

CHINA AND HONG KONG

QUARTERLY CONSTRUCTION
COST REVIEW





CONTENTS

HONG KONG MARKET OVERVIEW	3
MARKET ANALYSIS	4
APPROXIMATE BUILDING COSTS - HONG KONG	5
BUILDING & BUILDING SERVICES PRICE INDEX - MAINLAND CHINA	6
TENDER PRICE INDEX - HONG KONG	7
MATERIALS - MAINLAND CHINA	8
LABOUR	9
GROSS VALUE OF CONSTRUCTION WORK PERFORMED - MAINLAND CHINA.....	10
GROSS VALUE OF CONSTRUCTION WORK PERFORMED - HONG KONG.....	11
APPROXIMATE BUILDING COSTS FOR MAJOR CITIES - ASIA.....	12 - 15

Statistical data is compiled from sources deemed reliable but accuracy is not guaranteed.
The information contained herein should be regarded as indicative and for general guidance only.
Whilst every effort has been made to ensure accuracy, no responsibility can be accepted for errors
and omission, however caused. All rights reserved. Reproduction of this data, in whole or in part,
is permitted providing the source is quoted.

HONG KONG MARKET OVERVIEW



The Chief Executive's 2018 Policy Address built on last year's Address by acknowledging Hong Kong's need to do more to challenge the shortage of public housing and land supply. These pivotal topics that underpin Hong Kong's construction industry have been earmarked with potential solutions such as land reclamation, use of brownfield sites and the allocation of more land.

The lack of land to build on and a shortage of affordable housing is a consistent challenge in Hong Kong and other major cities around Asia. Hong Kong has limited resources and is going to require positive action to meet the needs of its citizens.

These challenges add a premium to the price of real estate, but improving construction productivity and cost effectiveness through innovation and technology are opportunities that were highlighted

as potential areas that could help mitigate the overall rising cost of construction.



Progress can be witnessed in Hong Kong's first pilot project to adopt Modular Integrated Construction (MiC) with the Disciplined Services Quarters for the Fire Services Department at Pak Shing Kok, creating interest around how introducing alternative construction methods can be further aligned with current and future works.

MARKET MOVEMENT



ECONOMY

Indicator

	GDP Growth per annum	Q2/16 - Q1/17 (+) 3.9%	Q1/17 - Q1/18 (+) 4.6%	Q2/17 - Q2/18 (+) 3.5%
	Inflation Rate (CPI) per annum	Aug 16 - 17 (+) 1.9%	May 17 - 18 (+) 2.1%	Aug 17 - 18 (+) 2.3%



BASIC COSTS


Indicator

	Highways Material Index	Apr - Jun 17 744.4	Jan - Mar 18 822.6	Apr - Jun 18 837.4
	Labour Wages Index	May - Jul 17 155.5	Feb - Apr 18 148.5	May - Jul 18 148.0



SUPPLY & DEMAND

Indicator

	Activity Level (Gross output; new + A&A)	Q2/17 HK\$62.554 Bn	Q1/18 HK\$64.322 Bn	Q2/18 HK\$61.543 Bn
---	--	------------------------	------------------------	------------------------



CONSTRUCTION COST TREND

Indicator

	Tender Price Index (Arcadis)	Q3/17 1957	Q2/18 1910	Q3/18 1885
---	------------------------------	---------------	---------------	---------------



1 MARKET ANALYSIS

DROP IN GROSS VALUE OF CONSTRUCTION WORK PERFORMED

Hong Kong's construction industry witnessed a decrease of 4.3% Quarter-on-Quarter (QoQ) and 1.62% Year-on-Year (YoY) in its gross value output. This market movement was due to a significant drop in output in public sector works of 14.5% YoY. In contrast, the private sector recorded an increase in output of 3.3% YoY with all other works increasing by 8.1% YoY. The remainder of 2018 is expected to be stable, but depending on the approval rates from LegCo in submitted proposals, it might see an increase in activity, if not this year, then potentially in 2019. The Tender Price Index (TPI) has seen a 1.3% decrease QoQ and 3.68% decrease YoY. This downward trend has continued from the second quarter of 2018 and is likely to extend throughout the remainder of 2018, especially on buildings. The Hong Kong economy enjoyed continued growth for the seventh quarter in a row at more than 3%, creating market stability and positive sentiment towards public and private construction spending.

COST OF MATERIALS AND LABOUR

Steel price has increased from a market low in early 2016 and has remained stable since December 2017. Prices for other core materials such as cement, diesel and basic architectural products also remain stable in the third quarter of 2018. However, the price of sand has increased along with floor tiles. Construction workers' wages, including bar benders, electrical and mechanical workers remained stable at peak levels, but joiner's rates dropped slightly along with the Labour Wage Index (LWI) 0.3% QoQ and 4.8% YoY.

ALTERNATIVE LAND SUPPLY

A critical talking point from 2018 Policy Address is the "Lantau Tomorrow Vision", which proposes to build several artificial islands equating to 1,700 hectares to ease Hong Kong's overcrowding. The debate aside to whether this project should proceed, the increase

in works for the construction industry would be significant, but from a material perspective questions need to be asked around supply of critical resources such as sand to support potential land reclamation works. With most resources being imported, costs could rise creating a supply and demand issue requiring the government to look at alternative construction methods. The government will commence a study on the reclamation feasibility and how it can increase land supply and drive economic development.

CHINA OVERVIEW

In the third quarter of 2018, the cost of China's major construction materials continued to rise. Compared with the second quarter of 2018, basic construction products such as steel and concrete also increased by 8% and 2% respectively, which is consistent with labour wages that increased by 4.8% p.a. Due to the environmental protection policies, manufactory productivity is expected to be limited in the fourth quarter, with material prices anticipated to rise subsequently.

Land area sales increased by 15.7% throughout China from January, to September of this year. However, there were 935 auctions that were aborted, showing that the overall increase in land sales could have been significantly higher. The terminated transactions are broken down with 13 in Tier 1 cities, 197 in the Tier 2 cities and 725 in the Tier 3 and 4s. The premium rate of land price in Tier 2 and 3 cities is also dropping, with real estate developers indicating a more cautious approach in their investments.

Despite this cautious approach, real estate developers are continuing to see growth in their turnover rate as the accumulated sales amount from January to September increased by 13.3% YoY. However, the growth of sales area 2.9% YoY is slower than the growth of new commencement projects area 16.4% YoY, some developers' stock is increasing.



2 APPROXIMATE BUILDING COSTS

HONG KONG

Notes:

1. The costs 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 costs per square metre are based on Construction Floor Areas (CFA) measured to the outside face of the external walls /external perimeter including lift shafts, stairwells, balconies, plant rooms, water tanks and the like.

3. All buildings are assumed to have no basements (except otherwise stated) and are built on flat ground, with normal soil and site conditions. The cost excludes site formation works, external works, land cost, professional fees, finance and legal expenses.

