

Quarterly Construction Cost Review

China and Hong Kong

2022 | Q2

Arcadis Hong Kong Limited



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China and Hong Kong Market Overview



In the second quarter of 2022, the economic and construction activities of Hong Kong have been recovering from the devastating fifth wave of COVID-19 pandemic. In May 2022, The Buildings Department approved 34 building plans, among which 22 building plans involve residential developments.

Generally, construction works were slowed down by the fifth wave of the pandemic. According to the Buildings Department, only 2,869 domestic units were consented to commence construction between December 2021 and April 2022. As the local pandemic situation is being stabilised, 3,670 domestic units were consented to commence construction in May 2022, which was about 5 times that in April 2022. It is expected there are more domestic units to commence construction in the second half of this year to recover the delay.

Land sales were relatively quiet in the first half of fiscal year 2022-23. However, in accordance with the land sale programme announced by the Lands Department, there are increased land sale in the second half of fiscal year 2022-23 - around 20 hectares of land are on the schedule for sale, mainly for development in residential and commercial use. The future private sector construction activity is expected to maintain.

Market Movement

Economy

 GDP Growth	Q2/20 - Q2/21 (+) 7.6%	Q1/21 - Q1/22 (-) 3.9%	Q2/21 - Q2/22 (-) 1.3%
 Inflation Rate (CPI)	Jun 20 - 21 (+) 0.7%	Mar 21 - 22 (+) 1.7%	Jun 21 - 22 (+) 1.8%

Construction Output

 Activity Level (Gross output; new + A&A)	Q1/21 HK\$56.581 Bn	Q4/21 HK\$63.391 Bn	Q1/22 HK\$55.931 Bn*
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Basic Costs

 Highways Material Index	Mar - May 21 1041.4	Dec 21 - Feb 22 1165.5	Mar - May 22 1238.9
 Labour Wages Index	Mar - May 21 154.7	Dec 21 - Feb 22 156.2	Mar - May 22 155.2

Construction Cost Trend

 Tender Price Index (Arcadis)	Q2/21 1760	Q1/22 1810	Q2/22 1820
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*Provisional

Source: Highways Materials Index from Civil Engineering and Development Department (CEDD), other data from Census and Statistics Department (CSD).



Market Analysis

China

In the second quarter of 2022, a resurgence of COVID-19 cases in Shanghai and other key manufacturing hubs in East China forced a prolonged lockdown. It inevitably disrupted the construction industry and supply chains and caused a lot of suspensions of construction works in certain areas. China's economy slightly grew by 0.4% Year-on-Year (YoY), which is the lowest growth rate since the outbreak of Covid-19 in Q1 2020.

Although there has been a lot of easing policies in the real estate industry countrywide, the real estate investment, sales and land purchases have fallen sharply. The real estate investment capital source by the end of the second quarter of this year has decreased by 25.3% YoY. Besides, the new construction floor area had a decrease of 34.4% YoY and the area of land sales remains decreasing with a record of (-) 48.3% YoY.

In Q2 2022, the overall construction wages remained stable. However high labour wages due to labour shortage are occurring in the regions where there are outbreaks of epidemic. Comparing with last quarter, the average basic construction material costs were in downward trend. Rebar and steel prices remained unchanged. Aluminium, concrete and cement prices dropped by 6%, 3% and 8% respectively. Copper price increased slightly by 2%. Fewer new projects commenced and the increasingly fierce bidding resulted in lower tender prices. The construction market price is anticipated to go down next quarter due to strong competition and decreasing major material prices.

Hong Kong

Decline in economic growth

The Hong Kong economy contracted in the second consecutive quarter subsequent to a short-term recovery in 2021. The Gross Domestic Product (GDP) recorded a negative growth rate of (-)1.3% YoY in Q2 2022, after a revised figure of (-)3.9% YoY in Q1 2022. The Consumer Price Index (CPI) recorded an inflation of (+)1.8% YoY in June 2022, which remained generally stable as compared to the previous quarter.

Floor area of commenced works

The total gross floor area of the commenced private construction works in Q2 2022 dropped by 24% comparing to Q2 2021, but when looking into the total floor area of the commenced private works in the last twelve months, an increase of 13.6% YoY was recorded. Moreover, there was a substantial increase of 96% compared to Q1 2022. The unemployment rate of construction workers reduced from 8% in Q1 2022 to 7.3% in Q2 2022. The surge in the construction volume this quarter might further lower the unemployment rate in the short run.

Gross value of performed construction works

Gross value of performed new-built private and A&A works decreased significantly by 23.0% and 18.3% QoQ in Q1 2022, while that of performed new-built public works increased by 5.7% QoQ. The overall performed construction works in Q1 2022 recorded a decrease of 1.1% as compared to the previous year.

Cost of materials and labour

The Tender Price Index (TPI) increased by 3.41% YoY based on Q2 2022. The price of steel dropped by 4.5% from the peak in March 2022 and still got a slight increase of 3.5% YoY based on May 2022. Meanwhile, the price of concrete blocks, diesel fuel and cement also notably rose by 31%, 30% and 21% YoY based on May 2022 respectively. Prices of sand and floor tiles increased by around 10% in the same period. The construction labour wages index decreased marginally by 0.6% QoQ and increased by 0.7% YoY based on Q2 2022. Amongst the various trades of labourer, wages of carpenter and joiner rose noticeably by 5% YoY based on Q2 2022.

Approximate Building Costs Hong Kong

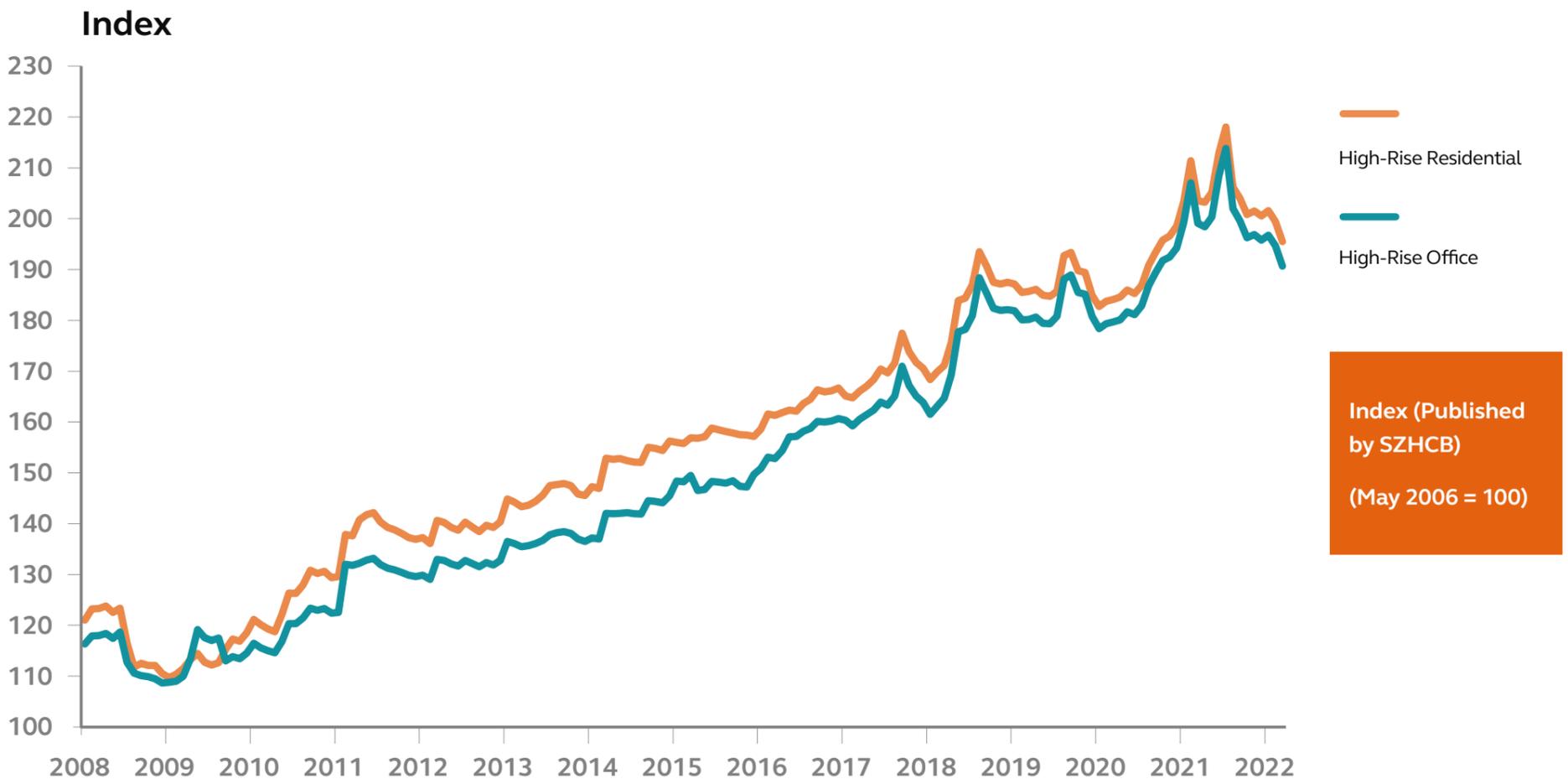
Notes:

