EDISON

China Water Affairs Group

FY20 results

Growth opportunities remain

Utilities

In FY20, despite a very challenging operating environment, China Water Affairs (CWA) delivered another year of growth for shareholders. Requirements for environmental expenditure in the Chinese water sector present opportunities for it to extend its track record of growing returns into FY21 and beyond. This opportunity does not appear to be reflected in CWA's current modest market rating of an FY21e P/E multiple of 5.6x.

Year end	Revenue (HK$m)	PBT* (HK$m)	EPS* (c)	DPS (c)	P/E (x)	Yield (%)
03/19	8,302	2,772	85.1	28.0	7.1	4.6
03/20	8,694	3,165	102.1	30.0	5.9	5.0
03/21e	9,731	3,374	108.0	32.0	5.6	5.3
03/22e	10,787	3,810	122.0	36.0	5.0	6.0

Note: *PBT and EPS are normalised, excluding amortisation of acquired intangibles, exceptional items and share-based payments.

FY20: A year of progress despite challenges

CWA posted growth in all key financial metrics in FY20. Revenue rose 4.7%, helped by a strong performance from the water business (+13.3% and over 90% of profits) and operating profit rose by 5.3%, to HK$3,181m, with operating margins nudging higher (from 36.4% to 36.6%). Lower finance costs, a stronger than forecast associates line and a lower tax rate than projected delivered a 17.7% rise in net profits (2.8% ahead of our net profit forecast). A slightly smaller than forecast attribution to minorities (34.6% versus 35.0%) and a small fall in the share count (buy-back) saw EPS rise 20%. The declared DPS of HK$0.30 was below our forecast (HK$0.33), but still up 7.1% y-o-y, and cover rose to 3.4x. CWA remains in a secure financial position and at the year-end net debt/equity stood at 76.5% (FY19: 79.9%). Interest cover was 7.7x (FY19: 9.4x) and FY20 ROIC was 11.2%.

Outlook: Prospects of continued growth

The secular growth trends prevailing in the Chinese water market – urban-rural water supply integration and supply-drainage integration – remain intact and CWA expects to grow 'steadily' (its EPS CAGR from FY13–20 was 26.4%). It will seek to take advantage of long-term public-private partnerships to expand the capacity of the core Water Supply business while accelerating the development of its value-added businesses, such as direct drinking water. We continue to believe that CWA will be able to grow its business at an attractive rate for shareholders.

Valuation: FY21e P/E multiple of 5.6x

Despite the persistence of COVID-19 and political related uncertainty in Hong Kong, following the better than anticipated FY20 results, we have nudged up our FY21 EPS forecasts for CWA from HK$1.06 to HK$1.08, implying a P/E of c 5.6x. The market appears to be taking a cautious view of CWA's growth prospects with a PEG ratio of 0.6x. Applying a PEG ratio of 1.0x (peer group: 1.1x) would indicate a valuation of HK$9.5/share. Our revised DCF model (EBIT growth FY20–25 12% CAGR and WACC 10%) indicates a valuation of HK$7.9/share.

23 July 2020

Price	**HK$6.05**
Market cap	**HK$9,704m**

Net debt (HK$bn) at 31 March 2020	10.8
Shares in issue	1,604m
Free float	66%
Code	855
Primary exchange	HK
Secondary exchange	N/A

Share price performance

%	1m	3m	12m
Abs	8	1.3	(16.8)
Rel (local)	5.7	(3.4)	(5.8)
52-week high/low		HK$7.36	HK$5.10

Business description

China Water Affairs (CWA) is a pioneer in the privatisation of water supply assets in China. The company seeks to create growth via volume/price increases.

Next event

AGM	4 September 2020

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Edison profile page

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Investment summary

Company description: Water utility with a Chinese focus

CWA is a one-stop provider of water services in China. It supplies raw and tap water, sewage treatment, network construction and maintenance and water resource management in over 100 cities under a transfer-own-operate model (TOO) and runs sewage treatment projects (under 25-year franchise agreements – build, operate, transfer (BOT)). CWA also supplies water direct to businesses and develops and sells land banks with proceeds re-invested in the core water business. CWA seeks to grow its business organically, via expansion of the network and tariff increases, and through the acquisition of existing assets.