BUILDING TYPE	HK\$/m ² CFA	OUTLINE SPECIFICATION
DOMESTIC		
Apartments, high rise, public authority standard	11,000 - 13,500	Apartment units with fit-out, based on Hong Kong Housing Authority Non-standard Cruciform Block design
Apartments, high rise, average standard	23,900 - 28,000	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	31,600 - 36,900	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 - 38,000	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	48,000 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	23,400 - 27,500	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	28,500 - 33,500	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 - 27,700	Including public area fit-out and M&E, but excluding shop fit-out
Retail malls, high end	31,100 - 37,100	
INDUSTRIAL		
Owner operated factories, low rise, light weight industry	18,200 - 23,200	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	30,200 - 32,700	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	31,600 - 37,100	
Luxury hotels - 5-star	37,000 - 43,000	
OTHERS		
Underground/basement car parks (<3 levels)	25,000 - 30,000	RC structure
Multi storey car parks, above ground (<4 levels)	15,000 - 18,000	RC structure, natural ventilation, no facade enclosure
Schools (primary and secondary)	19,700 - 21,200	Public authority standard, including fit-out, no a/c, complete with basic external works but excluding educational equipment
Students' residences	22,900 - 25,900	Including fit-out, loose furniture and a/c
Sports clubs, multi purpose sports/leisure centres (dry sports)	30,000 - 35,000	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	38,800 - 43,800	Excluding medical and operating equipment

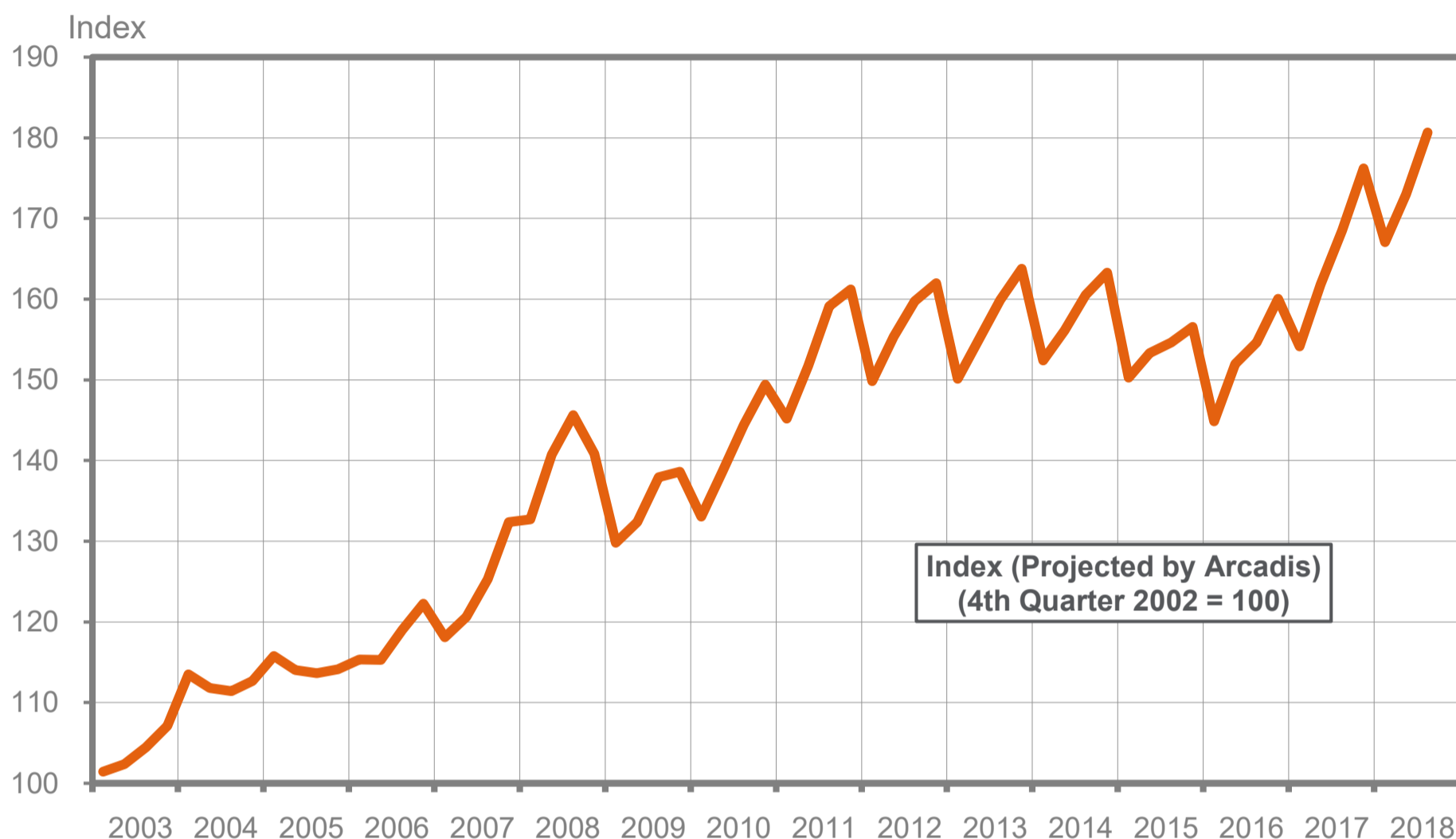
*The above cost are at 3rd Quarter 2018 levels.



3

BUILDING & BUILDING SERVICES PRICE INDEX

MAINLAND CHINA



BUILDING & BUILDING SERVICES PRICE INDEX								
Index	Published (by NBS of China) (Base : Corresponding Quarter in Preceding Year = 100)				Projected (by Arcadis) (Base : Q4/2002 = 100) (see explanatory notes below)			
	Quarter / Year	2015	2016	2017	2018	2015	2016	2017
1st Quarter	98.6	96.4	106.4	108.4	150.3	144.9	154.1	167.1
2nd Quarter	98.2	99.1	106.5	106.9	153.3	152.0	161.8	173.0
3rd Quarter	96.3	100.0	109.0	107.2	154.6	154.6	168.5	180.7
4th Quarter	95.9	102.2	110.1		156.6	160.0	176.2	

Source : National Bureau of Statistics (NBS) of China

Notes:

Data are published on a quarterly basis, measuring the year-on-year change in price level of each quarter, 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, basing on the following understanding and assumptions:

1. Only indices from 1st Quarter 2003 and onwards are published.

2. For 2002 and before, indices were only published annually. This annual index indicates that the average fluctuation of 2002 was moderate. Arcadis' own in-house data further substantiates that the construction costs in 2002 were rather stable throughout the year.

3. Changes between quarters in 2002 are assumed to be evenly distributed throughout the year. This establishes a notional relationship between the four quarters in 2002 and can be compared with the published data for 2003 to find their notional quarter-on-quarter changes.

