CHINA AND HONG KONG

QUARTERLY CONSTRUCTION COST REVIEW

Arcadis Asia Limited
Arcadis Hong Kong Limited

2018 | SECOND QUARTER

CONTENTS

HONG KONG
MARKET OVERVIEW

The decline in major infrastructure projects continued to impact Hong Kong's construction industry with private building works keeping Hong Kong's market buoyant. Hospital projects are expected to provide an area of growth in alignment with the government's 10-year hospital plan.

The second quarter of 2018 has seen a significant increase in proposals for funding with the Public Works Sub-Committee (PWSC), outlining a potential HKD$49,450.00 million of future works including new hospitals and facilities for the Third Runway System. Additionally, the 10-year hospital plan is a significant initiative that could create an increase in commencement rates throughout the remainder of 2018 and into 2019, as limited political objection is expected around their approvals.

Underpinning all construction work is the high costs of labour, an ageing workforce and labour intensive building methods. These factors still define the critical challenges that Hong Kong faces in improving liveability.

MARKET MOVEMENT

ECONOMY

Indicator			
GDP Growth per annum	**Q1/16 - Q1/17** (+) 3.4%	**Q4/16 - Q4/17** (+) 3.4%	**Q1/17 - Q1/18** (+) 4.7%
Inflation Rate (CPI) per annum	**June 16 - 17** (+) 1.9%	**Feb 17 - 18** (+) 3.1%	**Jun 17 - 18** (+) 2.4%

SUPPLY & DEMAND

Indicator			
Activity Level (Gross output; new + A&A)	**Q1/17** HK$58.752 Bn	**Q4/17** HK$67.674 Bn	**Q1/18** HK$65.875 Bn

BASIC COSTS

Indicator			
Highways Material Index	**Feb - Apr 17** 742.9	**Nov 17 - Jan 18** 804.8	**Feb - Apr 18** 827.4
Labour Wages Index	**Mar - May 17** 156.9	**Dec 16 - Feb 17** 149.7	**Mar - May 18** 148.2

CONSTRUCTION COST TREND

Indicator			
Tender Price Index (Arcadis)	**Q2/17** 1968	**Q1/18** 1920	**Q2/18** 1910

1 MARKET ANALYSIS

AN INCREASE IN PUBLIC WORKS SUB-COMMITTEE PROPOSALS

Hong Kong's construction industry saw a Quarter-on-Quarter (QoQ) (-) 2.7% decrease in its output, despite facing a significant Year-on-Year (YoY) increase of (+) 12.1%. There remains a stable level of demand for building works in the public and private sectors, keeping the market buoyant as the lag in infrastructure projects continued. The remainder of 2018 is expected to be stable, but depending on the approval rates from LegCo around the increased proposals, it might see an increase in activity, if not this year, then potentially in 2019.

The Tender Price Index (TPI) has seen a (-) 0.52% decrease QoQ; (-) 2.95% YoY. This downward trend has continued from the second quarter of 2017 and is likely to extend throughout the remainder of 2018, especially on buildings. The Hong Kong economy enjoyed continued growth for the sixth quarter in a row at more than 3%, creating market stability and positive sentiment towards public and private construction spending.

STEEL PRICE CONTINUES TO RISE

The second quarter of 2018 showed a slight increase in steel price, with further optimism that this growth will continue throughout the remainder of 2018. Prices for other core materials such as cement, diesel and basic architectural products remain stable in the quarter. Construction workers' wages, including structural, electrical and mechanical workers, also remained stable at peak levels, but bricklayer and general labour rates dropped along with the Labour Wage Index (-) 1.0% QoQ.

PRIVATE LAND SOLD FOR PUBLIC USE EXPECTED TO DRIVE UNIT PRICE

Land scarcity in Hong Kong is a constant challenge for both the government and the construction industry in meeting new public housing demands. Yet the government has recently made progress and reallocated sites for public housing, including those that were originally intended for private housing. Nine new housing sites in Kai Tak and Anderson Road Quarry have been reallocated, with a capacity to deliver 10,600 new liveable units; the scheme is expected to provide even more stability for public spending in construction. Meanwhile, private sector floor area commencement rates in the first half of 2018 have declined, moving away from 2017's 12-month average that almost reached the decade's peak. However, completed floor area rates have stayed flat for the period.

CHINA OVERVIEW

The China market has witnessed a consecutive quarter fluctuation in the price of major construction materials, such as re-bar, concrete and cement, with the end of the fourth quarter, 2017 experiencing growth that saw prices reach a three-year peak. However, the market underwent a decline in quarter one 2018, with an instant rebound in quarter two 2018. Labour wages have also increased by (+) 4.0% p.a. with market tender price seeing relative growth.

In the first six months of 2018, sales volume of more than half of China's top 20 real estate developers have increased by more than 30% p.a., with the highest experiencing an increase of nearly 200%. The real estate market is entering a traditionally high turnover period, in which–local developers become inclined to accelerate sales and the speed of construction to increase cash flow and take greater control of their investment risk.

In quarter two of 2018, area of buildings under construction and buildings commenced reached the three-year peak with a percentage increase of 7.9% p.a. and 9.6% p.a., respectively. The construction market is expected to keep buoyant moving into quarter three 2018, with the tender price continuing an upward trend.

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.