Valuation ignores growth potential

We value CWA using a DCF approach and peer-group multiples. The DCF valuation of HK$7.9/share (previously HK$11.9/share) assumes EBIT growth of 12% between FY20–25 (vs a 12% CAGR in FY17–20) and uses a WACC of 10% (previously 8%) to reflect the higher risks (political/COVID-19) facing the company. CWA's shares are currently over 40% below their 2018 peak and trading on an FY21e P/E of 5.6x (PEG ratio 0.6x), a significant discount to its peers and the Hong Kong market (Hang Seng c 20% below peak and on a P/E of 10.9x).

Financials indicate continuing growth

- **Revenue growth**: We now forecast revenue growth of 11.9% in FY21 and 10.9% in FY22. In the period 2013–20 CWA achieved a revenue CAGR of 21%.
- **Margin:** In FY20 CWA posted an operating margin of 36.6%. Our updated forecasts assume operating margins of 37% in FY21 and FY22 (range FY13–20 31% to 40%).
- **Balance sheet**: In FY20 net debt/equity stood at 76.5% and net debt/EBITDA was 3.1x. By FY22 we expect net debt/equity to have reduced to 56% and net/debt/EBITDA to be 2.3x.
- **EPS and DPS**: Our revised FY21 forecasts and new FY22 numbers imply growth in EPS of 5.8% (FY21 depressed by the absence of a revaluation in CWA's holding in KIE as in FY20) and 12.9%, respectively. DPS growth for the period is predicted to be 6.7% in FY21 and 12.5% in FY22. Based on our forecasts, dividend cover is projected to be 3.4x in FY22.

Exhibit 1: CWA forecast changes

	PBT (HK$)			EPS (HK cents)			DPS (HK cents)		
	Old	New	% chg	Old	New	% chg	Old	New	% chg
2020	3,169	3,165	-0.1%	98.2	102.1	3.8%	33.0	30.0	-9.1%
2021e	3,417	3,374	-1.3%	106.1	108.0	1.8%	38.0	32.0	-15.8
2022e	N/A	3,810	N/A	N/A	122.0	N/A	N/A	36.0	0.0

Source: Edison Investment Research. Note: For 2020, old numbers are Edison published forecasts.

Sensitivities and risk factors

- **Acquisition**: CWA is an acquisitive company and is therefore exposed to a risk that it overpays for an asset. This risk is mitigated by the large number of projects (over 100) in its portfolio.
- **Political and governmental**: We believe that the Chinese government will continue to favour the introduction of private capital into the water sector, but a reversal of this policy would challenge CWA's business model. A breakdown in the relationship with local governments would threaten an individual project but CWA's operations cover 20 provinces.

- **Regulatory**: Chinese water prices remain low by world standards, however any regulatory inspired reduction to allowed returns would undermine profitability. Conversely, a raising of standards would require additional investment and present CWA with opportunities for growth.

CWA meets expectations in FY20

CWA performed broadly in line with our forecasts in FY20 and all key financial metrics grew year-on-year (Exhibit 2). This performance is more noteworthy given the last quarter of the financial year coincided with the period of maximum disruption caused by COVID-19 (ie Q120).Revenue and operating profit were marginally worse than we anticipated, but this was offset by lower than expected interest and tax charges and a lower share count, with the result that basic EPS was up 20% y-o-y and 4% ahead of our estimates.

Revenue rose by 4.7%, slightly undershooting our forecast (5.4%) due to a slight shortfall in Water Supply revenue and a larger miss in property development. Helped by a modest rise in operating margins (up from 36.4% to 36.6%), operating profit rose 5.3% to HK$3,181m, although it remained 3.3% behind our expectations. Lower finance costs (HK$429m versus FY20e HK$493m), a stronger than anticipated associate line, including Kangda for the first time (HK$413m versus FY20e HK$373m), and a lower tax rate than projected (20.8% versus 23.0%) all contributed to a 17.7% rise in net profits, which was 2.8% ahead of our forecasts. A slightly smaller than predicted element attributable to minority interests, 34.6% versus 35.0%, allowed for a 19.7% year-on-year increase in attributable profits (3.4% ahead of our forecasts).

The 20% y-o-y rise in basic EPS (4% ahead of forecast) reflected the sharp rise in attributable profits and a small fall in share count due to a share buyback (1,606m shares versus 1,609m shares in FY19). The declared DPS was less generous than we had forecast, but the FY20 figure of HK$0.30 (final DPS HK$0.16) still represented a year-on-year increase of 7.1%. Cover, thanks to the strong EPS growth, rose to 3.4x, the highest level achieved since 2016.

