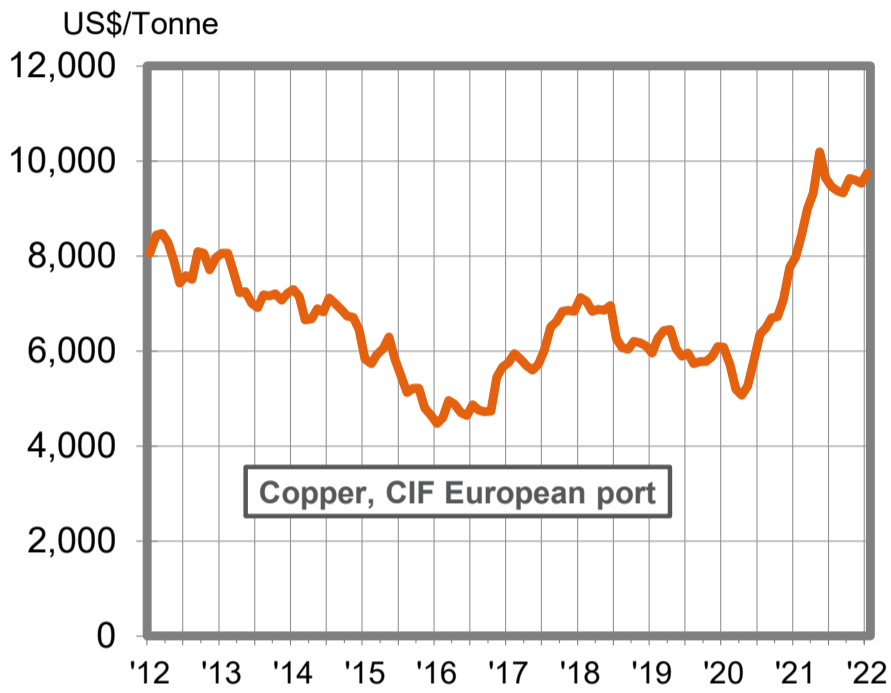
Data are published on a monthly basis, measuring the year-on-year change in price level of each month, but the quarter-on-quarter change is not published, i.e. the changes between consecutive quarters are not given.

To give an illustration of the price trend over time, Arcadis applies a hypothetical calculation to derive the data table and chart as above. For comparison purpose, December 2006 is referred to as base and the base index as 100.