4. For comparison purposes, 4th Quarter 2002 is referred to as base and the base index as 100.

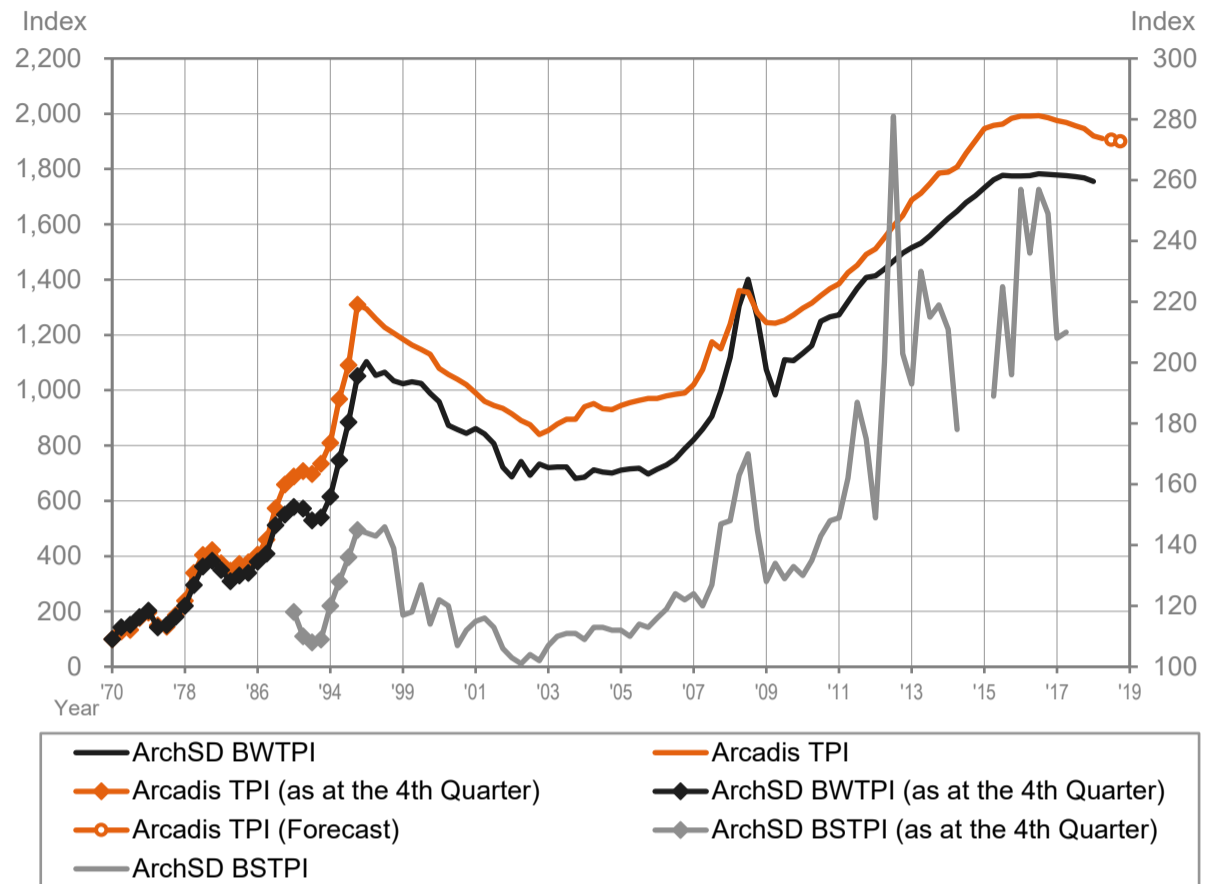


4 TENDER PRICE INDEX

HONG KONG

Notes:

- [*] denotes forecast figures.
- Both BWTP (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.



Quarter / Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
ArchSD BWTP (Base = 100, at Year 1970)										
Q1	1074	1134	1273	1414	1516	1621	1732	1775	1779	1755
Q2	983	1161	1320	1438	1532	1648	1761	1776	1776	1727
Q3	1111	1249	1369	1467	1559	1679	1777	1783	1773	
Q4	1107	1266	1408	1496	1590	1703	1775	1781	1768	
ArchSD BSTPI (Base = 100, at Year 1989)										
Q1	128	130	149	149	193	211	(N/A)	257	208	(N/A)
Q2	134	135	162	200	230	178	189	236	210	258
Q3	129	143	187	281	215	(N/A)	225	257	(N/A)	
Q4	133	148	175	203	219	(N/A)	196	249	287	
Arcadis TPI (Base = 100, at Year 1970)										
Q1	1245	1297	1385	1511	1688	1789	1946	1992	1975	1920
Q2	1242	1315	1425	1552	1713	1808	1958	1992	1968	1910
Q3	1253	1342	1452	1595	1747	1857	1963	1993	1957	1885
Q4	1273	1367	1491	1632	1786	1903	1984	1986	1946	1870*

Source : Competitive tenders received by Arcadis, Building Works Tender Price Index (BWTP) and Building Services Tender Price Index (BSTPI) of Architectural Services Department (ArchSD) of HKSAR

Note : 1. [*] denotes forecast figures

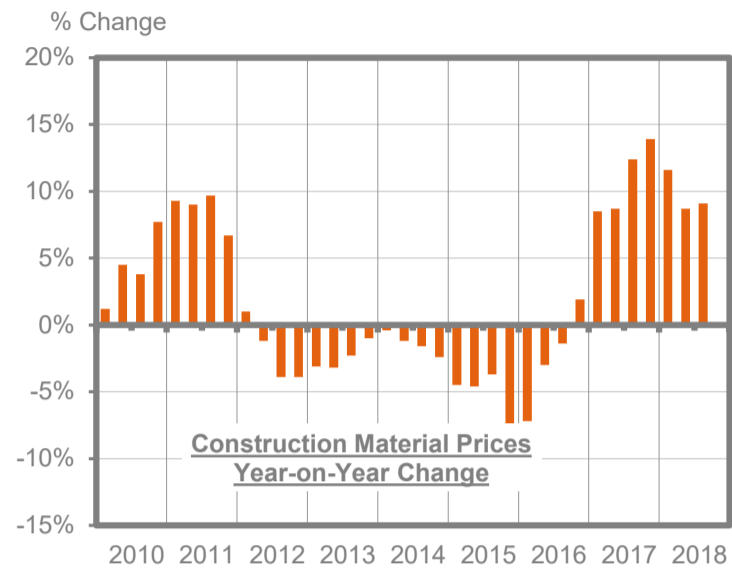
- Both BWTP (ArchSD) and Arcadis TPI measure the trend of general builder's works only. Special works and Mechanical and Electrical Services would have to be considered separately.
- All indices were published quarterly. For reference purpose, only indices from 1st quarter of 1998 and onwards are given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



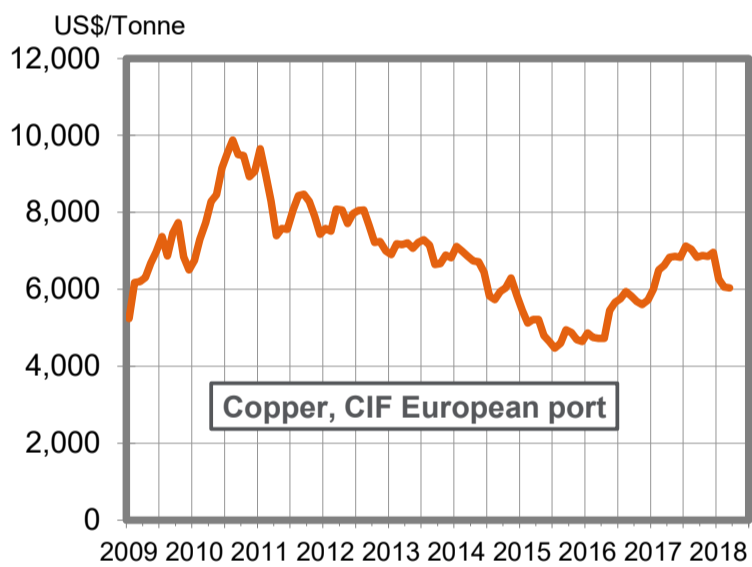
5 MATERIALS MAINLAND CHINA

CONSTRUCTION MATERIAL PRICES YEAR-ON-YEAR CHANGE			
Quarter / Year	2016	2017	2018
1st Quarter	(-) 7.2%	(+) 8.5%	(+) 11.6%
2nd Quarter	(-) 3.0%	(+) 8.7%	(+) 8.7%
3rd Quarter	(-) 1.4%	(+) 12.4%	(+) 9.1%
4th Quarter	(+) 1.9%	(+) 13.9%	