CWA remains in a secure financial position. At FY20 net debt/equity stood at 76.5% (FY19: 79.9%) and net debt/EBITDA was 2.8x. This reduction in gearing was achieved despite spending HK$34.2m during FY20 repurchasing 4.872m shares (c HK$7.0/share). Despite the reduction in gearing, CWA was able to maintain an attractive post-tax return on equity of 19.9% and ROIC of 11.2% – above a number of its peers. By FY22, thanks to improving profitability and broadly stable capex in FY21 and FY22 (c. HK$2,500-2,600m) we expect net debt/equity to have reduced to 56% and net debt/EBITDA to be 2.3x.

Exhibit 2: CWA key financial figures 2020 versus 2019 and Edison estimates

HK$m	2019	2020	% change	Edison FY20e	Actual vs Edison FY20e
Revenue	8,302.2	8,694.3	4.7	8,757	-0.7%
Operating profit	3,022.2	3,181.1	5.3	3,289	-3.3%
Net profit	2,130.3	2,507.3	17.7	2,440	2.8%
Net profit excluding minorities	1,369.2	1,639.5	19.7	1,586	3.4%
Basic EPS (HKc)	85.1	102.1	20.0	98.2	4.0%
DPS (HKc)	28.0	30.0	7.1	33.0	-9.1%

Source: China Water Affairs, Edison Investment Research

At the operational level CWA performed broadly in line with our expectations. Exhibit 3 highlights the importance of the core Water Supply business, which remains the key driver of group profitability, contributing 83.1% of group revenue and 90% of segmental profits. In FY20 the Water Supply business increased revenue by 13.3%, while segmental profits rose by 12.9% (a small decline in the operating margin from 41.1% to 40.9%). Within Water Supply all segments increased revenue with year-on-year growth in Connection +12.3%, Construction Services +17.1 % and Operational Services +17.0%. The main reasons cited for the growth in profitability were volume of water sold, contribution of new projects and additional construction and connection work driven by the continuing trend of urban-rural Water Supply integration. Environmental Protection suffered from a 29.5% decrease in revenues and a 37.8% decline in segmental profits versus FY19, due in large part to a decrease in upgrade work for existing facilities. The weaker performance from this division was foreshadowed by a weaker performance in H120, but the outturn also fell below our forecasts (see Exhibit 3). A reduction in work upgrading existing facilities to meet higher operating standards, and renovation work contributed to the weaker performance. The property development business returned to profitability (HK$42m versus a loss of HK9m in FY19) despite a reduction in turnover (HK$291m to HK$237m).

Exhibit 3: CWA segmental breakdown of revenues and profits

Segment	CWA FY19		CWA FY20		Profits % change	Edison FY20 forecast		Profits actual vs forecast % difference
	Revenue (HK$m)	Profits (HK$m)	Revenue (HK$m)	Profits (HK$m)		Revenue (HK$m)	Profits (HK$m)	
Connection Services	1,441		1,619		.			
Construction Services	2,631		3,081		17.1%			
Operational Services	2,214		2,403		8.5%			
Other	91		121		33.0%			
City Water Supply	**6,376**	**2,619**	**7,224**	**2,956**	**+12.9%**	**7,268**	**2,888**	**+2.4%**
Environmental Protection	1,522	444	1,073	276	-38%	1,065	330	-16.4%
Property Development	291	(79)	237	42	N/M	306	70	-40.0%
All other segments	113	9	158	9	-11.1%	118	0	N/M
Total	**8,302**	**2,993**	**8,694**	**3,283**		**8,757**	**3,289**	**-0.2%**

Source: China Water Affairs, Edison Investment Research

With growth in all key financial benchmarks, FY20 has extended CWA's track record of growth by another year (see Exhibit 4). CWA has achieved an impressive 26.4% CAGR in EPS and a 29.2% CAGR in DPS in the period 2013–20.