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\$/m2 CFA	Outline Specification
Domestic		
Apartments, high rise, public authority standard	11,200 - 13,400	Apartment units with fit-out, based on Hong Kong Housing Authority Non-standard Cruciform Block design (Rental Housing)
Apartments, high rise, average standard	24,100 - 27,900	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	31,200 - 36,200	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	33,200 - 38,300	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	48,300 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	23,900 - 27,200	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	28,700 - 32,900	RC structure, curtain wall, including public area fit-out, tenant area with raised floor, painted wall and false ceiling
Out-of-town shopping centre, average standard	23,600 - 27,700	Including public area fit-out and M&E, but excluding shop fit-out
Retail malls, high end	30,700 - 36,400	
Industrial		
Owner operated factories, low rise, light weight industry	18,300 - 23,000	RC structure, including small office with simple fit-out and M&E, but excluding a/c
Hotel		
Budget hotels - 3-star, mid market	30,400 - 32,300	1) Interior decoration
Business hotels - 4/5-star	31,400 - 36,500	2) Furniture (fixed and movable)
Luxury hotels - 5-star	36,600 - 41,700	3) Special light fittings (chandeliers, etc.) 4) Operating Supplies and Equipment (OS&E) excluded
Others		
Underground/basement car parks (<3 levels)	26,000 - 31,000	RC structure
Multi storey car parks, above ground (<4 levels)	15,500 - 18,400	RC structure, natural ventilation, no facade enclosure
Schools (primary and secondary)	20,200 - 21,800	Public authority standard, excluding educational equipment
Students' residences	23,100 - 26,000	Including fit-out, loose furniture and a/c
Sports clubs, multi purpose sports/ leisure centres (dry sports)	30,300 - 34,400	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	38,500 - 42,400	Excluding medical and operating equipment

*The above cost are at 2nd Quarter 2022 levels.

Building & Building Services Price Index Mainland China

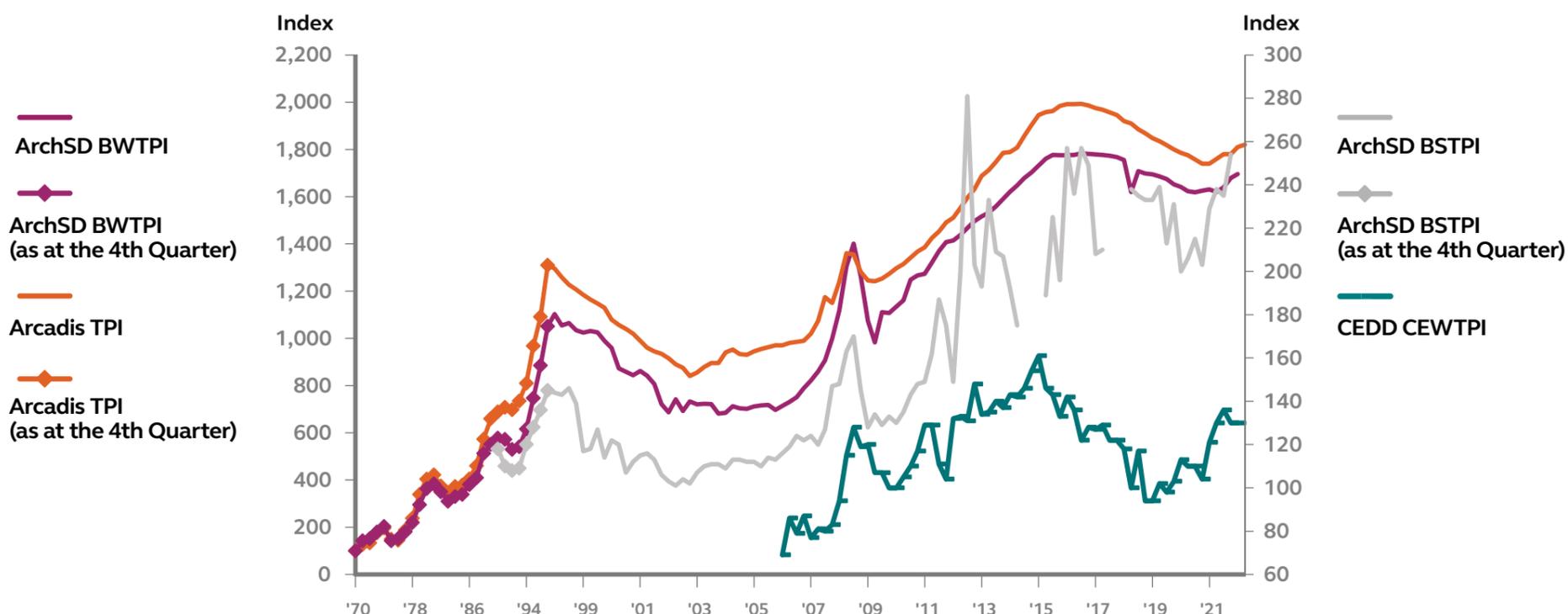


Building & Building Services Price Index								
Index	(Base Index: May 2006 = 100)							
	High-Rise Residential				High-Rise Office			
Month / Year	2019	2020	2021	2022	2019	2020	2021	2022
January	187.5	189.8	195.8	200.8	182.4	185.5	191.8	196.3
February	187.2	189.4	196.6	201.5	182.0	185.2	192.4	196.9
March	187.5	185.0	198.5	200.5	182.1	180.8	194.3	195.8
April	187.2	182.7	203.4	201.6	181.9	178.3	199.3	196.7
May	185.5	183.8	211.4	199.4	180.1	179.3	207.0	194.7
June	185.7	184.1	203.5	195.5	180.2	179.7	199.1	190.7
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