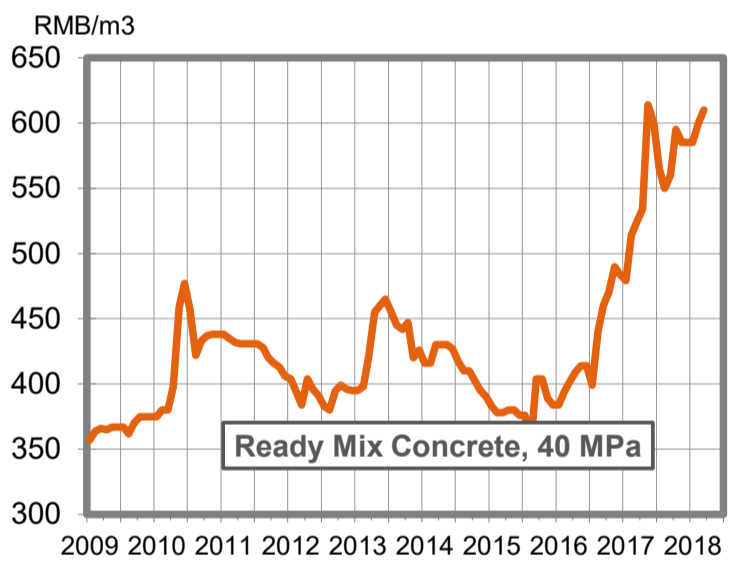
Source : National Bureau of Statistics of China



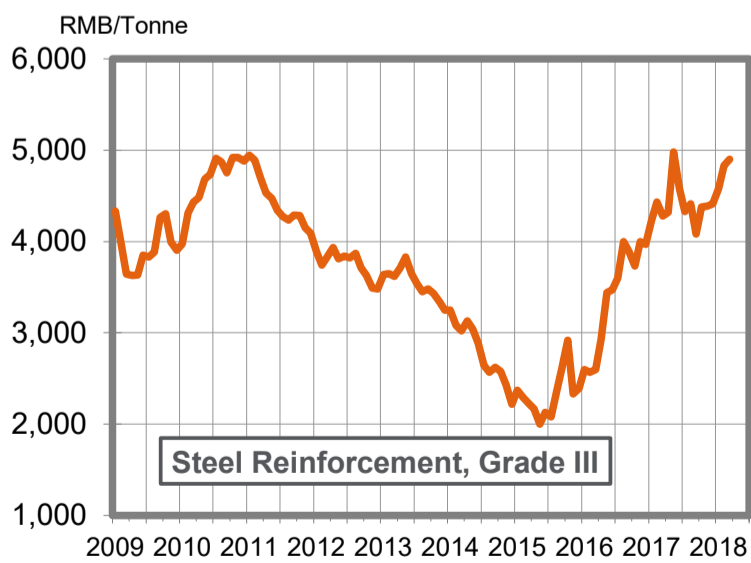
Basic Construction Materials



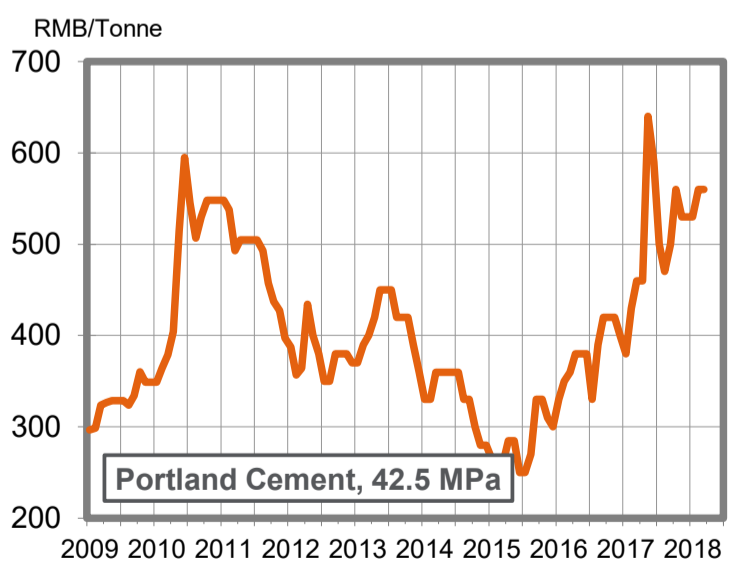
Source : London Metal Exchange



Shanghai Construction & Construction Material
Industry Administration Department



Shanghai Construction & Construction Material
Industry Administration Department



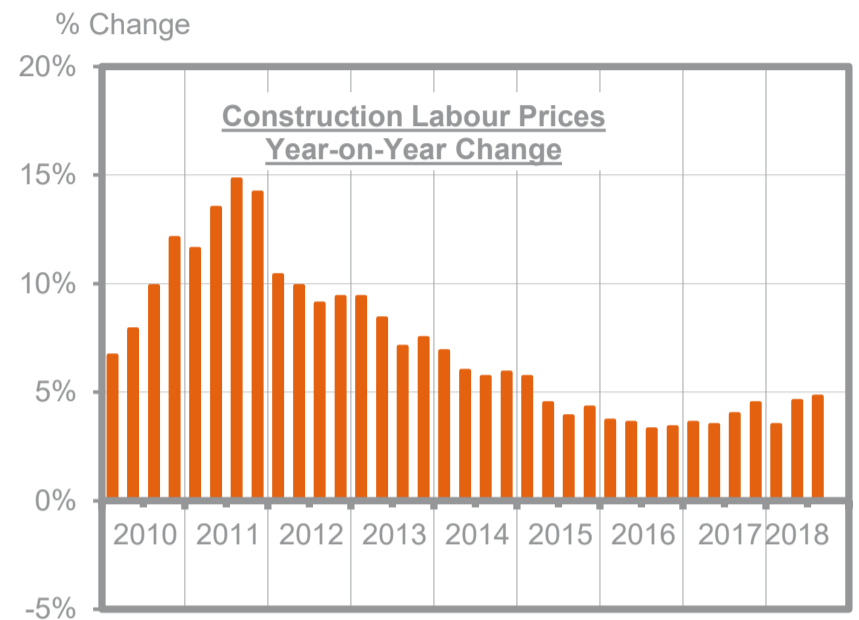
Shanghai Construction & Construction Material
Industry Administration Department