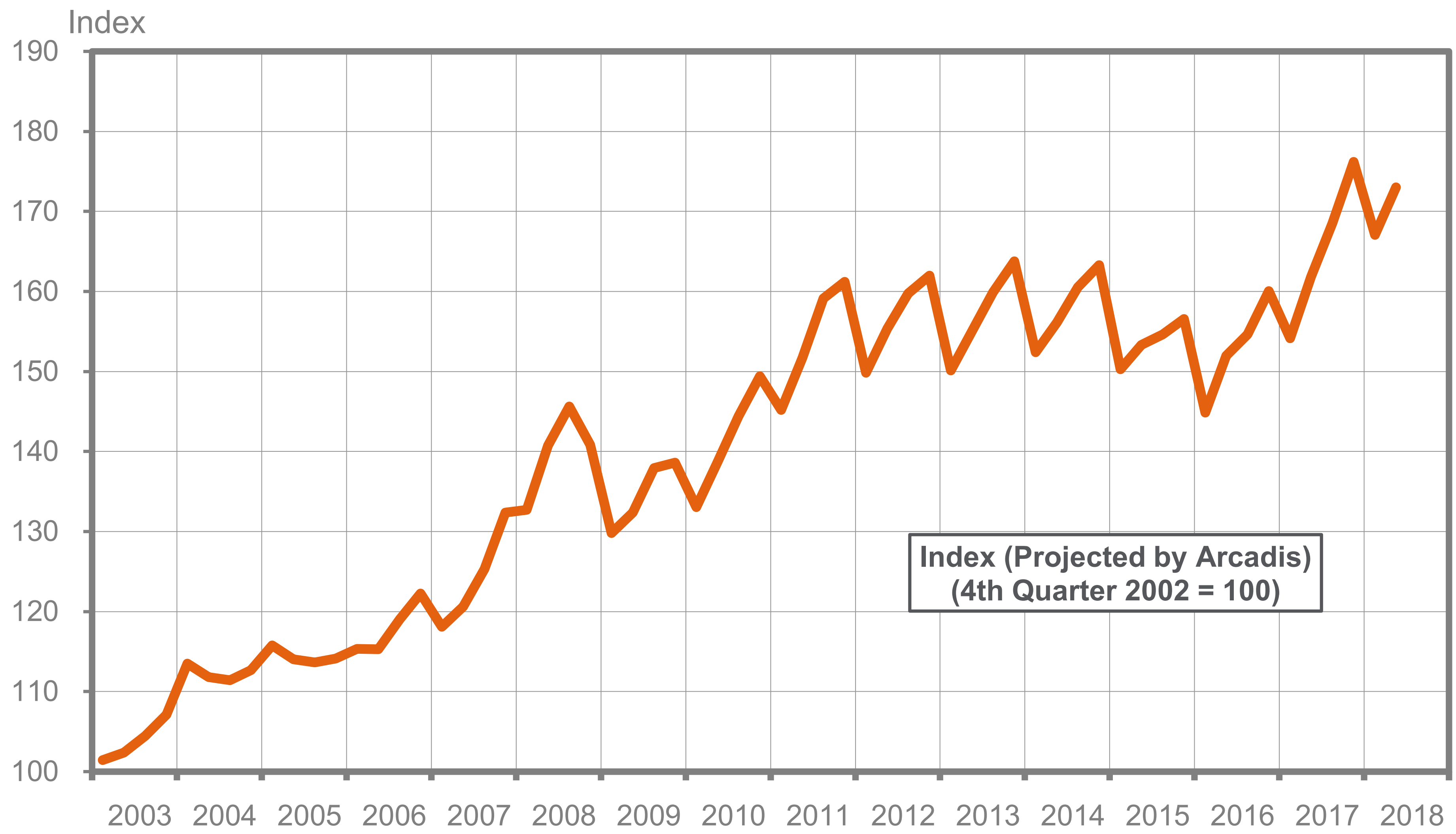
3. All buildings are assumed to have no basements (except otherwise stated) and are built on flat ground, with normal soil and site conditions. The cost excludes site formation works, external works, land cost, professional fees, finance and legal expenses.

BUILDING TYPE	HK$/m2 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 - 28,100	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	32,000 - 37,300	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	32,700 - 38,200	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	42,400 - 48,300	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 - 27,800	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	28,800 - 33,800	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	23,400 - 27,900	Including public area fit-out and M&E, but excluding shop fit-out
Retail malls, high end	31,400 - 37,400	
INDUSTRIAL		
Owner operated factories, low rise, light weight industry	18,300 - 23,300	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	30,300 - 32,800	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	31,800 - 37,300	
Luxury hotels - 5-star	37,300 - 43,300	
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 2nd 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**	**2018**
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		154.6	154.6	168.5	
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, ie. 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.

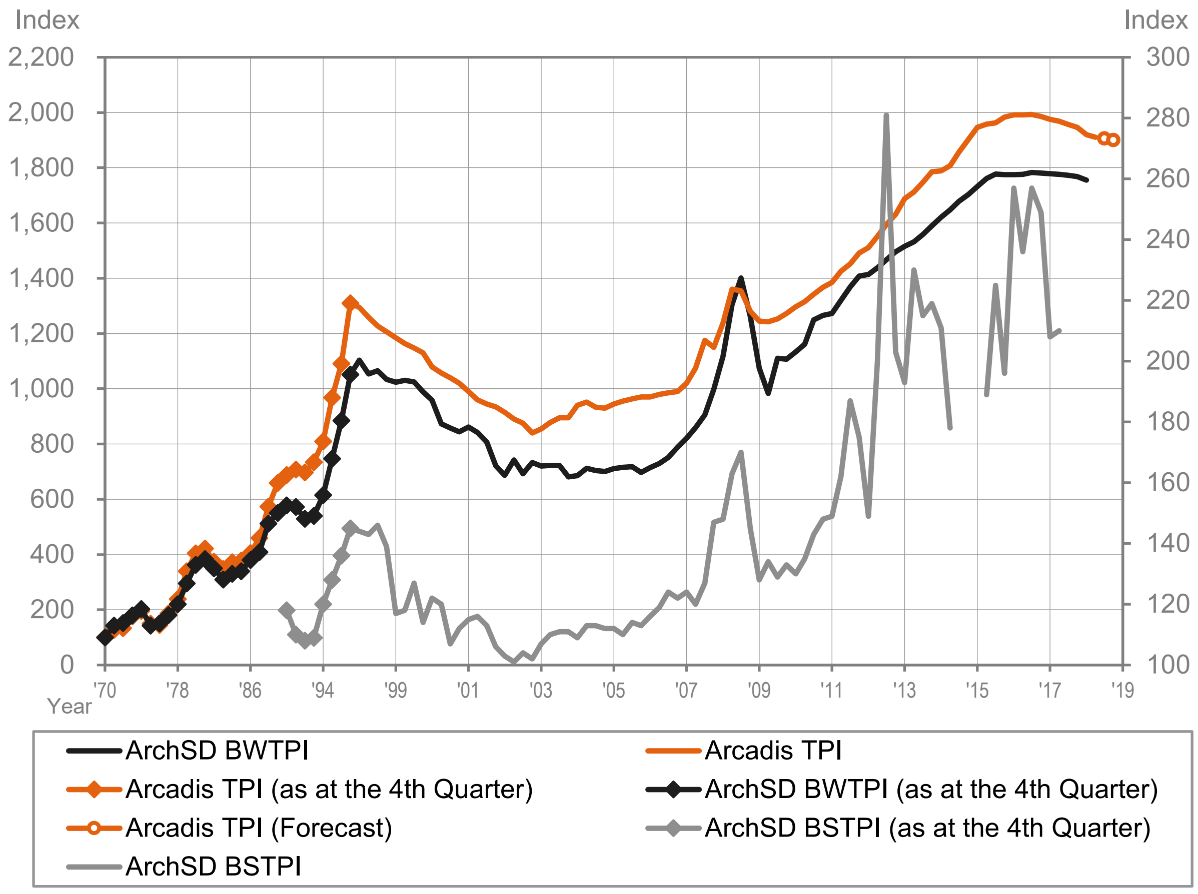
4. For comparison purposes, 4th Quarter 2002 is referred to as base and the base index as 100.