Exhibit 4: Growth in principal benchmarks 2013–20

		2013	2014	2015	2016	2017	2018	2019	2020	CAGR 2013–20
Revenue	HK$m	2,251	2,747	3,622	4,740	5,708	7,580	8,302	8,694	21.3%
EPS	HK cents	19.9	20.5	25.2	40.3	56.7	72.6	85.1	102.1	26.4%
DPS	HK cents	5.0	5.0	7.0	8.0	20.0	23.0	28.0	30.0	29.2%
Cover	(x)	4.0	4.1	3.6	5.0	2.8	3.2	3.0	3.4	N/A

Source: China Water Affairs, Edison Investment Research

Outlook

While noting the challenges presented by COVID-19, in light of the secular trends prevailing in the Chinese water market – urban-rural water supply integration and supply-drainage integration – CWA expects to 'grow steadily'. The company will continue to seek to take advantage of long-term public-private partnerships by injecting capital into existing municipal projects (see Exhibit 6) to expand the capacity of its core Water Supply business (9.4m tons/day of operational assets with a further 5.8m tons/day either under construction or earmarked for future expansion). The company will also accelerate the development of its value-added businesses, such as direct drinking water. We have updated our forecasts to reflect the FY20 results and the current opportunities and challenges facing CWA. We continue to believe that CWA will be able to take advantage of the government's favourable environmental policies (eg 'Water Ten') to expand its business via volume growth (organic and acquired), price increases and efficiency improvements and as a consequence deliver returns for shareholders.

Water Supply remains the key business

Exhibit 5 below shows the longer-term evolution of revenues and profits by segment. The overall compound annual growth rate for revenue and profit over the period shown is 21%. The most rapid growth has been achieved by the Environmental Protection business (44% CAGR in profits), but as can be seen, the Water Supply, operation and construction business remains the most important division, accounting for 83% of revenues and 90% of profits in 2020. The Water Supply business generates higher margins than Environmental Protection (41% versus 26% in FY20) and has grown rapidly across the period (CAGR FY13–20 23% in profits), though at a slower rate than Environmental Protection. We expect Water Supply to remain the key determinant of profitability.

Exhibit 5: Evolution of segmental revenue and profits

	2013	2014	2015	2016	2017	2018	2019	2020	2013–20 CAGR
Segment revenue (HK$m)									
Water Supply	1,734	1,875	2,244	4,003	4,961	6,204	6,376	7,224	23%
Environmental Protection	51	82	170	339	553	814	1,522	1,074	55%
Others	466	789	444	397	194	562	404	396	-2%
Total	**2,251**	**2,747**	**2,859**	**4,739**	**5,708**	**7,580**	**8,302**	**8,694**	**21%**
Segment profit (HK$m)									
Water Supply	615	731	941	1,468	1,847	2,402	2,619	2,956	25%
Sewage treatment	21	31	56	184	208	271	444	276	44%
Others	212	125	153	105	289	81	-70	51	--19%
Total	**848**	**887**	**1,150**	**1,757**	**2,343**	**2,754**	**2,993**	**3,283**	**21%**
Segment margin (%)									
Water Supply	35%	39%	42%	37%	37%	39%	41%	41%	
Sewage treatment	42%	38%	33%	54%	38%	33%	29%	26%	
Others	45%	16%	34%	26%	149%	14%	-17%	13%	
Total	**38%**	**32%**	**40%**	**37%**	**41%**	**36%**	**36%**	**38%**	

Source: China Water Affairs, Edison Investment Research

Profit and price drivers

It is perhaps worth reiterating that profit growth at CWA is facilitated by three major factors: volume growth, supported by industrialisation and urbanisation; expansion of the company's water assets via acquisitions (see Exhibit 6), driven by government privatisation of water networks; and tariff increases to raise the rate of return in under-earning networks. In this section of the note we focus on fees, a key component of CWA's water revenue.

Exhibit 6: CWA recent expansion announcements

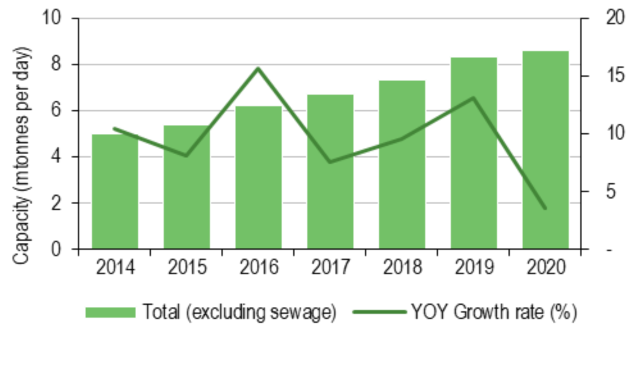
Date	Details
28/02/20	Capital injection of RMB58m into water supply company in Leizhou by a wholly owned subsidiary of CWA. CWA will thereby increase its holding from c 5% to c 32.1%. The company has a capacity of 50,000 tonnes/day with plans for expansion to 100,000 tonnes/day
06/03/20	Formation of a JV (CWA 70%) with the government of Baofeng, Henan (30%) in water supply. The current designated capacity is c 79,000 tonnes/day.
08/06/20	Cooperation agreement for urban-rural water supply integration for Gongyi City, Henan. Expected daily water supply capacity 360,000 tonnes.