6 LABOUR

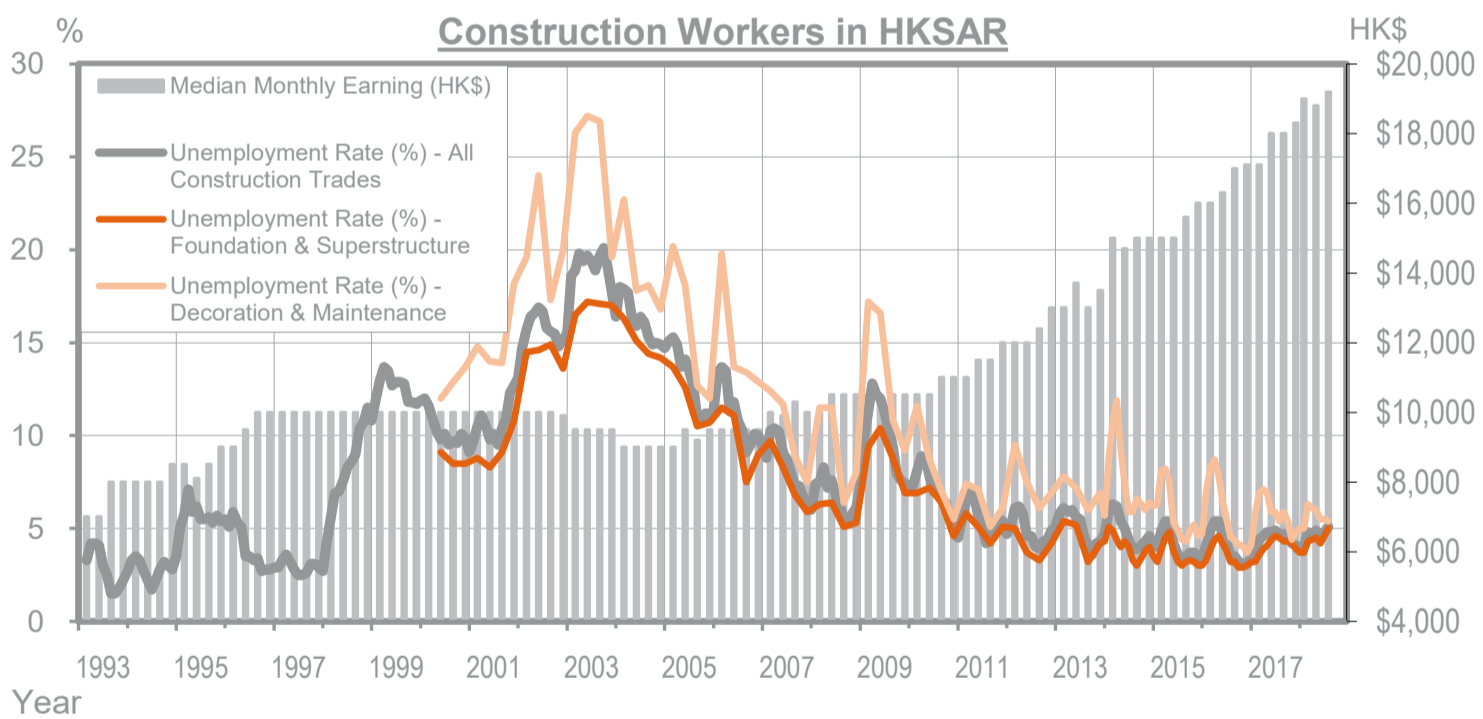
Mainland China

CONSTRUCTION LABOUR PRICES YEAR-ON-YEAR CHANGE			
Quarter / Year	2016	2017	2018
1st Quarter	(+) 3.7%	(+) 3.6%	(+) 3.5%
2nd Quarter	(+) 3.6%	(+) 3.5%	(+) 4.6%
3rd Quarter	(+) 3.3%	(+) 4.0%	(+) 4.8%
4th Quarter	(+) 3.4%	(+) 4.5%	

Source : National Bureau of Statistics of China

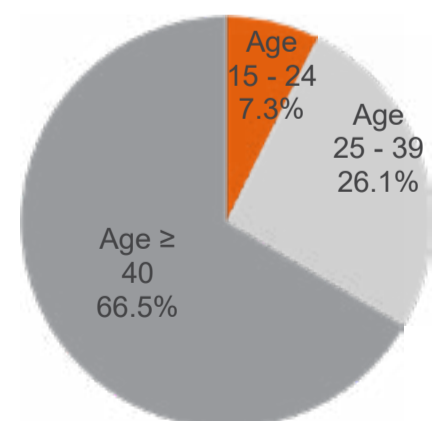


Hong Kong



Age Group	No. of Workers Employed by Construction Industry	
Age 15 - 24	34,506	7.3%
Age 25 - 39	123,095	26.1%
Age ≥ 40	313,379	66.5%
Total (as at June 2018)	470,980	100.0%

Source : Construction Industry Council



Age Distribution of Workers

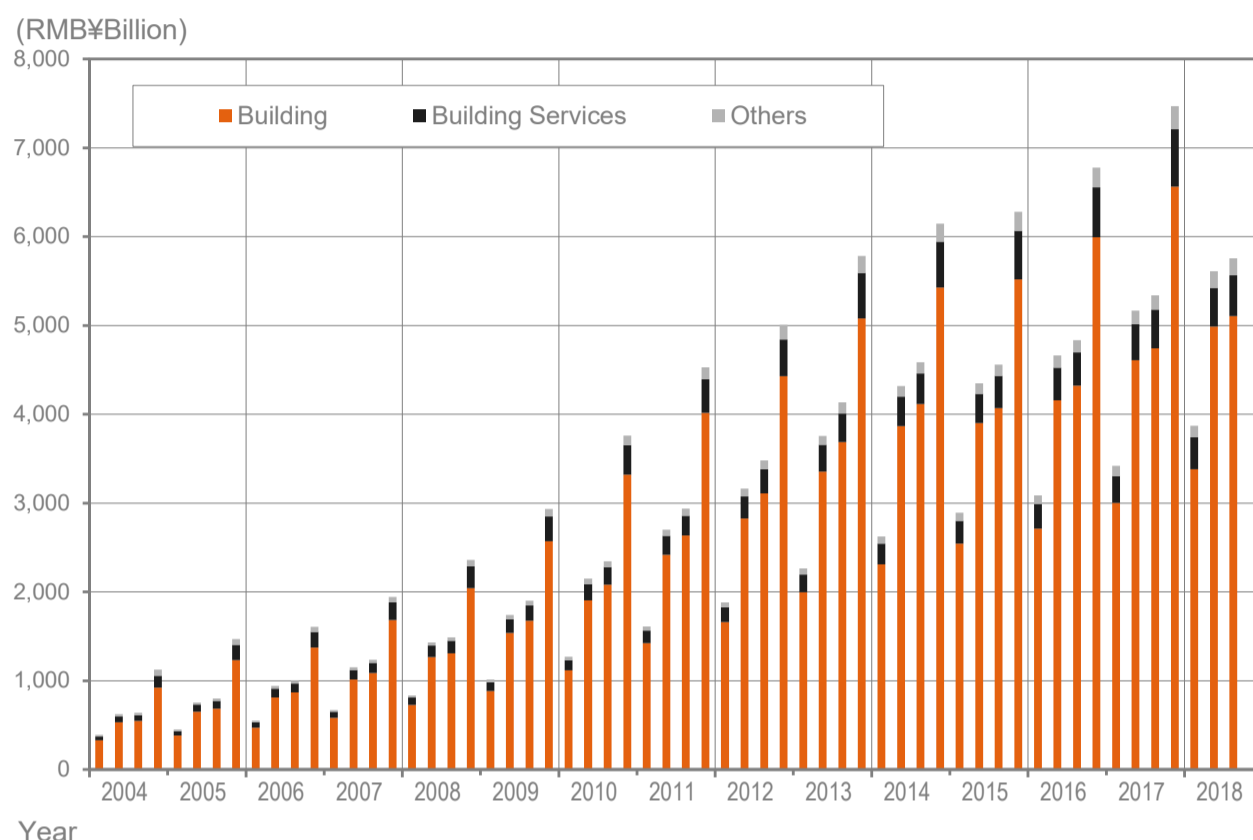


7 GROSS VALUE OF CONSTRUCTION WORK PERFORMED

MAINLAND CHINA

Notes:

1. Value of "Construction" includes builder's works and building services systems.
2. Value of "Installation" is for assembling and installation of equipment for industrial production, power, load-lifting, transportation, medical and laboratory uses, but excludes supply costs of such equipment.
3. Value of "Others" is generally maintenance and other miscellaneous construction activities.