4 TENDER PRICE INDEX

HONG KONG

Notes:

1. [*] denotes forecast figures.
2. 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.
3. 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 to1997 are shown with their 4th Quarter figures.



Quarter / Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
ArchSD BWTPI (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	
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	
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	1905*
Q4	1273	1367	1491	1632	1786	1903	1984	1986	1946	1900*

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

Note : 1. [*] denotes forecast figures

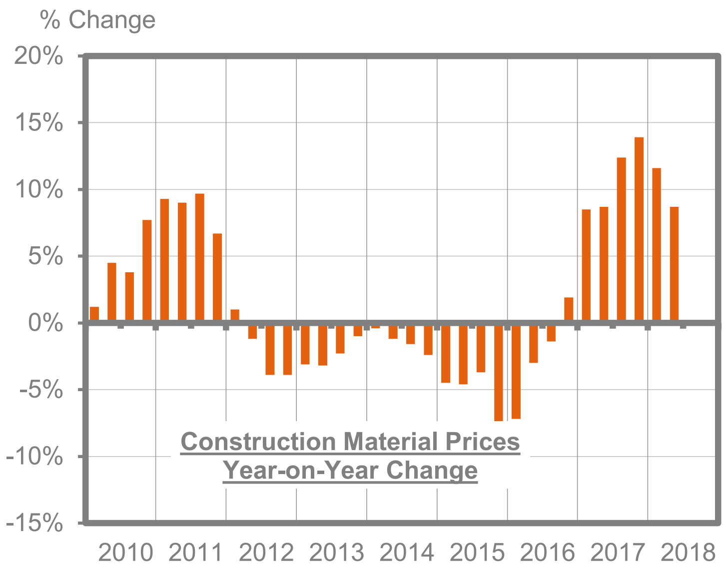
2. Both BWTPI (ArchSD) and Arcadis TPI measure the trend of general builder's works only. Special works and Mechanical and Electrical Services would have to be considered separately.

3. 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.

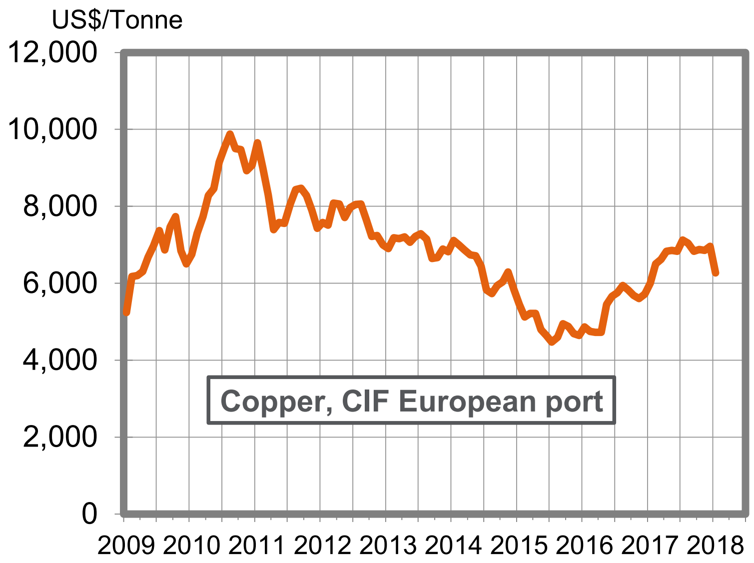
5 MATERIALS
MAINLAND CHINA

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%	
4th Quarter	(+)1.9%	(+) 13.9%	