Source: China Water Affairs

It is worth pointing out that five provinces (Hubei, Henan, Jiangxi, Guangdong and Jiangsu) account for c 80% of CWA's current operating capacity of 9.4m tons/day. Jiangxi remains the single most important province with c 23% of the total operating capacity, followed by Guangdong (17%). Taken together, Jiangxi and Guangdong also account for c 76% of capacity under construction and 49% of capacity identified in CWA's future plans. A significant proportion of CWA's Water Supply business is located in Tier 3 and Tier 4 cities where local governments typically grant 30–50-year exclusive and renewable concessions.

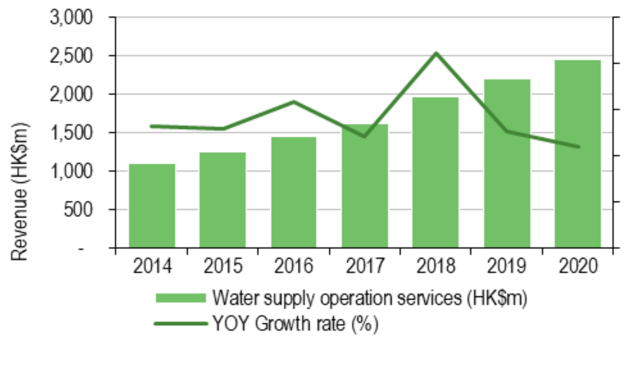
A key component of sustaining CWA's profit growth will be increases in service revenues. CWA's water fees segment generated 28% of FY20e total revenues. Between FY13 and FY20 this segment sustained a 14% CAGR fuelled by a combination of increases in capacity, rises in usage and prices. We estimate capacity increased by a 10% CAGR over this period, implying that usage and price rises combined averaged about 4% per annum.

Exhibit 7: Water capacity increases grew at a 10% CAGR between FY13 and FY20



Source: China Water Affairs Group data (see Exhibit 10 in our previous note 'Well positioned in a growing market') digitalised using WebPlotDigitizer, Edison Investment Research

Exhibit 8: Water Supply revenues grew at a 14% CAGR between FY13 and FY20



Source: China Water Affairs Group data, Edison Investment Research

However, data from H1 suggests that rising usage and prices may be an increasingly important growth driver in the future. CWA reported 17% y-o-y growth in its water fees in H1, which we estimate was c 22% in constant currency terms. CWA's capacity disclosure (in millions of tonnes per day) allows revenue per tonne of connected capacity to be calculated, and from that the benefit of price and usage increases across its portfolio can be estimated. Capacity growth (measured in connected drinking and raw capacity) rose 4.3% over the same period, implying usage and price rises combined to grow revenue 16.9% y-o-y in constant currency terms. Incremental revenue generated from higher usage and particularly prices is high margin. While usage can increase pumping costs and some price rises contain obligations to increase provision, they both leverage fixed infrastructure investment costs.

Exhibit 9: Analysis of water fees growth in H120 versus capacity increases

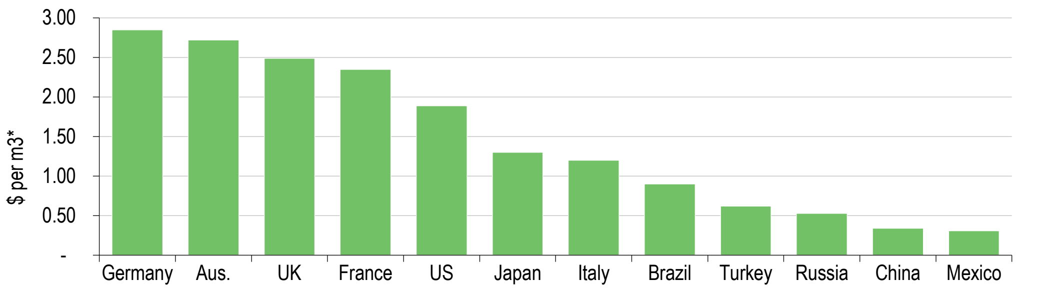
	H119	H120	y-o-y growth (%)
Water service fees (HK$m)	1,067	1,248	17.0
Water service fees (HK$m, CCY*)	1,067	1,301	22.0
Current capacity (m tons per day)			
– drinking water	5,348	5,680	6.2
– raw water	2,755	2,773	0.7
Total	8,103	8,453	4.3
Implied revenue per capacity ($/tonnes per day, CCY)	0.13	0.15	16.9
Incremental reported revenue from usage/pricing (HK$m)		135	
Assumed EBIT margin of incremental revenue (%)		80.0	
Incremental EBIT from pricing (HK$m)		**108**	