Tender Price Index

Hong Kong



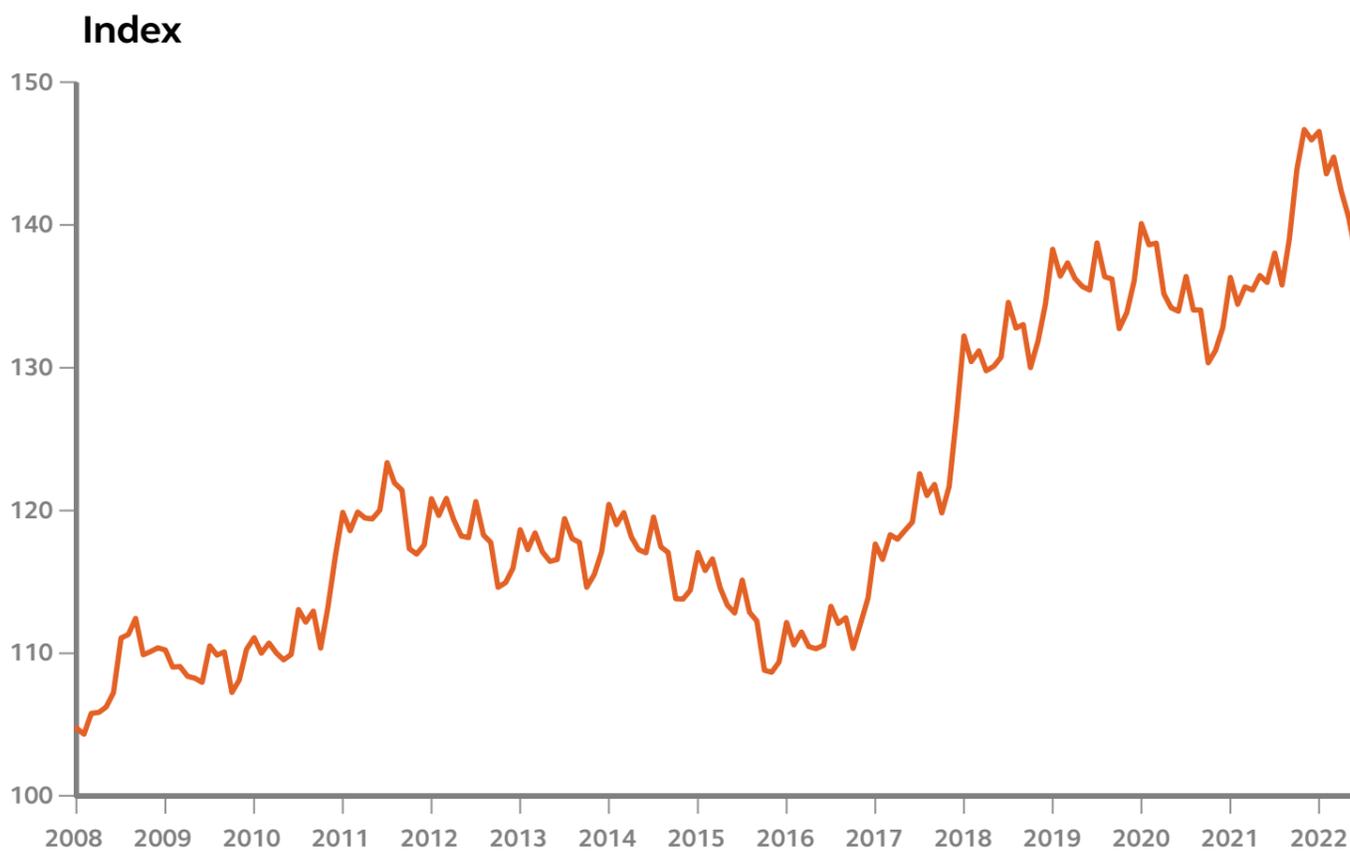
Quarter/Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
ArchSD BWTPI (Base = 100, at Q1 1970)										
Q1	1516	1621	1732	1775	1779	1755	1695	1641	1631	1696
Q2	1532	1648	1761	1776	1776	1727	1686	1623	1620	
Q3	1559	1679	1777	1783	1773	1708	1675	1618	1640	
Q4	1590	1703	1775	1781	1768	1698	1652	1625	1679	
ArchSD BSTPI (Base = 100, at Q4 1989)										
Q1	193	192	(N/A)	257	208	(N/A)	233	200	229	
Q2	233	175	189	236	210	258	239	206	238	
Q3	209	(N/A)	225	257	(N/A)	247	213	215	235	
Q4	207	(N/A)	196	249	287	233	231	203	254	
Arcadis TPI (Base = 100, at Q1 1970)										
Q1	1688	1789	1946	1992	1975	1920	1848	1785	1740	1810
Q2	1713	1808	1958	1992	1968	1910	1835	1775	1760	1820
Q3	1747	1857	1963	1993	1957	1885	1818	1757	1780	
Q4	1786	1903	1984	1986	1946	1868	1800	1740	1780	
CEWTPI (Base = 100, at Q1 2010)										
Q1	134	143	161	142	127	118	94	113	121	130*
Q2	135	142	146	136	129	100	102	110	130	
Q3	140	146	143	122	122	117	98	110	136	
Q4	137	154	133	128	122	94	103	104	130	

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.

Materials Mainland China



Construction Material Price Index								
Month / Year	Published (by NBS of China) (Base : Corresponding Month in Preceding Year = 100)				Projected (by Arcadis) (Base : 12/2006 = 100) (see explanatory notes below)			
	2019	2020	2021	2022	2019	2020	2021	2022
January	104.6	101.3	97.3	107.5	138.3	140.1	136.3	146.6
February	104.6	101.6	97.0	106.8	136.4	138.6	134.5	143.6
March	104.7	101.0	97.8	106.7	137.3	138.7	135.7	144.8
April	105.0	99.2	100.2	105.1	136.3	135.2	135.5	142.4
May	104.3	98.9	101.7	103.0	135.7	134.2	136.5	140.6
June	103.6	98.9	101.5	101.4	135.5	134.0	136.0	137.9
July	103.1	98.3	101.2		138.8	136.4	138.0	
August	102.7	98.3	101.3		136.4	134.0	135.8	
September	102.4	98.4	103.7		136.2	134.0	139.0	
October	102.1	98.2	110.4		132.7	130.3	143.9	
November	101.5	98.0	111.8		133.9	131.2	146.7	
December	101.2	97.6	109.9		136.1	132.8	146.0	

Source : National Bureau of Statistics (NBS) of China

Notes:

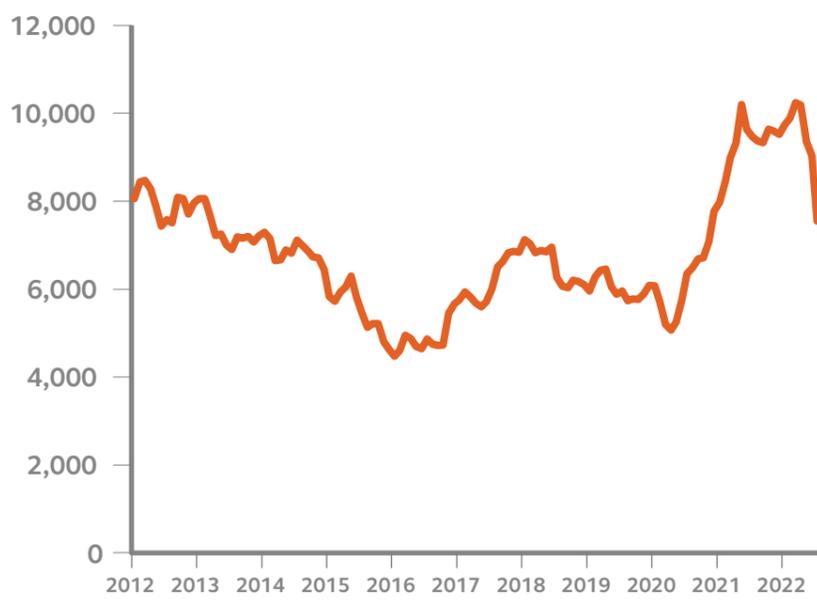
1. Data are published on a monthly basis, measuring the year-on-year change in price level of each month, but the quarter-on-quarter change is not published, ie. the changes between consecutive quarters are not given.
2. To give an illustration of the price trend over time, Arcadis applies a hypothetical 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.