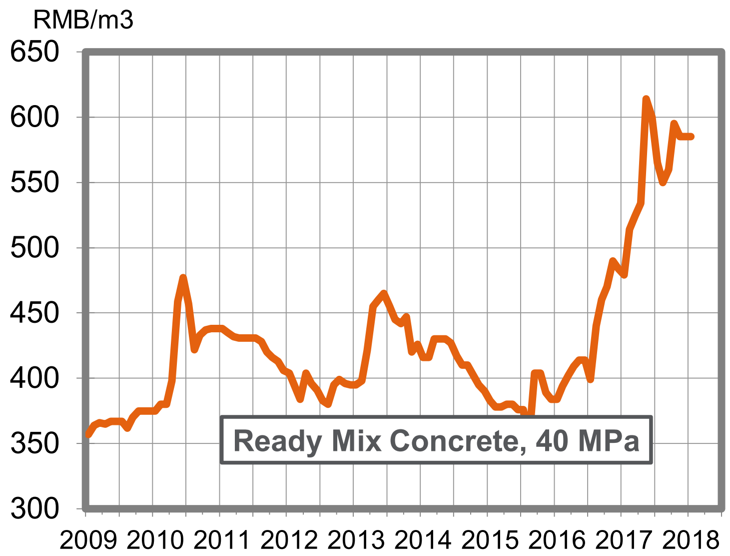
Source : National Bureau of Statistics of China



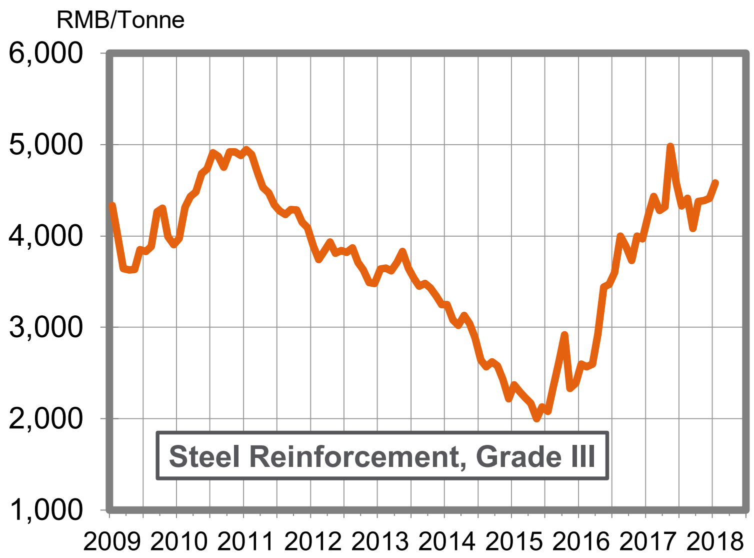
Basic Construction Materials



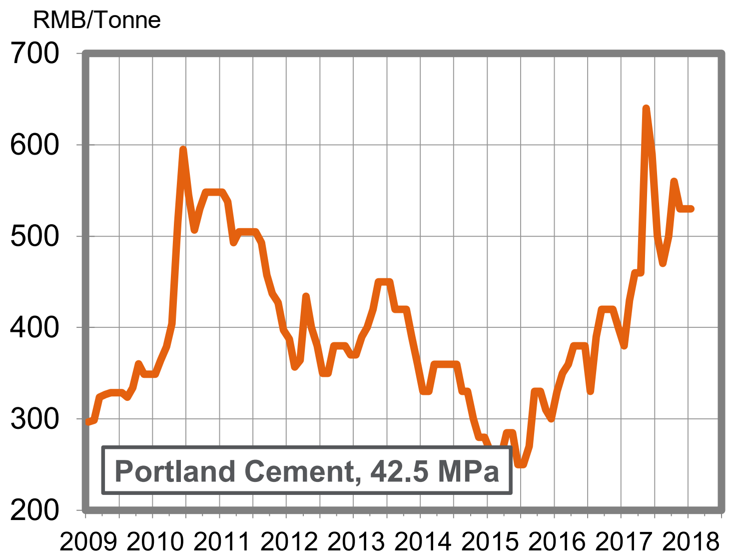
Source : London Metal Exchange



Shanghai Construction & Construction Material Industry Administration Department



Shanghai Construction & Construction Material Industry Administration Department



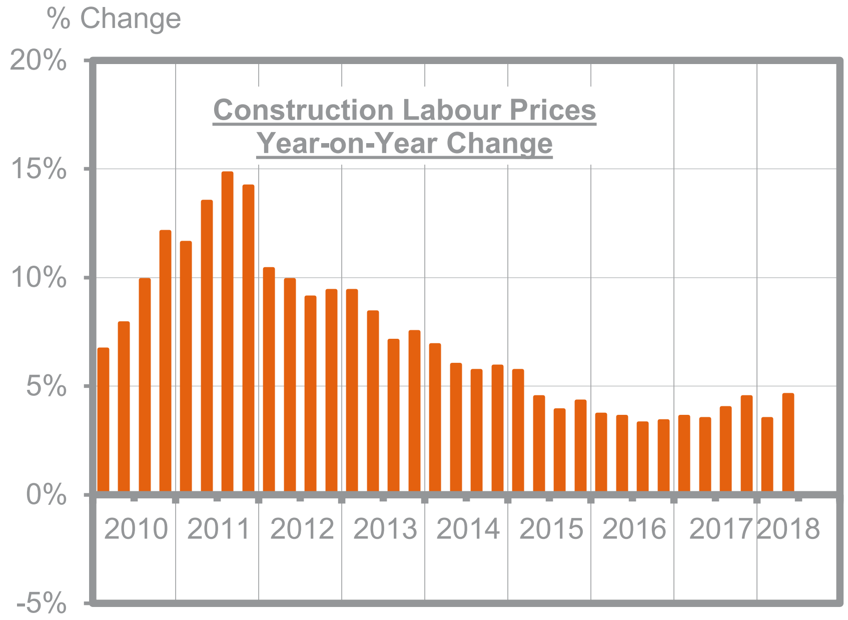
Shanghai Construction & Construction Material Industry Administration Department