Source: Edison Investment Research based on CWA data. Note: *CCY = constant currency

A key question is whether the trends in usage and prices seen in H1 can be sustained, while usage in H2 was heavily affected by COVID-19. Industrial consumption of water fell dramatically in January and February as lockdown restrictions reduced factory output. This recovered substantially in March and was partially offset by rising domestic consumption (more time at home and increased use of water for hygiene). It is difficult to extrapolate performance in this period to draw conclusions about long-term performance, but usage appears to have recovered to be at least in line with historical trends.

It is the long-term outlook for pricing that is particularly encouraging. Exhibit 10 highlights that China has one of the lowest prices for water internationally. Many observers have argued that a key component of addressing issues of availability and quality in China is implementing more cost reflective pricing.[1] Raising prices discourages excess water consumption and encourages investment that might otherwise be uneconomic. Of course, there is a delicate political balance to be struck and increases have to be set against consumers' ability and willingness to pay.

Exhibit 10: Current international drinking water price



Source: IBNet Tariffs DB (www.ib-net.org), Edison Investment Research. Note: *Based on 15m^3 of consumption per month. Figures reflect average tariff weighted by population served where data is available.

CWA's ability to raise prices is governed by local/regional regulators. Tariff setting allows for a target 8–12% return on equity (ROE). Often existing tariffs do not properly reflect the replacement cost of the existing infrastructure as the asset inventory is often incomplete. As a consequence, the depreciation assumption made by the local/regional regulator is too low and reported profits do not reach the targeted ROE range.

If an operator is making less than the target it can apply to raise prices. CWA opens its books to the local regulator and a team of experts who scrutinise its finances to assess the claim. A hearing is also held in public. The whole process can take nine to 12 months and hence tariff rises are usually only applied for every three to four years. In any one year, CWA might have seven to 12 of its projects going through the process. Sometimes settlements allow for a 15–20% ROE premised on escalating future costs and designed to prevent companies from reapplying too quickly.

Better mapping of underground assets is providing greater visibility on costs while the introduction of water resource fees in other parts of the network are providing transparency on pricing. More broadly, as long as water prices remain low by international standards and the Chinese government remains committed to improving availability and quality, we see significant scope for further tariff rises across CWA's portfolio. We forecast price increases of 5% in FY21 and FY22 and believe the rolling tariff setting process is likely to perform an important role in sustaining double-digit growth in both CWA's Water service fees revenues and group EBIT. We see this pricing analysis underpinning our forecasts of a 10.3% EBIT CAGR between FY20 and FY22.

The macro environment

In the current environment of COVID-19 related economic uncertainty, CWA's utility earnings should prove relatively resilient to the headwinds. However, much of what we have written previously regarding the macro factors affecting the Chinese water and wastewater market remain pertinent. China continues to suffer from a relative lack of freshwater resources (about a third of the global average) and there is regional disparity in supply and poor water quality (due to inadequate wastewater treatment). Despite its scarcity, the relative cheapness of water (c 1% of disposable income) does not, as we have noted above, encourage efficient use (over 20% is used for coal production) and China consumes c. 5.5x the global average when calculated on a unit/GDP basis.

The government is seeking to rectify these problems via large-scale infrastructure projects and mandated environmental standards and has, for many years now, welcomed private capital into the

[1] See www.chinawaterrisk.org/opinions/pricing-water/

water industry. Central and regional government have also shown that, via the tariff setting process and regulation, it is prepared to allow tariffs to rise. All these factors combine to make a favourable market backdrop for CWA.

Focus on KIE

CWA acquired a 29.5% stake in Kangda International Environmental (KIE; HKSE:06136) from Kangda Holdings in April 2019 at a cost of HK$1.2bn (600m shares at a price of HK$2/share). Following the acquisition CWA became the largest shareholder in KIE and took control of the board although it is treated as an equity investment. In March 2020, KIE released its first set of full year results (year end December 2019) since CWA's acquisition of its holding. In April CWA announced that it had entered into an agreement with Baring Private Equity Asia (BPEA) via the mutual issue of exchangeable bonds that could, in time, lead to CWA increasing its holding in KIE to 46.45%.