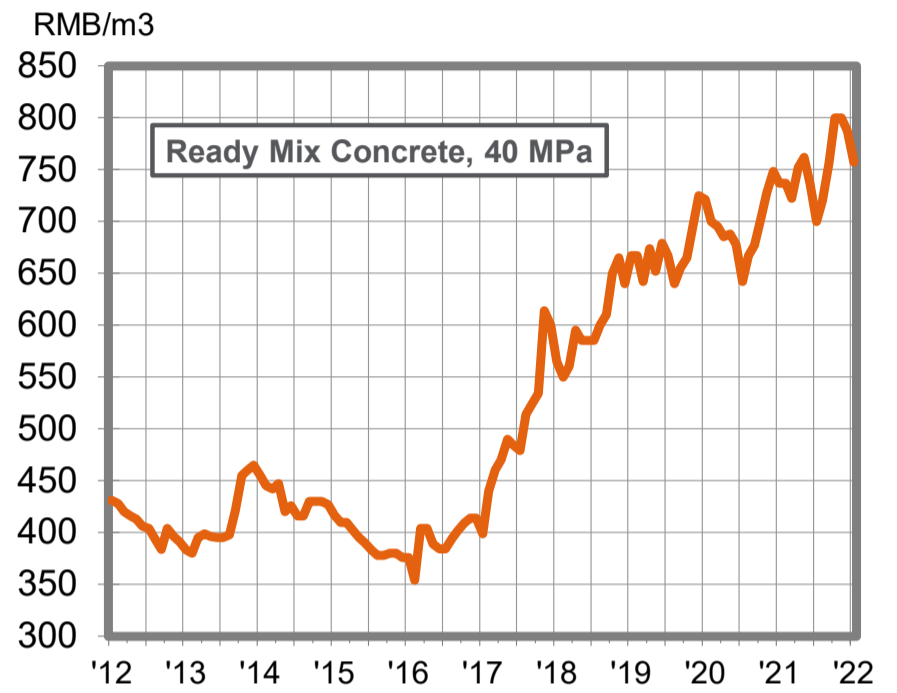


5 Materials Mainland China

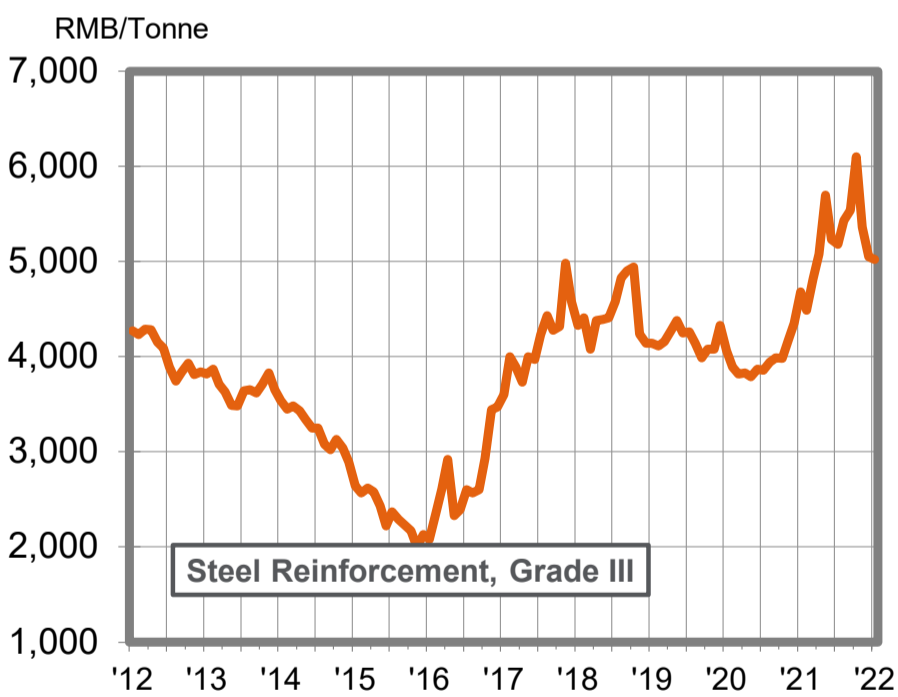
Basic Construction Materials



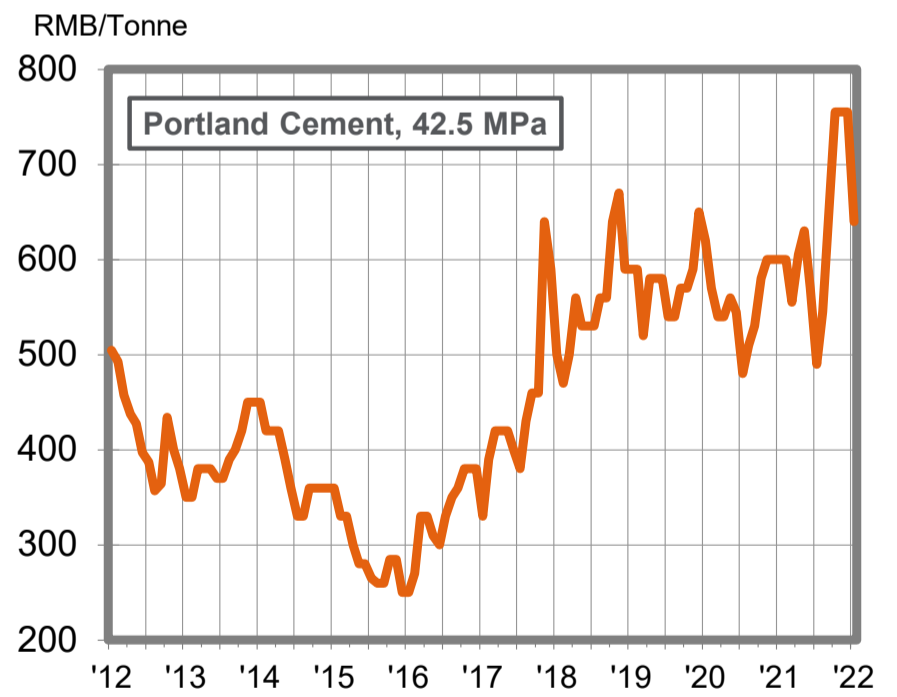
Source : London Metal Exchange