6 LABOUR

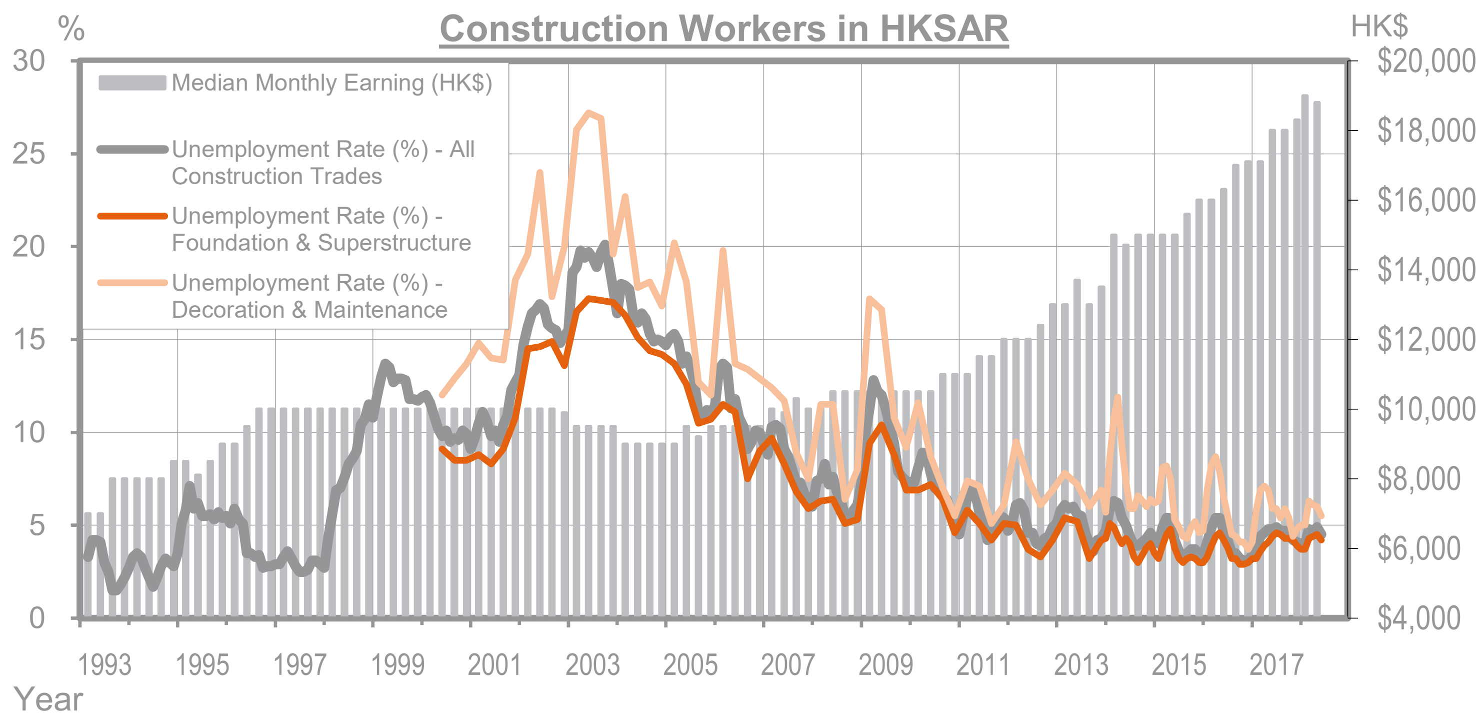
Mainland China

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%	
4th Quarter	(+) 3.4%	(+) 4.5%	

Source : National Bureau of Statistics of China

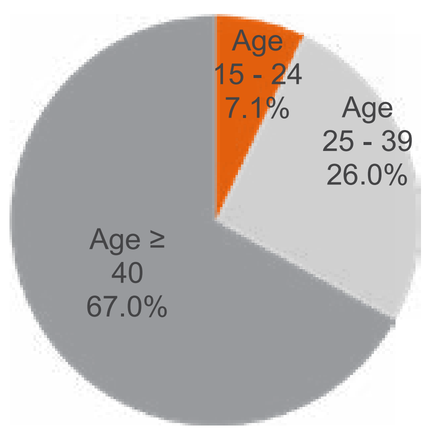


Hong Kong



Age Group	No. of Workers Employed by Construction Industry	
Age 15 - 24	32,928	7.1%
Age 25 - 39	121,265	26.0%
Age ≥ 40	312,544	67.0%
Total (as at Mar 2018):	466,737	100.0%