We have commented in some detail on KIE's results in a previous report (improvements at Kangda International, 28 April 2020) and set out the mechanics of the deal with BPEA. Given the relative scale and importance of the transaction we recap briefly on its mechanics and the FY19 results.

According to the terms of the deal with BPEA, CWA has subscribed to exchangeable bonds, issued by BPEA, which entitle it to convert the bonds in to 344.13m KIE shares at a price of HK$1.05/share. As can be seen the price is a significant discount to the acquisition price of the first tranche of shares (HK$2/share) and it stands at a discount to KIE's net assets per share of HK$2.42 (as at 31 December 2019). The price represents a multiple of 5.2x KIE's FY19 EPS. Simultaneously CWA has issued a convertible bond to BPEA (HK$361m), which will allow BPEA to convert the bond into 44.9m CWA shares (c 2.8% of the issued share capital) at a price of HK$8.05. At the time the deal was struck the price represented 9.5x CWA's FY19 EPS of 85.1c.

Despite a decline in revenue at KIE, the result of a decrease in construction revenues, particularly in the urban water treatment division, the results showed an 11.9% increase in PBT to RMB509.8m (FY18: RMB455.69m) thanks to a significant reduction in costs (a focus area for CWA). A lower tax rate (25% versus 32%) helped lead to a 25% increase in EPS to RMB0.1854. As can be seen from Exhibit 12, changes implemented by CWA led to an increase in the return on equity in KIE after a period of decline (2013–18) and for the first time in many years KIE achieved positive operating cash flow. However, indebtedness remains high at KIE and reducing gearing constitutes an important part of CWA's strategy for improving the performance in the next two years. Strategically KIE has assumed a dominant role in CWA's wastewater treatment division.

As a consequence of its improved performance, KIE was able to make a significant contribution to CWA's FY20 results. Overall, the associate line rose from HK$69m in FY19 to HK$412.6m in FY20. Of the figure of HK$412.6m more than half (HK$214.8m) resulted from a fair value adjustment to CWA's holding in KIE but a further HK$108.4m can be attributed to CWA's share of KIE's post acquisition profits. Other associate income also rose strongly, from HK$69m in FY19 to HK$89.4m in FY20.

Exhibit 11: Contribution of KIE to CWA's associate income line in FY20

(HK$m)	H120	H220	FY20
KIE fair value adjustment	214.8	0.0	214.8
CWA's share of KIE's profits	44.8	63.6	108.4
Other	31.8	57.6	89.4
Total associates	291.4	121.2	412.6

Source: China Water Affairs

Exhibit 12: KIE – evolution of key operating metrics

Year end 31 December (RMB)	2013	2014	2015	2016	2017	2018	2019
Revenue	1,340	1,813	1,837	1,927	2,524	3,021	2,815
Net Income	232	295	325	335	414	303	377
Return on equity (%)	19	14	11	10	11	8	9
Debt							
Short-term debt	(785)	(1,746)	(1,579)	(2,660)	(3,906)	(3,683)	(4,130)
Long-term debt	(1,802)	(1,811)	(3,197)	(3,108)	(4,538)	(5,538)	(4,980)
Total Debt	(2,587)	(3,557)	(4,776)	(5,768)	(8,444)	(9,236)	9,110
Cash + short-term inv.	276	747	1,292	834	1,690	976	226
Net Debt	(2,311)	(2,810)	(3,484)	(4,934)	(6,754)	(8,260)	(8,884)
Equity	1,340	2,843	3,200	3,547	4,003	4,115	4,395
Operating cash flow	(206)	(634)	(30)	(200)	(813)	(127)	115

Source: Refinitiv 16 June 2020

Management

During the year Mr Duan Jerry Linnan joined the board as an executive director (October 2019) and Mr Chan Wai Cheung Admiral (January 2020) was appointed as a non-executive director, taking the total number of directors to 14, of whom nine are non-executive directors, with five classified as independent. The appointment of Mr Chan ensured that at least one-third of the board of directors is comprised of independent non-executive directors, in line with the listing regulations. Mr Duan Chuan Liang remains executive chairman and CWA states that the function of the chief executive officer is collectively performed by the executive directors. Mr Duan is not subject to retirement by rotation.