Shanghai Municipal Management Commission of Housing and Urban-Rural Development



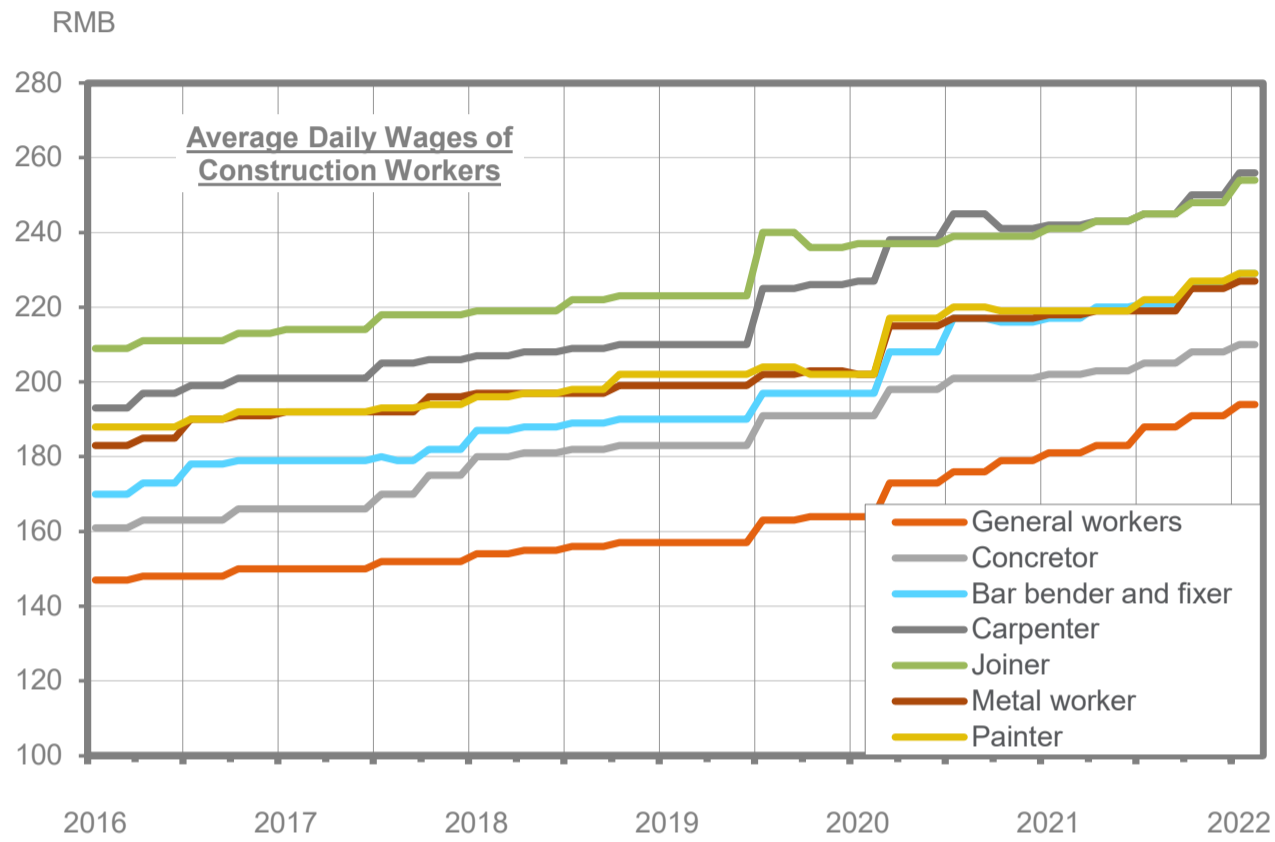
Shanghai Municipal Management Commission of Housing and Urban-Rural Development