Source : Construction Industry Council



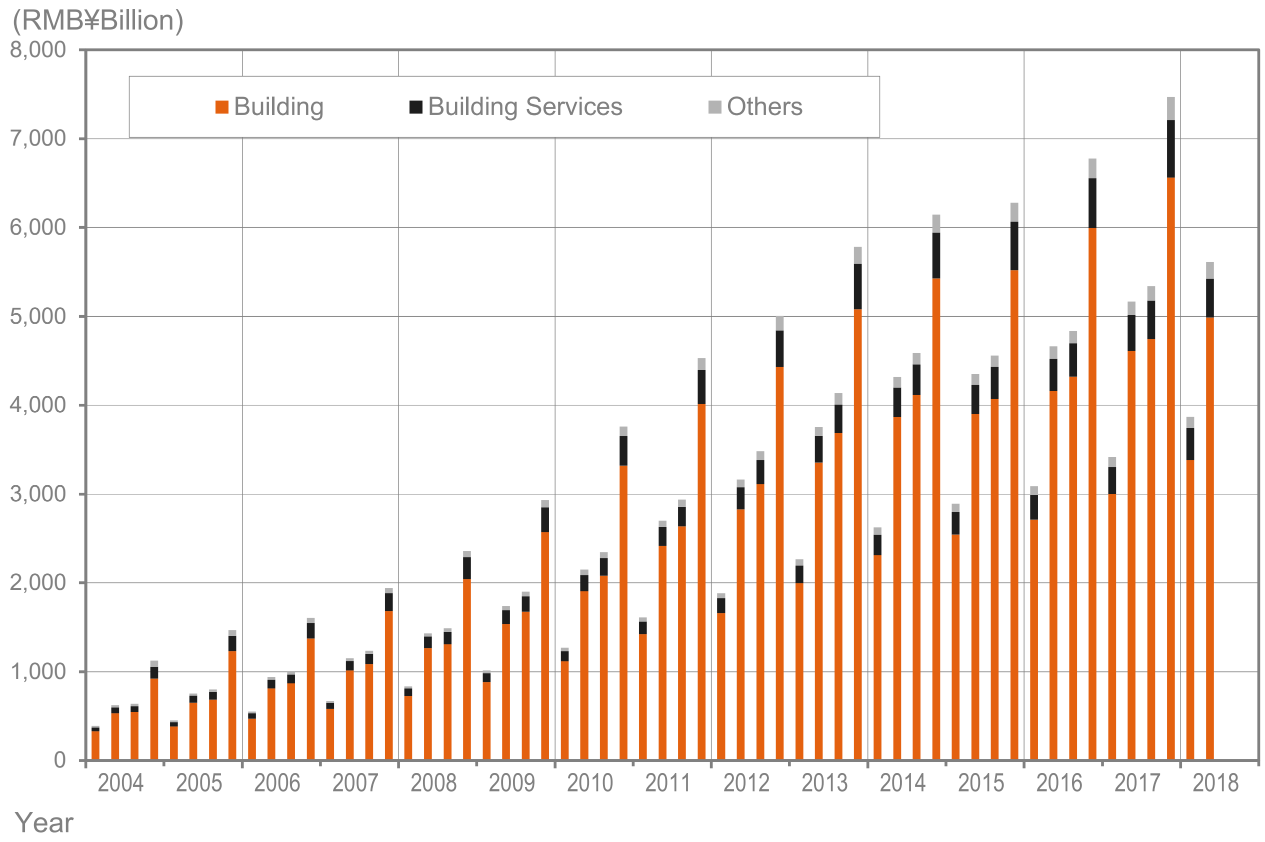
Age Distribution of Workers

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.



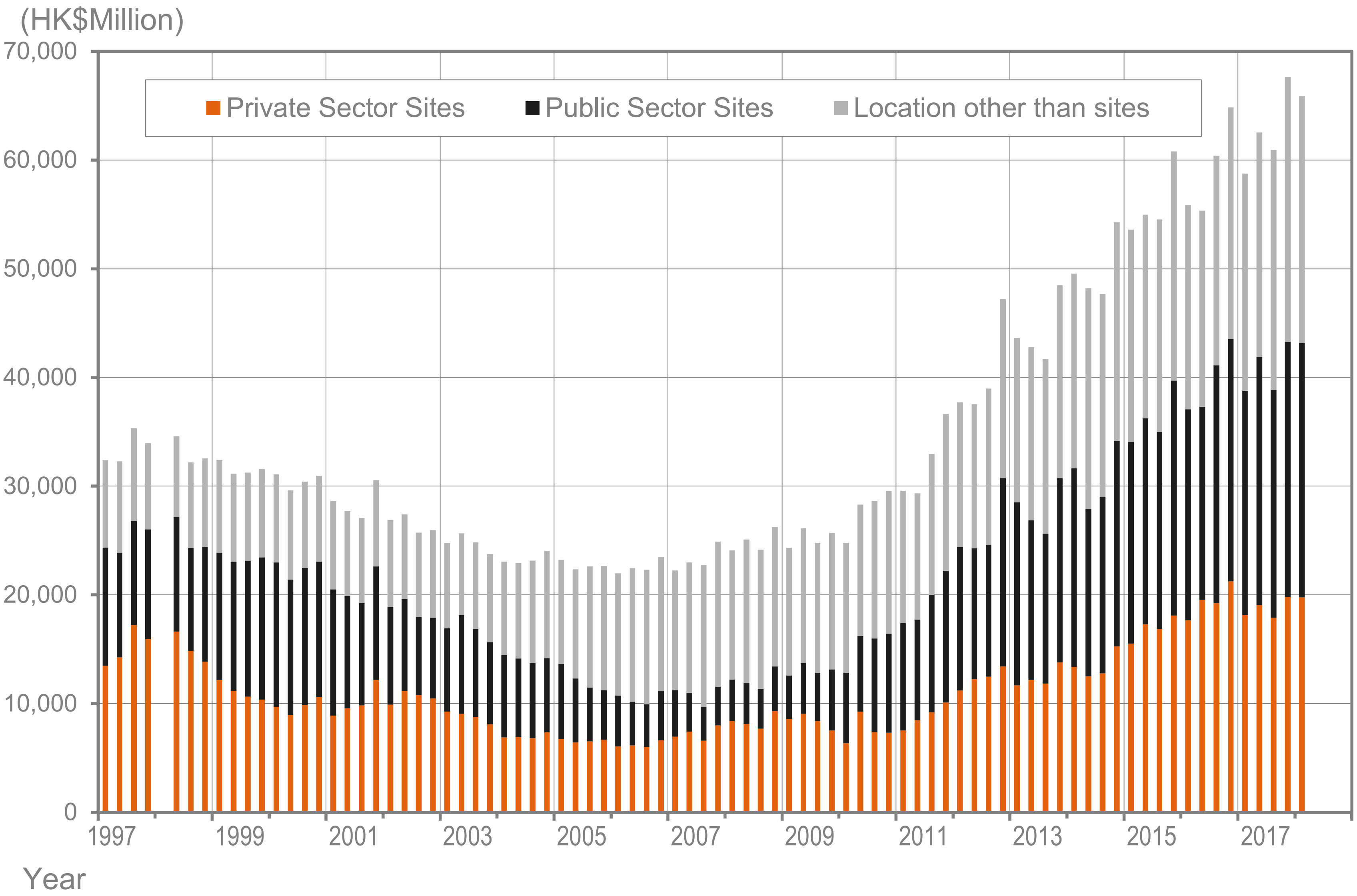
Quarter	Value Performed (RMB¥ Billion) 2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
A. Building										
1st Quarter	882	1,118	1,422	1,661	1,994	2,311	2,544	2,712	3,003	3,382
2nd Quarter	1,537	1,906	2,419	2,826	3,355	3,866	3,899	4,158	4,609	4,985
3rd Quarter	1,673	2,082	2,634	3,111	3,687	4,113	4,068	4,322	4,742	
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	
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	
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	19,760 *
2nd Quarter	9,055	9,276	8,458	12,260	12,176	12,507	17,284	19,530	19,070	
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	19,760
B. Public sector sites										
1st Quarter	3,967	6,511	9,880	13,168	16,829	18,258	18,531	19,414	20,639	23,393 *
2nd Quarter	4,652	6,937	9,263	12,023	14,690	15,397	18,964	17,780	22,827	
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	23,393
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	22,722 *
2nd Quarter	12,415	12,109	11,620	13,245	15,914	20,327	18,744	18,041	20,657	
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	22,722
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**	**65,875**