Basic Construction Materials

Copper, CIF European port

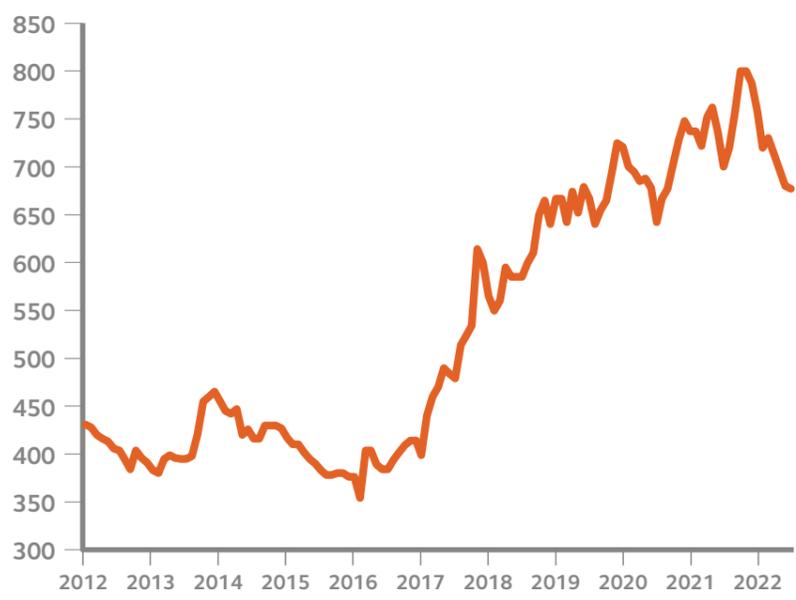
US\$/Tonne



Source : London Metal Exchange

Ready Mix Concrete, 40 MPa

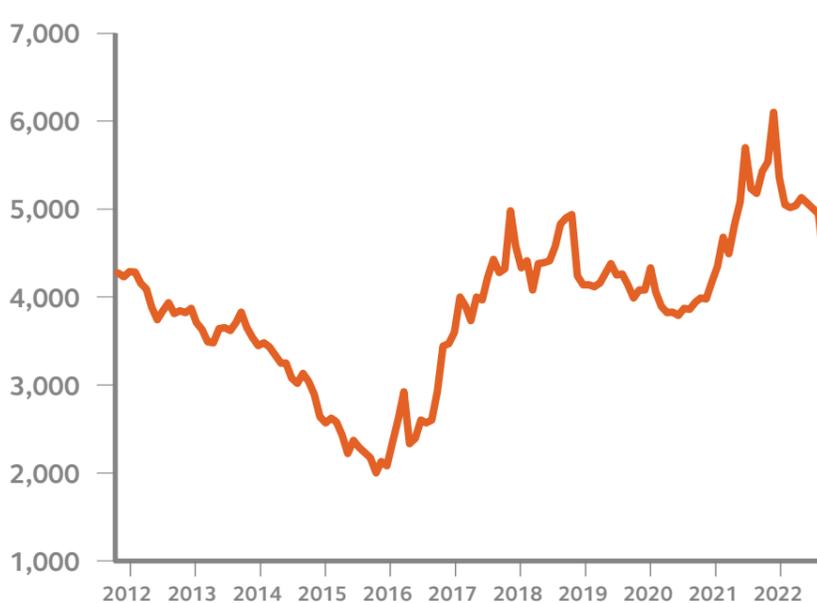
RMB/m3



Shanghai Municipal Management Commission of Housing and Urban-Rural Development

Steel Reinforcement, Grade III

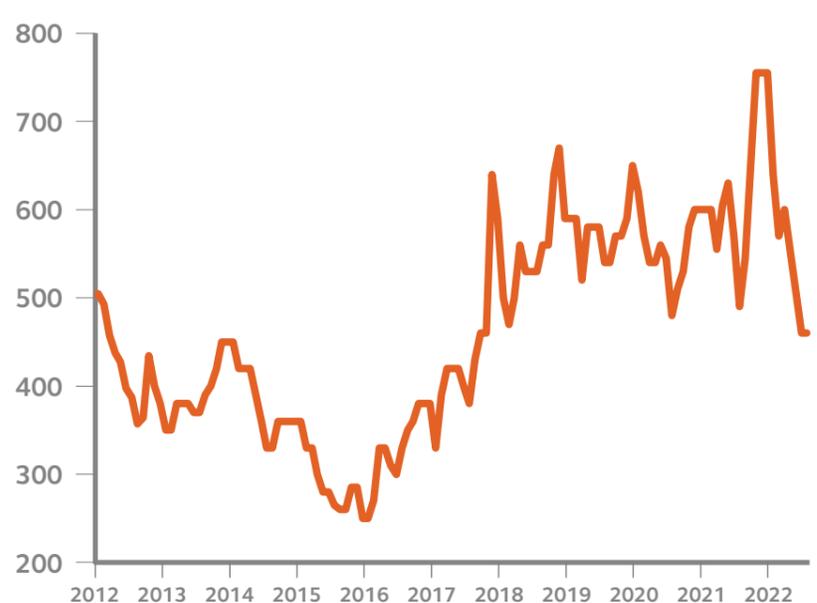
RMB/Tonne



Shanghai Municipal Management Commission of Housing and Urban-Rural Development

Portland Cement, 42.5 MPa

RMB/Tonne

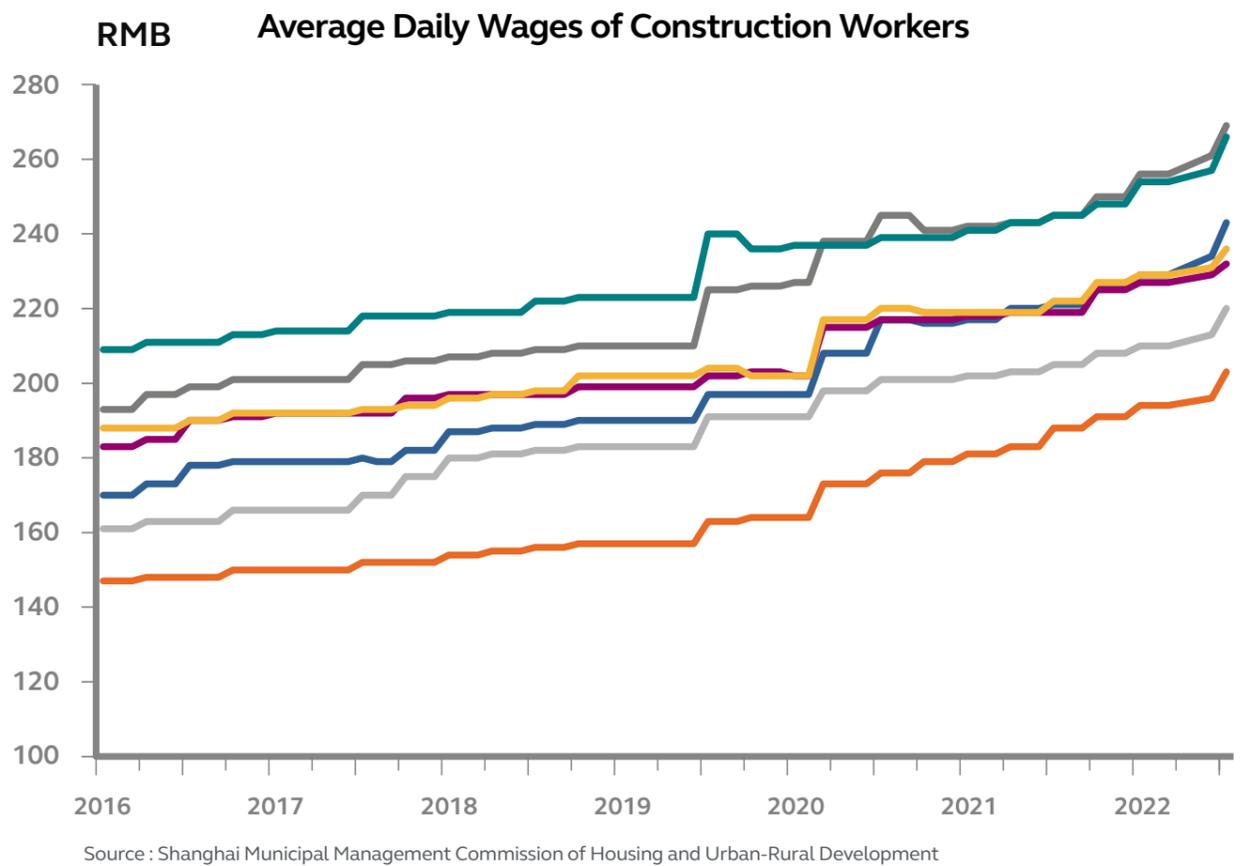


Shanghai Municipal Management Commission of Housing and Urban-Rural Development

Labour

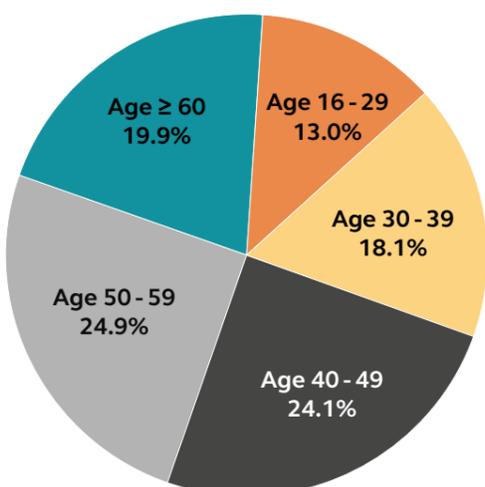
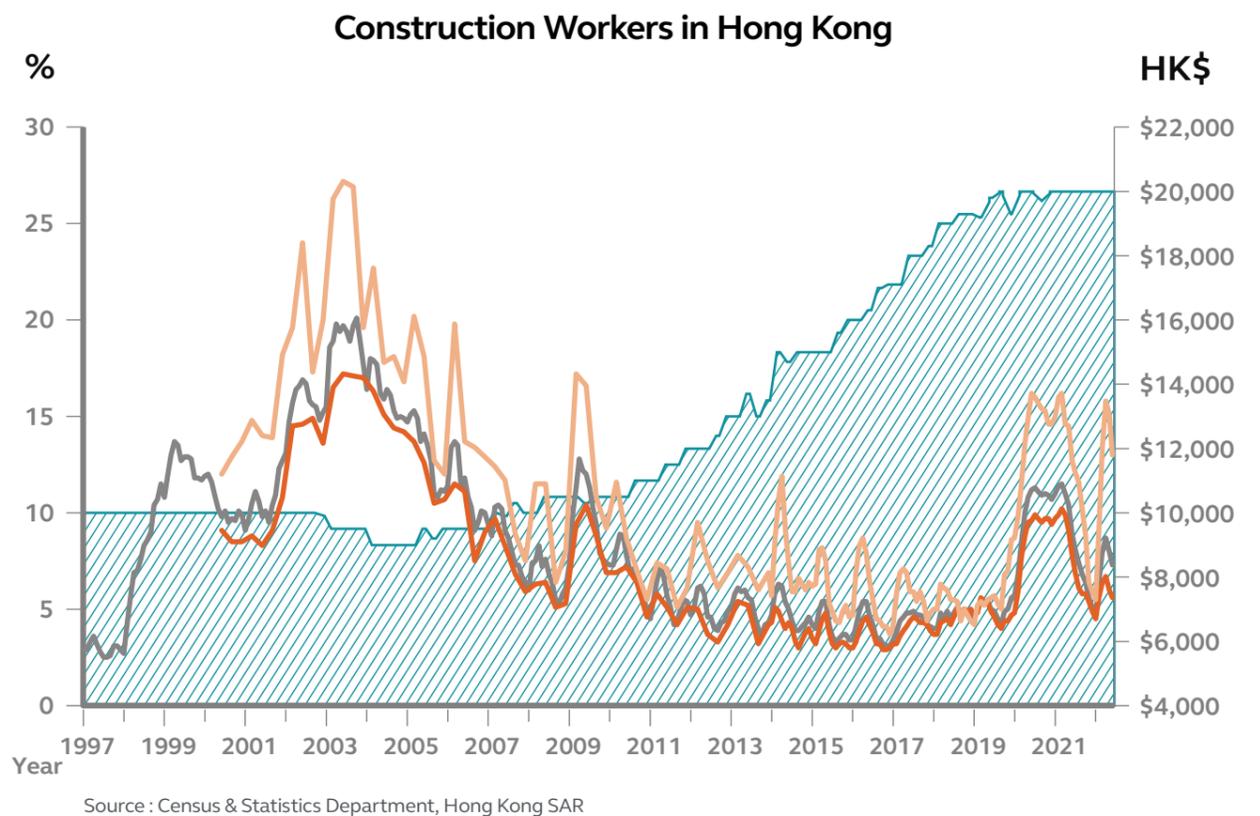
Mainland China

- General workers
- Concretor
- Bar bender and fixer
- Carpenter
- Joiner
- Metal worker
- Painter



Hong Kong

- ▨ Median Monthly Earning (HK\$)
- Unemployment Rate (%) - All Construction Trades
- Unemployment Rate (%) - Foundation & Superstructure
- Unemployment Rate (%) - Decoration & Maintenance