Shanghai Municipal Management Commission of Housing and Urban-Rural Development

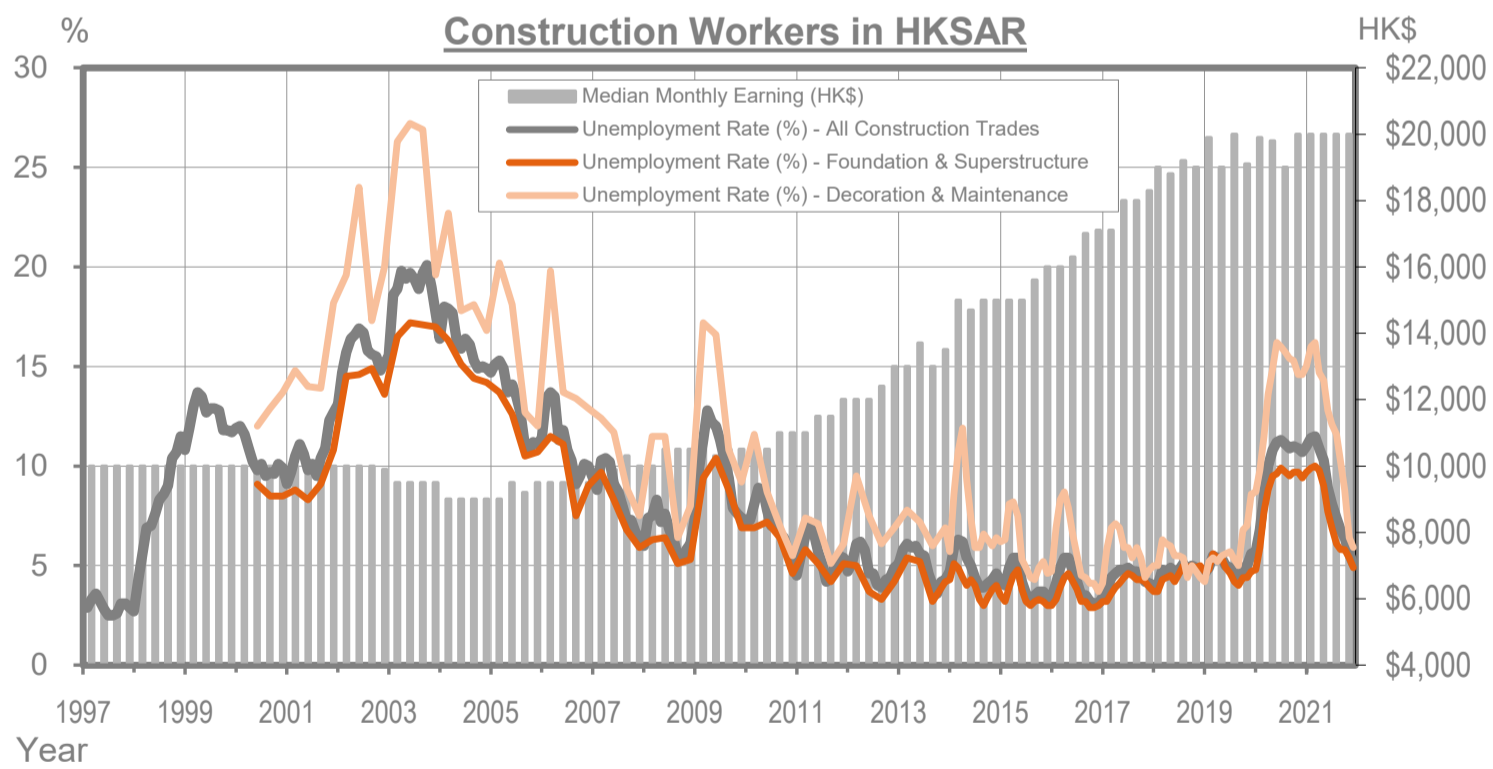
6 Labour

Mainland China



Source : Shanghai Municipal Management Commission of Housing and Urban-Rural Development