*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	2,648 - 3,053	2,660 - 3,068	2,398 - 2,658	2,362 - 2,773
- Full fit	4,561 - 5,056	4,211 - 4,627	3,561 - 3,938	3,642 - 4,362
Apartments, high rise, high end				
- Shell and core	3,232 - 3,522	3,139 - 4,553	2,513 - 3,314	2,916 - 3,867
- Full fit	10,692 - 11,675	10,197 - 11,616	5,965 - 6,537	5,985 - 7,580
Terraced houses, average standard				
- Shell and core	3,069 - 3,280	3,069 - 3,584	2,706 - 2,976	2,996 - 3,642
- Full fit	N/A	6,025 - 6,532	N/A	N/A
Detached houses, high end				
- Shell and core	4,580 - 5,089	4,627 - 5,148	3,703 - 4,073	3,979 - 4,591
- Full fit	N/A	11,578 - 12,084	N/A	N/A
OFFICE / COMMERCIAL				
Medium/high rise offices, average standard	5,927 - 7,887	5,887 - 7,927	5,204 - 5,756	5,709 - 6,633
High rise offices, prestige quality	7,887 - 9,847	7,927 - 13,022	7,149 - 7,876	7,187 - 9,742
Out-of-town shopping centre, average standard	N/A	4,488 - 5,999	4,955 - 5,439	4,567 - 5,900
Retail malls, high end	8,382 - 10,824	8,118 - 11,174	7,284 - 10,180	7,187 - 10,138
INDUSTRIAL				
Industrial units, shell only. (Conventional single storey framed unit)	1,894 - 2,310	1,855 - 2,264	3,400 - 3,743	2,957 - 3,769
Owner operated factories, low rise, light weight industry	2,944 - 3,676	3,584 - 4,112	N/A	N/A
HOTEL				
Budget hotels - 3-star, mid market	6,501 - 7,979	6,640 - 8,184	6,698 - 7,372	6,449 - 8,004
Business hotels - 4/5-star	10,685 - 14,553	11,095 - 14,652	10,805 - 15,422	12,137 - 15,200
Luxury hotels - 5-star	14,553 - 17,450	14,137 - 18,183	14,716 - 16,217	13,100 - 16,100
OTHERS				
Underground/basement car parks (<3 levels)	5,029 - 7,009	5,128 - 5,636	3,420 - 5,466	2,810 - 3,830
Multi storey car parks, above ground (<4 levels)	2,587 - 3,604	3,082 - 3,122	2,450 - 2,693	2,039 - 2,548
Schools (primary and secondary)	3,590 - 4,600	3,571 - 4,613	2,713 - 2,989	2,752 - 3,062
Students' residences	2,561 - 3,584	2,528 - 3,571	1,764 - 1,979	N/A
Sports clubs, multi purpose sports/ leisure centres (dry sports)	6,521 - 8,006	6,118 - 6,164	5,029 - 5,547	N/A
General hospitals - public sector	9,728 - 12,619	8,039 - 10,065	N/A	N/A

Notes :
1. 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.
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 builidings 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.
4. The standard for each category of building varies from region to region and do not necessary follow that of each other.
5. "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.
6. "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).
7. Fluctuation in exchange rates may lead to changes in construction costs expressed in U.S. dollars.

* The above costs are at 2nd Quarter 2018 levels.

9 APPROXIMATE BUILDING COSTS FOR MAJOR CITIES

ASIA

BUILDING TYPE	Hong Kong	Macau	Singapore	Kuala Lumpur
	USD / m² CFA *(See also exchange rates per U.S. dollar below)*			
DOMESTIC	HK$ 7.85	MOP 8.085	S$ 1.33	RM 4.04
Apartments, high rise, average standard				
- Shell and core	N/A	1,758 - 2,606	N/A	N/A
- Full fit	3,045 - 3,580	2,264 - 2,770	1,355 - 1,540	425 - 595
Apartments, high rise, high end				
- Shell and core	N/A	2,606 - 3,909	N/A	N/A
- Full fit	4,076 - 4,752	3,162 - 4,832	2,105 - 3,160	890 - 1,140
Terraced houses, average standard				
- Shell and core	N/A	3,087 - 3,833	N/A	N/A
- Full fit	4,166 - 4,866	3,858 - 4,604	1,765 - 1,990	240 - 350
Detached houses, high end				
- Shell and core	N/A	3,732 - 5,376	N/A	N/A
- Full fit	5,401 - 6,153	4,706 - 6,122	2,255 - 3,010	805 - 995
OFFICE / COMMERCIAL				
Medium/high rise offices, average standard	2,981 - 3,541	2,606 - 3,365	1,765@ - 1,990@	650 - 755
High rise offices, prestige quality	3,669 - 4,306	3,365 - 3,681	1,990@ - 2,180@	935 - 1,270
Out-of-town shopping centre, average standard	2,981 - 3,554	2,454 - 3,681	1,990 - 2,105	595 - 730
Retail malls, high end	4,000 - 4,764	3,858 - 4,655	2,105 - 2,330	735 - 1,015
INDUSTRIAL				
Industrial units, shell only. (Conventional single storey framed unit)	N/A	N/A	750 - 960	345 - 435
Owner operated factories, low rise, light weight industry	2,331 - 2,968	N/A	N/A	465 - 530
HOTEL				
Budget hotels - 3-star, mid market	3,860 - 4,178	3,428 - 3,883	2,220 - 2,445	1,080 - 1,510
Business hotels - 4/5-star	4,051 - 4,752	4,655 - 5,566	2,855 - 3,235	1,870 - 2,190
Luxury hotels - 5-star	4,752 - 5,516	5,566 - 6,578	2,855 - 3,235	2,085 - 2,430
OTHERS				
Underground/basement car parks (<3 levels)	3,185 - 3,822	2,037 - 2,985	960 - 1,300	385 - 540
Multi storey car parks, above ground (<4 levels)	1,911 - 2,293	1,126 - 1,480	660@@ - 960@@	245 - 355
Schools (primary and secondary)	2,510 - 2,701	2,252 - 2,606	N/A	270 - 310
Students' residences	2,917 - 3,299	1,784 - 2,075	1,615 - 1,765	320 - 375
Sports clubs, multi purpose sports/ leisure centres (dry sports)	3,822 - 4,459	N/A	2,030 - 2,180	640 - 750
General hospitals - public sector	4,943 - 5,580	N/A	2,855 - 3,010	930 - 1,175