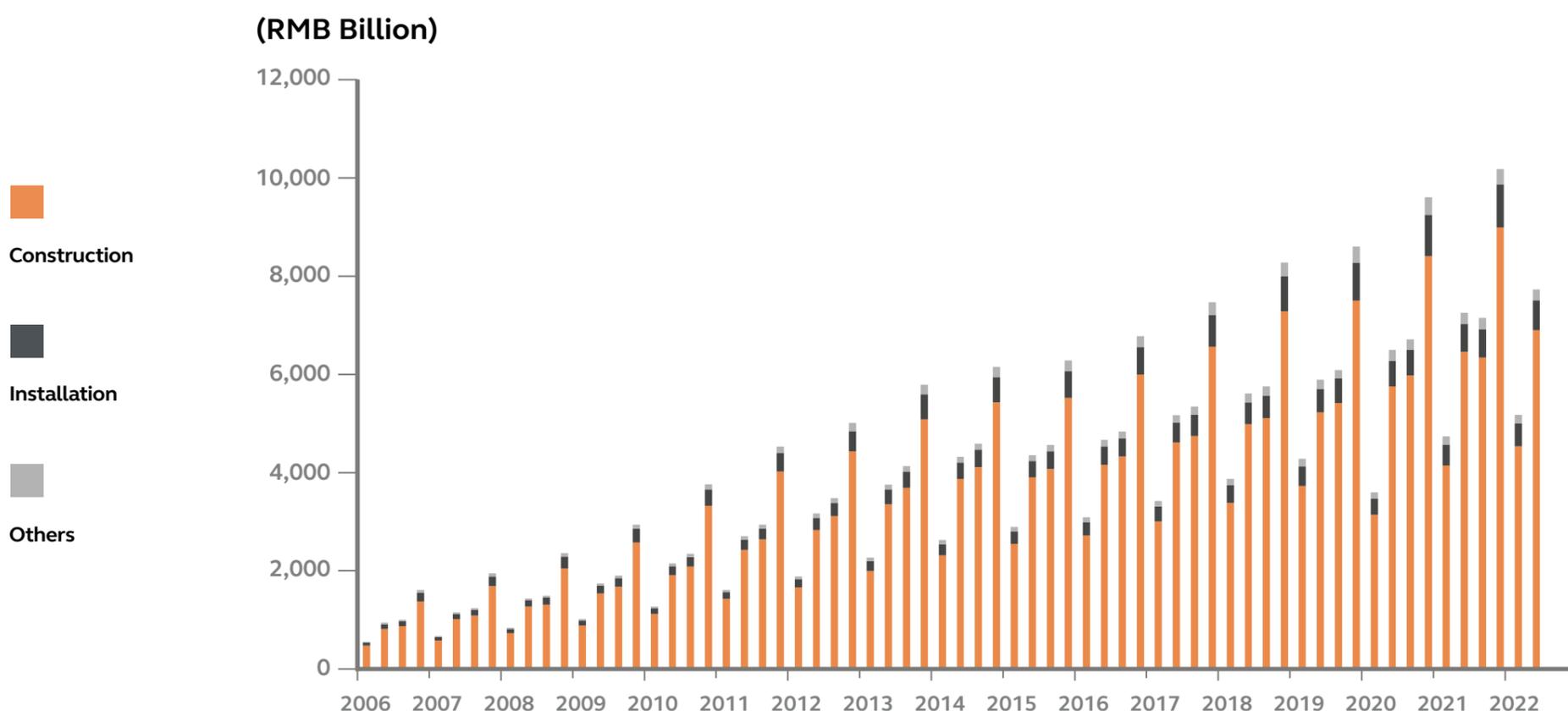


Age Distribution of Workers

Age Group	No. of Workers Employed by Construction Industry	
Age 16 - 29	76,867	13.0%
Age 30 - 39	107,616	18.1%
Age 40 - 49	142,728	24.1%
Age 50 - 59	147,557	24.9%
Age ≥ 60	117,746	19.9%
Total (as at Jun 2022) :	592,514	100.0%

Source : Construction Industry Council

Gross Value of Construction Work Performed – Mainland China



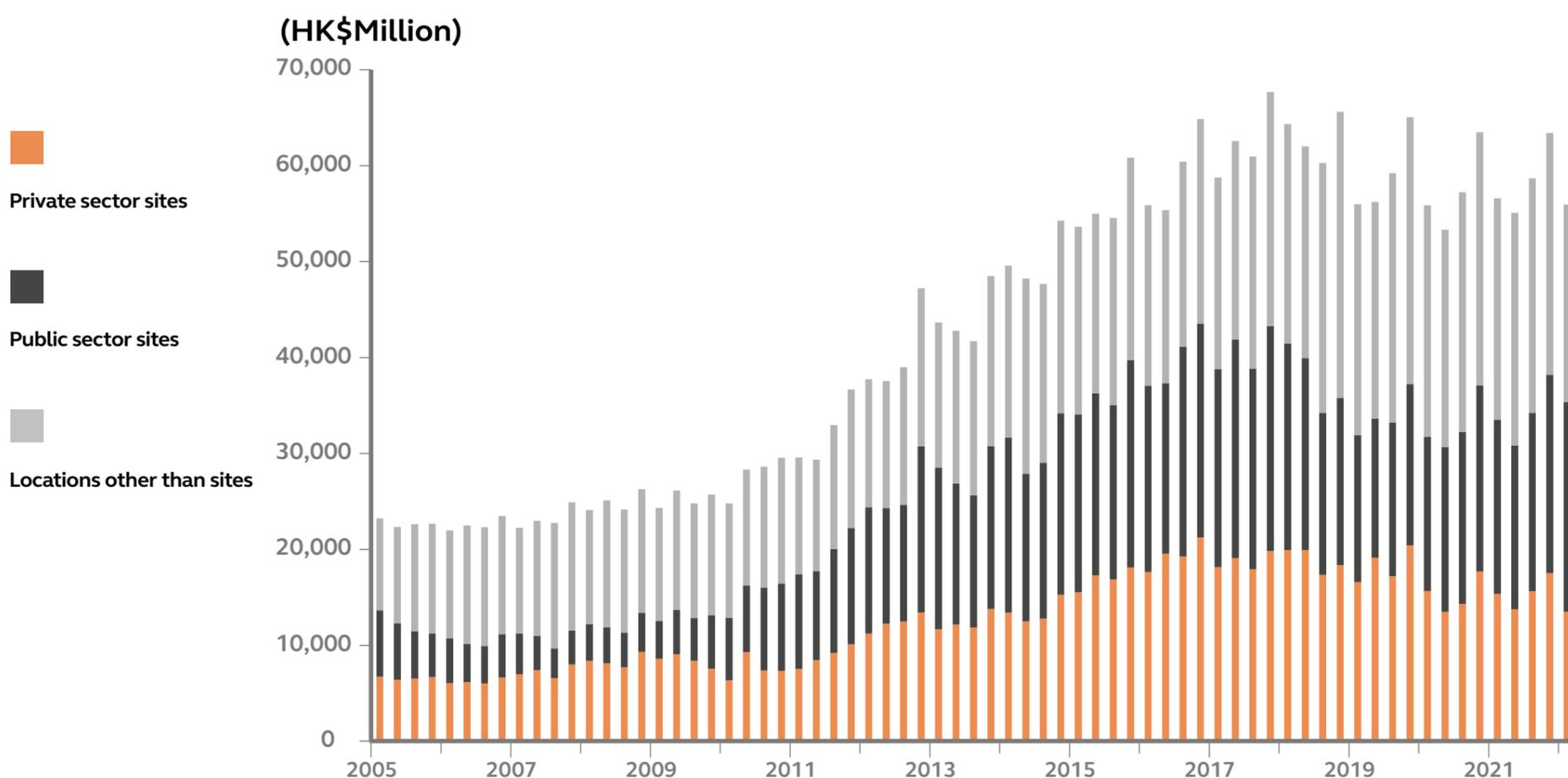
Value Performed (RMB Billion)										
Quarter	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
A. Construction										
1 st Quarter	1,994	2,311	2,544	2,712	3,003	3,382	3,727	3,138	4,141	4,533
2 nd Quarter	3,355	3,866	3,899	4,158	4,609	4,985	5,223	5,753	6,453	6,902
3 rd Quarter	3,687	4,113	4,068	4,322	4,742	5,106	5,414	5,977	6,336	
4 th Quarter	5,078	5,425	5,517	5,994	6,562	7,286	7,502	8,405	8,991	
Year Total:	14,115	15,714	16,028	17,186	18,916	20,759	21,867	23,272	25,921	11,435
B. Installation										
1 st Quarter	200	230	255	277	303	358	393	326	428	463
2 nd Quarter	300	333	331	366	405	438	476	523	569	602
3 rd Quarter	322	346	363	374	437	459	498	519	579	
4 th Quarter	514	517	548	561	646	708	768	840	871	
Year Total:	1,336	1,426	1,498	1,578	1,791	1,963	2,135	2,208	2,448	1,065
C. Others										
1 st Quarter	69	83	91	96	113	129	155	127	164	175
2 nd Quarter	100	118	117	138	154	187	186	217	229	223
3 rd Quarter	123	126	126	137	160	189	173	213	228	
4 th Quarter	189	205	216	222	262	282	328	357	318	
Year Total:	481	531	550	593	689	787	843	915	940	398
Annual gross value performed (A + B + C)										
Total:	15,932	17,671	18,076	19,357	21,396	23,509	24,845	26,395	29,309	12,898