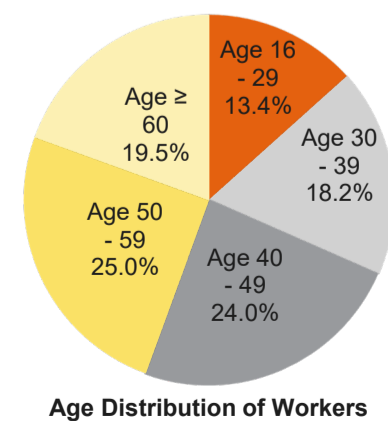
Hong Kong SAR



Source : Census & Statistics Department, Hong Kong SAR

Age Group	No. of Workers Employed by Construction Industry	
Age 16 - 29	78,506	13.4%
Age 30 - 39	106,529	18.2%
Age 40 - 49	140,825	24.0%
Age 50 - 59	146,514	25.0%
Age ≥ 60	114,162	19.5%
Total (as at Jan 2022)	586,536	100%

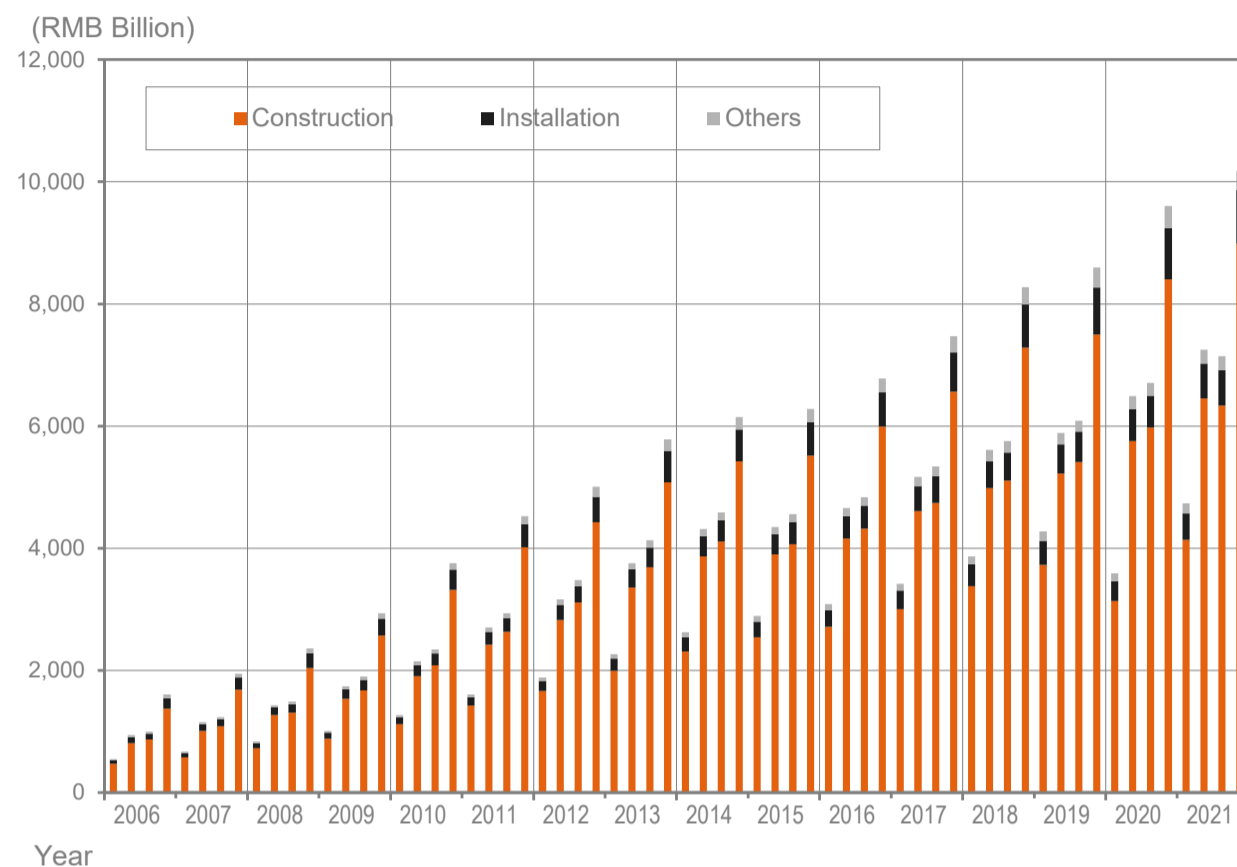
Source : Construction Industry Council





Gross Value of Construction Work Performed

Mainland China



Quarter	Value Performed (RMB Billion)									
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
A. Construction										
1 st Quarter	1,661	1,994	2,311	2,544	2,712	3,003	3,382	3,727	3,138	4,141
2 nd Quarter	2,826	3,355	3,866	3,899	4,158	4,609	4,985	5,223	5,753	6,453
3 rd Quarter	3,111	3,687	4,113	4,068	4,322	4,742	5,106	5,414	5,977	6,336
4 th Quarter	4,427	5,078	5,425	5,517	5,994	6,562	7,286	7,502	8,405	8,991