Notes :
1. 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.
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 bulidings 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.
4. The standard for each category of building varies from region to region and do not necessary follow that of each other.
5. "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.
6. "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).
7. Fluctuation in exchange rates may lead to changes in construction costs expressed in U.S. dollars.

* The above costs are at 2nd Quarter 2018 levels.

9 APPROXIMATE BUILDING COSTS FOR MAJOR CITIES

ASIA

BUILDING TYPE	Bangkok	Jakarta	Manila
	USD / m² CFA *(See also exchange rates per U.S. dollar below)*		
DOMESTIC	BAHT 31.24	IDR 13596.00	PHP 51.95
Apartments, high rise, average standard			
- Shell and core	544 - 704	N/A	N/A
- Full fit	720 - 896	729 - 825	921 - 1,070
Apartments, high rise, high end			
- Shell and core	656 - 848	N/A	N/A
- Full fit	1,024 - 1,248	1,004 - 1,133	1,243 - 2,102
Terraced houses, average standard			
- Shell and core	320 - 416	N/A	N/A
- Full fit	480 - 576	386 - 503	748 - 915
Detached houses, high end			
- Shell and core	560 - 800	N/A	N/A
- Full fit	832 - 1,008	1,050 - 1,174	1,602 - 2,717
OFFICE / COMMERCIAL			
Medium/high rise offices, average standard	672 - 832	719 - 796	916 - 1,073
High rise offices, prestige quality	912 - 1,216	1,058 - 1,183	1,242 - 1,387
Out-of-town shopping centre, average standard	656 - 848	618 - 684	749 - 933
Retail malls, high end	880 - 912	682 - 737	1,074 - 1,505
INDUSTRIAL			
Industrial units, shell only. (Conventional single storey framed unit)	512 - 640	332 - 362	477 - 537
Owner operated factories, low rise, light weight industry	N/A	360 - 398	673 - 787
HOTEL			
Budget hotels - 3-star, mid market	1,200 - 1,329	1,249 - 1,476	1,174 - 1,309
Business hotels - 4/5-star	1,537 - 1,761	1,704 - 1,841	1,323 - 1,604
Luxury hotels - 5-star	1,793 - 2,081	1,811 - 2,041	1,819 - 2,518
OTHERS			
Underground/basement car parks (<3 levels)	576 - 768	513 - 629	485 - 609
Multi storey car parks, above ground (<4 levels)	192 - 307	332 - 362	466 - 659
Schools (primary and secondary)	N/A	N/A	689 - 950
Students' residences	N/A	N/A	729 - 935
Sports clubs, multi purpose sports/ leisure centres (dry sports)	N/A	1,101 - 1,649	1,165 - 1,695
General hospitals - public sector	N/A	N/A	1,265 - 1,520

Notes :
1. 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.
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 builidings 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.
4. The standard for each category of building varies from region to region and do not necessary follow that of each other.
5. "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.
6. "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).
7. Fluctuation in exchange rates may lead to changes in construction costs expressed in U.S. dollars.

* The above costs are at 2nd Quarter 2018 levels.

9 APPROXIMATE BUILDING COSTS FOR MAJOR CITIES

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, joined houses in row(s), with air-conditioning, kitchen cabinets and home appliances, but excluding decorative light fittings, loose furniture, garden and parking
Detached houses, high end	Shell and core, good quality facade, excluding garden, parking, finishes and fittings to house interior Full fit, good quality provisions, with air-conditioning, kitchen cabinets and home appliances, but excluding decorative light fittings, loose furniture, garden and parking
OFFICE / COMMERCIAL	
Medium/high rise offices, average standard	RC structure, curtain wall, including public area fit-out, tenant area with raised floor/ carpet, painted wall and false ceiling
High rise offices, prestige quality	
Out-of-town shopping centre, average standard	Including public area fit-out and M&E, but excluding shop fit-out
Retail malls, high end	
INDUSTRIAL	
Industrial units, shell only (Conventional single storey framed unit)	RC structure with steel roof and M&E to main distribution, but excluding a/c, heating and lighting
Owner operated factories, low rise, light weight industry	RC structure, including small office with simple fit-out and M&E, but excluding a/c and heating
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 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 / cafe, bar, etc. Costs include a/c, Furniture, Fittings and Equipment (FF&E)
General hospital - public sector	Excluding medical and operating equipment

Notes:

1. 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.

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.

4. The standard for each category of building varies from region to region and do not necessarily follow that of each other.

5. "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.

6. "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).

7. Fluctuation in exchange rates may lead to changes in construction costs expressed in U.S. dollars.

8. 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) 29112000
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