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.

Gross Value of Construction Work Performed – Hong Kong



Value Performed (HK\$ Million)										
Quarter	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
A. Private sector sites										
1 st Quarter	11,675	13,395	15,528	17,652	18,150	19,918	16,583	15,647	15,339	13,493*
2 nd Quarter	12,176	12,507	17,284	19,530	19,070	19,925	19,112	13,489	13,758	
3 rd Quarter	11,848	12,792	16,849	19,252	17,912	17,340	17,199	14,303	15,620	
4 th Quarter	13,781	15,259	18,119	21,231	19,813	18,369	20,393	17,685	17,521	
Year Total:	49,480	53,953	67,780	77,665	74,945	75,552	73,287	61,123	62,238	13,493*
B. Public sector sites										
1 st Quarter	16,829	18,258	18,531	19,414	20,639	21,533	15,338	16,083	18,167	21,861*
2 nd Quarter	14,690	15,397	18,964	17,780	22,827	20,002	14,512	17,155	17,054	
3 rd Quarter	13,792	16,253	18,163	21,878	20,934	16,888	16,022	17,940	18,604	
4 th Quarter	16,976	18,915	21,585	22,295	23,455	17,433	16,825	19,400	20,687	
Year Total:	62,287	68,823	77,243	81,367	87,855	75,856	62,697	70,578	74,512	21,861*
C. Location other than sites										
1 st Quarter	15,140	17,909	19,549	18,809	19,963	22,871	24,032	24,126	23,075	20,577*
2 nd Quarter	15,914	20,327	18,744	18,041	20,657	22,073	22,592	22,674	24,249	
3 rd Quarter	16,038	18,636	19,520	19,274	22,093	26,027	25,992	24,971	24,465	
4 th Quarter	17,716	20,088	21,111	21,333	24,406	29,797	27,839	26,398	25,183	
Year Total:	64,808	76,960	78,924	77,457	87,119	100,768	100,455	98,169	96,972	20,577*
Annual gross value performed (A + B + C)										
Total:	176,575	199,736	223,947	236,489	249,919	252,176	236,439	229,870	233,722	55,931*

*Provisional

Source : Census and Statistics Department, Hong Kong SAR

Approximate Building Costs For Major Cities In Asia

Building Type	Shanghai	Beijing	Guangzhou/ Shenzhen	Chongqing/ Chengdu
	Q2/2022	Q2/2022	Q2/2022	Q2/2022
	RMB/ m ² CFA			
Domestic				
Apartments, high rise, average standard				
- Shell and core	3,139 - 3,579	2,856 - 3,294	2,725 - 3,130	2,747 - 3,181
- Full fit	5,132 - 5,658	4,517 - 4,961	4,324 - 4,961	4,201 - 4,960
Apartments, high rise, high end				
- Shell and core	3,774 - 4,088	3,403 - 4,936	2,844 - 3,857	3,396 - 4,400
- Full fit	11,589 - 12,634	10,948 - 12,463	7,025 - 8,009	6,782 - 8,470
Terraced houses, average standard				
- Shell and core	3,514 - 3,813	3,297 - 3,850	2,864 - 3,252	3,433 - 4,106
- Full fit	7,090 - 7,724	6,469 - 7,007	6,551 - 7,831	5,809 - 6,820
Detached houses, high end				
- Shell and core	5,168 - 5,712	4,965 - 5,526	3,986 - 4,526	4,499 - 5,135
- Full fit	12,469 - 13,229	12,431 - 12,970	12,568 - 14,725	7,391 - 8,395
Office / Commercial				
Medium/high rise offices, average standard	6,584 - 8,699	6,444 - 8,680	6,141 - 7,014	6,697 - 7,695
High rise offices, prestige quality	8,459 - 11,569	10,473 - 14,256	8,990 - 11,297	8,444 - 11,224
Out-of-town shopping centre, average standard	N/A	4,815 - 6,437	5,852 - 6,653	5,413 - 6,851
Retail malls, high end	8,940 - 12,051	8,712 - 11,994	8,658 - 12,545	8,040 - 11,098
Industrial				
Industrial units, shell only (Conventional single storey framed units)	2,028 - 2,484	1,990 - 2,426	2,280 - 2,801	3,324 - 4,133
Owner operated factories, low rise, light weight industry	3,136 - 3,928	3,846 - 4,409	N/A	N/A
Hotels				
Budget hotels - 3-star, mid market	7,204 - 8,781	7,128 - 8,781	7,879 - 8,934	7,267 - 8,884
Business hotels - 4/5-star	11,608 - 15,713	12,146 - 16,036	12,734 - 18,742	13,026 - 16,113
Luxury hotels - 5-star	15,694 - 18,761	15,460 - 19,901	17,313 - 19,673	16,033 - 19,064
Others				
Underground/basement car parks (<3 levels)	5,380 - 7,502	5,506 - 6,051	4,059 - 6,640	3,178 - 4,402
Multi storey car parks, above ground (<4 levels)	2,756 - 3,852	3,314 - 3,345	2,891 - 3,276	2,533 - 3,096
Schools (primary and secondary)	4,112 - 5,190*	3,833 - 4,948*	3,202 - 3,630*	3,359 - 3,700*
Students' residences	3,010 - 4,106	2,712 - 3,833	2,023 - 2,300	2,351 - 3,363
Sports clubs, multi purpose sports/ leisure centres (dry sports)	6,938 - 8,522	6,564 - 6,621	5,581 - 6,323	5,300 - 5,809
General hospitals - public sector	10,600 - 13,667	8,630 - 10,809	8,451 - 10,892	8,469 - 10,486

The above costs are at 2nd Quarter 2022 levels.