Year Total:	12,025	14,115	15,714	16,028	17,186	18,916	20,759	21,867	23,272	25,921
B. Installation										
1 st Quarter	165	200	230	255	277	303	358	393	326	428
2 nd Quarter	251	300	333	331	366	405	438	476	523	569
3 rd Quarter	271	322	346	363	374	437	459	498	519	579
4 th Quarter	413	514	517	548	561	646	708	768	840	871
Year Total:	1,100	1,336	1,426	1,498	1,578	1,791	1,963	2,135	2,208	2,448
C. Others										
1 st Quarter	57	69	83	91	96	113	129	155	127	164
2 nd Quarter	86	100	118	117	138	154	187	186	217	229
3 rd Quarter	97	123	126	126	137	160	189	173	213	228
4 th Quarter	166	189	205	216	222	262	282	328	357	318
Year Total:	406	481	531	550	593	689	787	843	915	940
Annual gross value performed (A + B + C)										
Total:	13,530	15,931	17,671	18,076	19,357	21,396	23,509	24,845	26,395	29,308

Source : National Bureau of Statistics of China

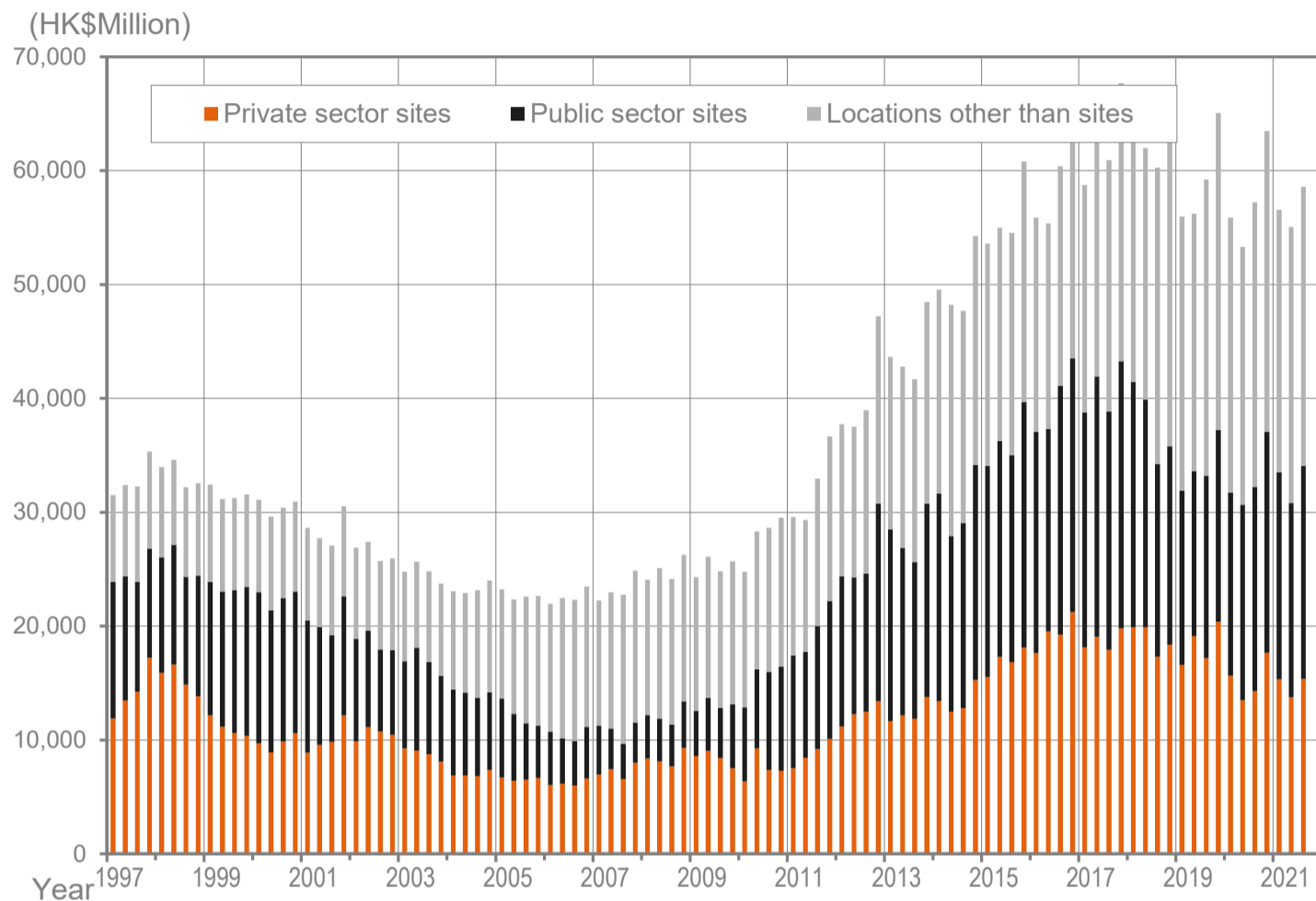
Notes :