Quarter	Value Performed (RMB¥ Billion)									
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
A. Building										
1st Quarter	882	1,118	1,422	1,661	1,994	2,311	2,544	2,712	3,003	3,382
2nd Quarter	1,537	1,906	2,419	2,826	3,355	3,866	3,899	4,158	4,609	4,985
3rd Quarter	1,673	2,082	2,634	3,111	3,687	4,113	4,068	4,322	4,742	5,106
4th Quarter	2,572	3,318	4,016	4,427	5,078	5,425	5,517	5,994	6,562	
Year Total :	6,664	8,424	10,490	12,025	14,115	15,714	16,028	17,186	18,916	
B. Building Services										
1st Quarter	100	115	141	165	200	230	255	277	303	358
2nd Quarter	153	183	214	251	300	333	331	366	405	438
3rd Quarter	173	196	224	271	322	346	363	374	437	459
4th Quarter	277	333	378	413	514	517	548	561	646	
Year Total :	702	827	957	1,100	1,336	1,426	1,498	1,578	1,791	
C. Others										
1st Quarter	30	38	47	57	69	83	91	96	113	129
2nd Quarter	48	60	69	86	100	118	117	138	154	187
3rd Quarter	56	66	77	97	123	126	126	137	160	189
4th Quarter	86	107	133	166	189	205	216	222	262	
Year Total :	220	270	326	406	481	531	550	593	689	
Annual gross value performed (A + B + C)										
Total :	7,586	9,521	11,773	13,530	15,931	17,671	18,076	19,357	21,396	

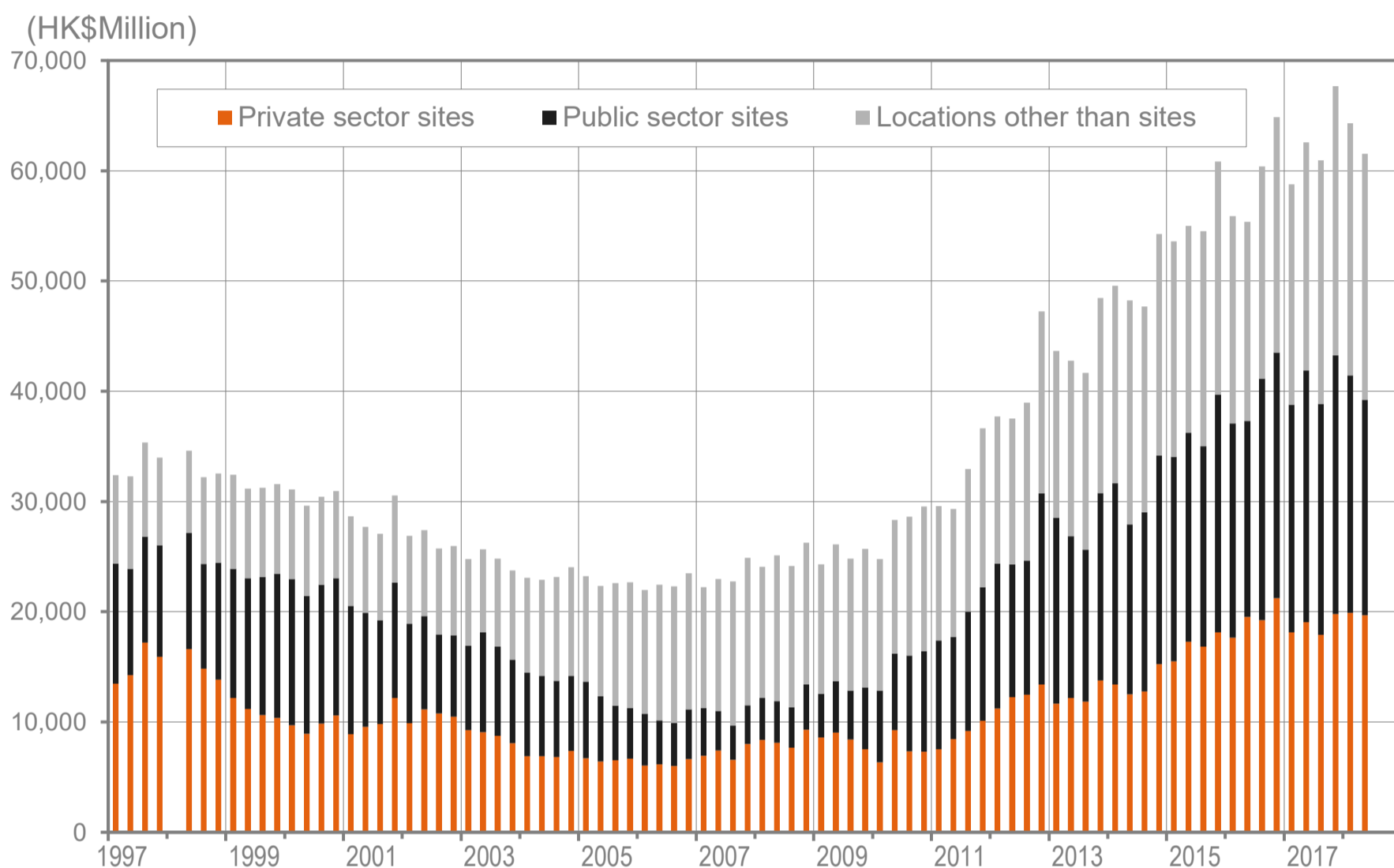
Source : National Bureau of Statistics of China

- Note : 1. Value of "Construction" includes builder's works and building services systems.
 2. Value of "Installation" is for assembling and installation of equipment for industrial production, power, load-lifting, transportation, medical and laboratory uses, but excludes supply costs of such equipment.
 3. Value of "Others" is generally maintenance and other miscellaneous construction activities.



8 GROSS VALUE OF CONSTRUCTION WORK PERFORMED

HONG KONG



Quarter	Value Performed (HK\$ Million)									
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
A. Private sector sites										
1st Quarter	8,600	6,349	7,529	11,209	11,675	13,395	15,528	17,652	18,150	19,918
2nd Quarter	9,055	9,276	8,458	12,260	12,176	12,507	17,284	19,530	19,070	19,690*
3rd Quarter	8,408	7,360	9,192	12,481	11,848	12,792	16,849	19,252	17,912	
4th Quarter	7,543	7,322	10,102	13,411	13,781	15,259	18,119	21,231	19,813	
Year Total :	33,606	30,307	35,281	49,361	49,480	53,953	67,781	77,666	74,945	39,608*
B. Public sector sites										
1st Quarter	3,967	6,511	9,880	13,168	16,829	18,258	18,531	19,414	20,639	21,533
2nd Quarter	4,652	6,937	9,263	12,023	14,690	15,397	18,964	17,780	22,827	19,518*
3rd Quarter	4,428	8,651	10,814	12,137	13,792	16,253	18,163	21,878	20,934	
4th Quarter	5,605	9,117	12,113	17,332	16,976	18,915	21,585	22,295	23,455	
Year Total :	18,652	31,216	42,070	54,660	62,287	68,823	77,242	81,367	87,855	41,051*
C. Location other than sites										
1st Quarter	11,750	11,926	12,172	13,347	15,140	17,909	19,549	18,809	19,963	22,871
2nd Quarter	12,415	12,109	11,620	13,245	15,914	20,327	18,744	18,041	20,657	22,335*
3rd Quarter	11,969	12,620	12,953	14,358	16,038	18,636	19,520	19,274	22,093	
4th Quarter	12,552	13,097	14,439	16,479	17,716	20,088	21,111	21,333	24,406	
Year Total :	48,686	49,752	51,184	57,429	64,808	76,961	78,924	77,458	87,119	45,206*
Annual gross value performed (A + B + C)										
Total :	100,944	111,275	128,535	161,450	176,575	199,737	223,946	236,491	249,919	125,865*