Approximate Building Costs For Major Cities In Asia

Building Type	Hong Kong	Macau	Singapore	Kuala Lumpur
	Q2/2022	Q2/2022	Q2/2022	Q2/2022
	USD/ m2 CFA (See also exchange rates per U.S. dollar below)			
	HK\$ 7.85	MOP 8.010	S\$ 1.37	RM 4.41
Domestic				
Apartments, high rise, average standard				
- Shell and core	N/A	1,904 - 2,820	N/A	N/A
- Full fit	3,070 - 3,554	2,450 - 2,998	1,790 - 1,935	325 - 650 \$
Apartments, high rise, high end				
- Shell and core	N/A	2,820 - 4,230	N/A	N/A
- Full fit	3,975 - 4,611	3,424 - 5,229	2,735 - 4,050	740 - 1,550
Terraced houses, average standard				
- Shell and core	N/A	3,340 - 4,147	N/A	N/A
- Full fit	4,229 - 4,879	4,176 - 4,983	2,300 - 2,555	235 - 380 \$\$
Detached houses, high end				
- Shell and core	N/A	4,037 - 5,817	N/A	N/A
- Full fit	6,153 up	5,094 - 6,626	2,920 - 3,905	785 - 1,080
Office / Commercial				
Medium/high rise offices, average standard	3,045 - 3,465	2,820 - 3,641	2,300 - 2,555	620 - 825
High rise offices, prestige quality	3,656 - 4,191	3,641 - 3,985	2,590 - 2,810	970 - 1,405
Out-of-town shopping centre, average standard	3,006 - 3,529	2,656 - 3,985	2,480 - 2,735	460 - 690
Retail malls, high end	3,911 - 4,637	4,176 - 5,038	2,735 - 2,995	720 - 1,105
Industrial				
Industrial units, shell only (Conventional single storey framed units)	N/A	N/A	1,095 - 1,275	335 - 475
Owner operated factories, low rise, light weight industry	2,331 - 2,930	N/A	N/A	445 - 570
Hotels				
Budget hotels - 3-star, mid market	3,873 - 4,115	3,710 - 4,203	2,920 - 3,210	1,045 - 1,550
Business hotels - 4/5-star	4,000 - 4,650	5,038 - 6,023	3,760 - 4,160	1,370 - 2,410
Luxury hotels - 5-star	4,662 - 5,312	6,023 - 7,119	3,760 - 4,160	2,010 - 2,700
Others				
Underground/basement car parks (<3 levels)	3,312 - 3,949	2,204 - 3,230	1,315 - 1,715	320 - 575
Multi storey car parks, above ground (<4 levels)	1,975 - 2,344	1,218 - 1,602	910 - 1,315	215 - 375
Schools (primary and secondary)	2,573 - 2,777	2,437 - 2,820	N/A	260 - 335 \$\$\$
Students' residences	2,943 - 3,312	1,930 - 2,245	2,155 - 2,265	310 - 395 \$\$\$\$
Sports clubs, multi purpose sports/ leisure centres (dry sports)	3,860 - 4,382	N/A	2,630 - 2,810	625 - 795
General hospitals - public sector	4,904 - 5,401	N/A	3,725 - 3,905	875 - 1,275

The above costs are at 2nd Quarter 2022 levels.

Approximate Building Costs For Major Cities In Asia

Building Type	Bangkok	Bangalore	Manila	Ho Chi Minh
	Q2/2022	Q2/2022	Q2/2022	Q2/2022
	USD/ m2 CFA (See also exchange rates per U.S. dollar below)			
	BAHT 35.50	INR 77.55	PHP 55.02	VND 23,450
Domestic				
Apartments, high rise, average standard				
- Shell and core	507 - 670	622 - 712	N/A	N/A
- Full fit	682 - 831	723 - 881	966 - 1,306	664 - 823
Apartments, high rise, high end				
- Shell and core	592 - 749	1,037 - 1,260	N/A	N/A
- Full fit	915 - 1,121	1,149 - 1,476	1,317 - 2,320	844 - 968
Terraced houses, average standard				
- Shell and core	282 - 366	424 - 500	N/A	N/A
- Full fit	428 - 530	509 - 572	875 - 1,071	448 - 526
Detached houses, high end				
- Shell and core	493 - 704	551 - 651	N/A	N/A
- Full fit	746 - 901	649 - 734	1,699 - 2,882	511 - 623
Office / Commercial				
Medium/high rise offices, average standard	755 - 901	546 - 602 #	893 - 1,166	776 - 898
High rise offices, prestige quality	944 - 1,211	677 - 729 #	1,293 - 1,653	895 - 1,219
Out-of-town shopping centre, average standard	645 - 834	548 - 598	760 - 947	N/A
Retail malls, high end	865 - 915	737 - 844	1,037 - 1,453	725 - 949
Industrial				
Industrial units, shell only (Conventional single storey framed units)	501 - 634	469 - 578	507 - 653	319 - 402
Owner operated factories, low rise, light weight industry	N/A	497 - 623	680 - 855	361 - 476
Hotels				
Budget hotels - 3-star, mid market	1,177 - 1,310	1,071 - 1,162	1,134 - 1,402	1,439 - 1,761
Business hotels - 4/5-star	1,507 - 1,732	1,486 - 1,919	1,294 - 2,145	N/A
Luxury hotels - 5-star	1,761 - 2,042	2,088 - 2,450	1,791 - 3,399	1,817 - 2,180
Others				
Underground/basement car parks (<3 levels)	577 - 761	362 - 419	565 - 756	659 - 786
Multi storey car parks, above ground (<4 levels)	189 - 310	301 - 351	454 - 689	424 - 465
Schools (primary and secondary)	N/A	374 - 441	666 - 919	557 - 608
Students' residences	N/A	390 - 484	704 - 906	557 - 715
Sports clubs, multi purpose sports/ leisure centres (dry sports)	N/A	724 - 807	1,122 - 1,634	823 - 880
General hospitals - public sector	N/A	816 - 949	1,351 - 1,579	N/A

The above costs are at 2nd 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 , 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 , including finishes and fittings 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/window wall, including public area fit-out, tenant area with screeded floor, painted wall and ceiling
High rise offices, prestige quality	RC structure, curtain wall, including public area fit-out, tenant area with raised floor, painted wall and false ceiling
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 and tenant fit-out
Owner operated factories, low rise, light weight industry	RC structure, including small office with simple fit-out and M&E, but excluding a/c
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 a/c, 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.
- Beijing, Shanghai, Guangzhou/Shenzhen, Chongqing/Chengdu:** *Public authority standard, no a/c. **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 \$\$\$ Standard government provisions \$\$\$\$ University standard. **Bangalore:** #Tenant area with screeded floor, painted wall and ceiling, excluding raised floor.
- The data for Bangkok is provided by Mentabuild Limited, an Arcadis Alliance Partner.
- 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.



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About Arcadis

At Arcadis, our purpose is improving quality of life. We do this by creating livable places where people and communities can thrive. We enhance mobility, so that we can sustainably move in and between our cities. We work to protect citizens, cities, the environment, and natural resources for future generations. Arcadis is the world's leading company delivering sustainable design, engineering, and consultancy services. We are more than 29,000 architects, data analysts, designers, engineers, project planners, water management and sustainability experts driven by our passion for improving quality of life.

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