1. Value of "Construction" refers to the value of projects included in the project budgets.
2. Value of "Installation" refers to the value of the installation of equipment, excluding the value of the equipment to be installed.
3. Value of "Others" refer to the output value excluding construction projects and installation projects. It includes: output value of repairing buildings and structures; output value of non-standard equipment manufacturing; overhead expenses received by contracted enterprises from the sub-contracted enterprises and the completed output value of construction activities undefined.



8 Gross Value of Construction Work Performed

Hong Kong



Value performed (HK\$ Million)										
Quarter	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
A. Private sector sites										
1 st Quarter	11,209	11,675	13,395	15,528	17,652	18,150	19,918	16,583	15,647	15,339
2 nd Quarter	12,260	12,176	12,507	17,284	19,530	19,070	19,925	19,112	13,489	13,758
3 rd Quarter	12,481	11,848	12,792	16,849	19,252	17,912	17,340	17,199	14,303	15,359*
4 th Quarter	13,411	13,781	15,259	18,119	21,231	19,813	18,369	20,393	17,685	
Year Total:	49,361	49,480	53,953	67,780	77,665	74,945	75,552	73,287	61,124	44,456*
B. Public sector sites										
1 st Quarter	13,168	16,829	18,258	18,531	19,414	20,639	21,533	15,338	16,083	18,167
2 nd Quarter	12,023	14,690	15,397	18,964	17,780	22,827	20,002	14,512	17,155	17,054
3 rd Quarter	12,137	13,792	16,253	18,163	21,878	20,934	16,888	16,022	17,940	18,703*
4 th Quarter	17,332	16,976	18,915	21,585	22,295	23,455	17,433	16,825	19,400	
Year Total:	54,660	62,287	68,823	77,243	81,367	87,855	75,856	62,697	70,578	53,924*
C. Location other than sites										
1 st Quarter	13,347	15,140	17,909	19,549	18,809	19,963	22,871	24,032	24,126	23,075
2 nd Quarter	13,245	15,914	20,327	18,744	18,041	20,657	22,073	22,592	22,674	24,249
3 rd Quarter	14,358	16,038	18,636	19,520	19,274	22,093	26,027	25,992	24,971	24,538*
4 th Quarter	16,479	17,716	20,088	21,111	21,333	24,406	29,797	27,839	26,398	
Year Total:	57,429	64,808	76,960	78,924	77,457	87,119	100,768	100,455	98,169	71,862*
Annual gross value performed (A + B + C)										
Total:	161,450	176,575	199,736	223,947	236,489	249,919	252,176	236,439	229,871	170,242*

*Provisional

Source : Census and Statistics Department, Hong Kong SAR



9 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.



9 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 - 1380 ^{**}
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.



9 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.



9 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.
- 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 \$\$\$ 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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