*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
	RMB / m2 CFA			
DOMESTIC				
Apartments, high rise, average standard				
- Shell and core	2,709 - 3,124	2,687 - 3,099	2,501 - 2,772	2,409 - 2,828
- Full fit	4,633 - 5,136	4,253 - 4,673	3,707 - 4,100	3,715 - 4,450
Apartments, high rise, high end				
- Shell and core	3,308 - 3,604	3,170 - 4,599	2,616 - 3,450	2,974 - 3,944
- Full fit	10,782 - 11,774	10,299 - 11,732	6,024 - 6,602	6,104 - 7,732
Terraced houses, average standard				
- Shell and core	3,133 - 3,348	3,100 - 3,620	2,815 - 3,095	2,996 - 3,642
- Full fit	N/A	6,085 - 6,597	N/A	N/A
Detached houses, high end				
- Shell and core	4,651 - 5,166	4,673 - 5,199	3,840 - 4,224	3,979 - 4,591
- Full fit	N/A	11,694 - 12,205	N/A	N/A
OFFICE / COMMERCIAL				
Medium/high rise offices, average standard	6,026 - 8,019	5,946 - 8,006	5,396 - 5,969	5,823 - 6,766
High rise offices, prestige quality	8,035 - 10,032	8,006 - 13,152	7,857 - 9,444	7,403 - 10,034
Out-of-town shopping centre, average standard	N/A	4,533 - 6,059	5,198 - 5,706	4,659 - 6,018
Retail malls, high end	8,521 - 11,003	8,199 - 11,286	7,554 - 10,557	7,044 - 10,442
INDUSTRIAL				
Industrial units, shell only. (Conventional single storey framed unit)	1,945 - 2,372	1,873 - 2,286	3,451 - 3,799	2,809 - 3,580
Owner operated factories, low rise, light weight industry	3,001 - 3,747	3,620 - 4,153	N/A	N/A
HOTEL				
Budget hotels - 3-star, mid market	6,608 - 8,111	6,706 - 8,266	6,839 - 7,526	6,449 - 8,004
Business hotels - 4/5-star	10,801 - 14,711	11,206 - 14,799	11,053 - 15,777	10,924 - 13,680
Luxury hotels - 5-star	14,689 - 17,614	14,279 - 18,365	15,025 - 16,558	13,755 - 16,905
OTHERS				
Underground/basement car parks (<3 levels)	5,146 - 7,172	5,179 - 5,693	3,560 - 5,691	2,810 - 3,830
Multi storey car parks, above ground (<4 levels)	2,649 - 3,690	3,113 - 3,153	2,551 - 2,803	2,141 - 2,675
Schools (primary and secondary)	3,664 - 4,695	3,606 - 4,660	2,824 - 3,112	2,890 - 3,216
Students' residences	2,616 - 3,661	2,553 - 3,606	1,836 - 2,060	N/A
Sports clubs, multi purpose sports/leisure centres (dry sports)	6,625 - 8,134	6,179 - 6,226	5,235 - 5,775	N/A
General hospitals - public sector	9,842 - 12,766	8,119 - 10,166	N/A	N/A

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 necessary 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.

* The above costs are at 3rd Quarter 2018 levels.



9 APPROXIMATE BUILDING COSTS FOR MAJOR CITIES

ASIA

BUILDING TYPE	Hong Kong	Macau	Singapore	Kuala Lumpur
	USD / m ² CFA (See also exchange rates per U.S. dollar below)			
DOMESTIC	HK\$ 7.83	MOP 8.07	S\$1.37	RM 4.14
Apartments, high rise, average standard				
- Shell and core	N/A	1,770 - 2,623	N/A	N/A
- Full fit	3,052 - 3,576	2,279 - 2,788	1,315 - 1,495	420 - 585
Apartments, high rise, high end				
- Shell and core	N/A	2,623 - 3,934	N/A	N/A
- Full fit	4,036 - 4,713	3,183 - 4,864	2,045 - 3,065	880 - 1,125
Terraced houses, average standard				
- Shell and core	N/A	3,107 - 3,858	N/A	N/A
- Full fit	4,151 - 4,853	3,884 - 4,635	1,715 - 1,935	235 - 345
Detached houses, high end				
- Shell and core	N/A	3,756 - 5,411	N/A	N/A
- Full fit	6,130 up	4,737 - 6,163	2,190 - 2,920	790 - 980
OFFICE / COMMERCIAL				
Medium/high rise offices, average standard	2,989 - 3,512	2,623 - 3,387	1,715 [@] - 1,935 [@]	640 - 740
High rise offices, prestige quality	3,640 - 4,278	3,387 - 3,705	1,935 [@] - 2,115 [@]	920 - 1,250
Out-of-town shopping centre, average standard	2,963 - 3,538	2,470 - 3,705	1,935 - 2,045	585 - 720
Retail malls, high end	3,972 - 4,738	3,884 - 4,686	2,045 - 2,265	725 - 1,000
INDUSTRIAL				
Industrial units, shell only. (Conventional single storey framed unit)	N/A	N/A	730 - 935	340 - 430
Owner operated factories, low rise, light weight industry	2,324 - 2,963	N/A	N/A	460 - 520
HOTEL				
Budget hotels - 3-star, mid market	3,857 - 4,176	3,451 - 3,909	2,155 - 2,370	1,070 - 1,490
Business hotels - 4/5-star	4,036 - 4,738	4,686 - 5,602	2,775 - 3,140	1,840 - 2,160
Luxury hotels - 5-star	4,725 - 5,492	5,602 - 6,621	2,775 - 3,140	2,055 - 2,395
OTHERS				
Underground/basement car parks (<3 levels)	3,193 - 3,831	2,050 - 3,005	935 - 1,265	380 - 530
Multi storey car parks, above ground (<4 levels)	1,916 - 2,299	1,133 - 1,490	640 ^{@@} - 935 ^{@@}	245 - 350
Schools (primary and secondary)	2,516 - 2,708	2,266 - 2,623	N/A	265 - 310
Students' residences	2,925 - 3,308	1,795 - 2,088	1,570 - 1,715	315 - 370
Sports clubs, multi purpose sports/leisure centres (dry sports)	3,831 - 4,470	N/A	1,970 - 2,115	630 - 740
General hospitals - public sector	4,955 - 5,594	N/A	2,775 - 2,920	920 - 1,160

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 necessary 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.

* The above costs are at 3rd Quarter 2018 levels.



9 APPROXIMATE BUILDING COSTS FOR MAJOR CITIES

ASIA

BUILDING TYPE	Bangkok	Jakarta	Manila
	USD / m ² CFA (See also exchange rates per U.S. dollar below)		
DOMESTIC	BAHT 32.75	IDR 14603.00	PHP 52.75
Apartments, high rise, average standard			
- Shell and core	534 - 687	N/A	N/A
- Full fit	702 - 870	722 - 818	935 - 1,150
Apartments, high rise, high end			
- Shell and core	626 - 809	N/A	N/A
- Full fit	977 - 1,206	996 - 1,124	1,262 - 2,135
Terraced houses, average standard			
- Shell and core	305 - 397	N/A	N/A
- Full fit	458 - 565	383 - 499	760 - 929
Detached houses, high end			
- Shell and core	534 - 763	N/A	N/A
- Full fit	794 - 962	1,042 - 1,165	1,627 - 2,759
OFFICE / COMMERCIAL			
Medium/high rise offices, average standard	641 - 794	712 - 789	931 - 1,090
High rise offices, prestige quality	870 - 1,176	1,050 - 1,174	1,262 - 1,408
Out-of-town shopping centre, average standard	626 - 809	612 - 676	760 - 947
Retail malls, high end	840 - 886	676 - 731	1,090 - 1,528
INDUSTRIAL			
Industrial units, shell only. (Conventional single storey framed unit)	489 - 611	328 - 357	484 - 545
Owner operated factories, low rise, light weight industry	N/A	356 - 393	683 - 799
HOTEL			
Budget hotels - 3-star, mid market	1,145 - 1,267	1,237 - 1,462	1,193 - 1,330
Business hotels - 4/5-star	1,466 - 1,679	1,691 - 1,826	1,344 - 1,628
Luxury hotels - 5-star	1,710 - 1,985	1,799 - 2,028	1,847 - 2,557
OTHERS			
Underground/basement car parks (<3 levels)	550 - 733	506 - 620	493 - 618
Multi storey car parks, above ground (<4 levels)	183 - 293	328 - 357	474 - 669
Schools (primary and secondary)	N/A	N/A	699 - 964
Students' residences	N/A	N/A	740 - 949
Sports clubs, multi purpose sports/leisure centres (dry sports)	N/A	1,094 - 1,638	1,183 - 1,721
General hospitals - public sector	N/A	N/A	1,284 - 1,543

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 necessary 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.

* The above costs are at 3rd Quarter 2018 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: * (i) Tenant area with screeded floor, painted wall and ceiling (ii) Facade in curtain wall/window wall ** Public authority standard, no a/c and complete with basic external works Singapore: @ Excluding carpet @@ Open on all sides with parapet Kuala Lumpur \$ 6-12 units per floor, 46m² - 83m² per unit; excluding air-conditioning \$\$ Excluding air-conditioning, Kitchen cabinets and home appliances \$\$\$ Exclude Tenant fit-out \$\$\$ Standard government provisions \$\$\$\$ University standard Bangkok # (i) Excluding raised floor/carpet and inter-tenancy partition (ii) Facade in windows and brick wall/pre-cast concrete panel ## Excluding raised floor/carpet and inter-tenancy partition Seoul Δ Excluding home appliance ΔΔ Curtain wall to external wall ΔΔΔ Steel structure ΔΔΔΔ Medium to high grade cladding, with garden ΔΔΔΔΔ Mechanical ventilation and car guidance system



OUR OFFICES IN GREATER CHINA

HONG KONG

17/F, Two Harbour Square, 180 Wai Yip Street,
Kwun Tong, Kowloon,
Hong Kong
T: (852) 2911 2000
F: (852) 2911 2002
E: asiacomms@arcadis.com

BEIJING

Suite 1225 - 1242, South Wing Central Tower,
Junefield Plaza
10 Xuan Wu Men Wai Street Beijing 100052, China
T: (86 10) 6310 1136
F: (86 10) 6310 1143
E: info-cn@arcadis.com

CHANGSHA

Room 2315-2317, HUAYUAN International Center,
No.36 Section 2,
Xiangjiang Middle Road,
Tianxin District,
Changsha, Hunan Province,
410002, China
T: (86 731) 8277 2500
F: (86 731) 8971 6736
E: info-cn@arcadis.com

CHENGDU

Room 807 Block A
Times Plaza 2 Zong Fu Road
Chengdu, Sichuan Province 610016 China
T: (86 28) 8671 8373
F: (86 28) 8671 8535
E: info-cn@arcadis.com

CHONGQING

Room 3409 - 3410
International Trade Centre
38 Qing Nian Road
Central District
Chongqing 400010, China
T: (86 23) 8655 1333
F: (86 23) 8655 1616
E: info-cn@arcadis.com

DALIAN

Unit 07, 32F, Xiwang Tower
136 Zhongshan Road Zhongshan District
Dalian, Liaoning Province 116001 China
T: (86 411) 8800 8018
F: (86 411) 8800 8823
E: info-cn@arcadis.com

FOSHAN

Room 1002-1004, 10F,
LNTD Commercial Plaza,
No.29, Zumiao Road,
Chancheng District, Foshan,
Guangdong Province, 528000, China
T: (86 757) 8203 0028
F: (86 757) 8203 0029
E: info-cn@arcadis.com

GUANGZHOU

3A10-18 Unit, 3A/F
Bank of America Plaza
555 Ren Min Zhong Road Guangzhou
Guangdong Province 510145 China
T: (86 20) 8130 3813
F: (86 20) 8130 3812
E: info-cn@arcadis.com

HAIKOU

Unit C, 10/F, Times Square
2 Guomao Road
Haikou, Hainan Province 570100 China
T: (86 898) 6652 7818
F: (86 898) 6652 7809
E: info-cn@arcadis.com

HANGZHOU

Room 1306 WinNing International
100 Min Xin Road
Hangzhou
Zhejiang Province 310016, China
T: (86 571) 2829 7766
F: (86 571) 2829 7622
E: info-cn@arcadis.com

HENGQIN

7/F, 156 Nan Shan Ju Road Hengqin, Zhuhai
Guangdong Province 519031 China
T: (86 756) 868 8986
F: (86 756) 868 8969
E: info-cn@arcadis.com

MACAU

12th Floor
Avenida da Praia Grande No. 594
Edificio BCM Macau
T: (853) 2833 1710
F: (853) 2833 1532
E: info-mo@arcadis.com

NANJING

Room 1104
South Tower Jinmao Plaza
201 Zhong Yang Road
Nanjing 210009 China
T: (86 25) 5791 1860
F: (86 25) 6698 1860
E: info-cn@arcadis.com

QINGDAO

Room 2008, 20/F, HNA Center
234 Yan An San Road
Shinan District
Qingdao
Shangdong Province 266071 China
T: (86 532) 8280 1818
F: (86 532) 8280 1881
E: info-cn@arcadis.com

SHANGHAI

11th Floor, Building C, The Place
No. 150 Zunyi Road
Changning District
Shanghai 200051 China
T: (86 21) 6026 1300
F: (86 21) 6026 1800
E: info-cn@arcadis.com

SHENYANG

Room 3013-3015
Office Tower 1, Forum66
1-1 Qingnian Avenue
Shenhe District
Shenyang
Liaoning Province 110063 China
T: (86 24) 3195 8880
F: (86 24) 3128 6983
E: info-cn@arcadis.com

SHENZHEN

Room 1001, AVIC Centre
1018 Huafu Road
Shenzhen
Guangdong Province 518031 China
T: (86 755) 2598 1841
F: (86 755) 2598 1854
E: info-cn@arcadis.com

SUZHOU

Room 906 The Summit,
118 Suzhou Avenue West,
Suzhou,
Jiangsu Province 215021 China
T: (86 512) 8777 5599
F: (86 512) 8777 5600
E: info-cn@arcadis.com

TIANJIN

4002, 40F,
Tianjin World Financial Centre Office Tower
2 Dagubei Road
Heping District
Tianjin 300020
China
T: (86 22) 2329 8611
F: (86 22) 2319 3186
E: info-cn@arcadis.com

WUHAN

Room 1703, Citic Pacific Mansion,
No.1627 Zhongshan Avenue,
Jiangan District, Wuhan,
Hubei Province 430 010, China
T: (86 27) 5920 9299
F: (86 27) 5923 9298
E: info-cn@arcadis.com

XI'AN

Room 1606 - 1607
CapitaMall Office Building
64 South Second Ring Western Xi'an
Shaanxi Province 710065 China
T: (86 29) 8866 9711
F: (86 29) 8866 9760
E: info-cn@arcadis.com



 @ArcadisAsia

 ArcadisAsia

www.arcadis.com

Arcadis. Improving quality of life