Executive chairman – Mr Duan Chuan Liang: Mr Duan worked for the Ministry of Water Resources of the PRC for more than 10 years and has over 30 years' experience in the water sector as a whole. He was also the chairman and non-executive director of China City Infrastructure Group Limited. Mr Duan joined CWA in 2003 and currently holds c 29% of the shares.

Executive director – Ms Ding Bin: Ms Ding joined the group in 2007 and has over 10 years of experience in financial management and tax planning. Ms Ding is a certified public accountant in the PRC and a member of the Chinese Institute of Certified Public Accountants. Ms Ding graduated from Zhengzhou University of Technology in finance and computing management.

Executive director – Ms Liu Yu Jie: Ms Liu Yu Jie joined the group in 2014 and is also currently the executive director of New Universe Environmental Group Limited (436). Ms Liu has worked in Hong Kong, Singapore and the PRC for over 20 years in total and is familiar with the business environment and regulatory system of the three places. She also has comprehensive experience in capital market, business promotion and corporate management.

Executive director – Mr Li Zhong: Mr Li Zhong joined CWA in 2015 and is a member of the Standing Committee of the Shenzhen Municipal Committee of the Chinese People's Political Consultative Conference. Mr Li has over 20 years' experience of serving in large state-owned enterprises and US-based corporations. Mr Li Zhong is a member of the Standing Committee of the Shenzhen Municipal Committee of the Chinese People's Political Consultative Conference , a director of the Shenzhen Bus Group and honorary chairman of the Hong Kong Volunteers Association.

Executive director – Mr Duan Jerry Linnan: Mr Duan joined CWA in 2011, and now holds directorship or senior management positions in various subsidiaries of the company. Mr Duan is also the executive director and chief executive officer of Kangda International Environmental.

Sensitivities

Revenue sensitivity – For the period FY20–22 we assume a CAGR in revenue of 11.4% leading to a CAGR in EPS of 9.3% for the same period. Reducing the rate of revenue growth to a CAGR of 10% would reduce the CAGR in EPS to 7.8%.

Acquisition risk – CWA remains an acquisitive company and this carries associated risks, mitigated by the portfolio nature of CWA's asset base.

Political – The Chinese government has long been committed to a policy of attracting private capital into the water industry. Such a policy has allowed CWA to grow and a reversal of the government's attitude, although in our view unlikely, would pose an impediment to growth. CWA operates a large number of projects (in China) jointly with the local governments, which offers support in terms of subsidies and grants and retains the right to terminate concessions. A breakdown of CWA's relationship with a local government would present a risk to a specific project. Political uncertainty in Hong Kong also undermines the local stock market and the price of CWA's shares.

Regulatory – CWA is allowed to earn returns of between 8% and 12%. A reduction in allowed returns could undermine the profitability of CWA's water business.

Valuation

Peer group valuation multiples and a discounted cash flow (DCF) continue to provide the major reference points for our valuation analysis, although we have made some adjustments to our approach in light of COVID-19, political uncertainty in Hong Kong and recent trends in profitability.

The peer group includes a range of Chinese and international water companies for which we tabulate P/E, EV/EBITDA, yield and P/B multiples for FY1 and FY2. Applying the average values for the peer group (all metrics in FY1 and FY2, shown in Exhibit 13) to our forecasts for CWA would indicate a share price valuation for CWA of HK$13.3/share, a significant premium to CWA's current share price (over 100%).

The significant upside to the international peer group multiples in part reflects the weakness of the local market (Hang Seng index) which is now c 24% lower than its peak of 33,154 reached in January 2018 (driven significantly by political uncertainty). However, CWA's share price is c 42% below its peak of July 2018 (c HK$10.46) and now trades on an FY21e P/E of only 5.6x versus the Hang Seng as a whole on 10.9x. Excluding the European peers from the multiple analysis would lower the indicative price for CWA only modestly, to HK$13.2/share but applying the multiples of Beijing Enterprises indicates a valuation of HK$9.0/share for CWA. Applying only a price/book ratio of 1.1x would produce a valuation of HK$6.7/share, while a PEG ratio of 1.0x (peer group average 1.5x excluding the European companies) would produce a valuation of HK$9.5/share. The valuation discount appears difficult to justify given the superior returns generated by CWA. For example, in FY20 CWA achieved a ROIC of 11.2%, compared to trailing returns (ROIC) for Beijing Enterprises of 6.6%, Guangdong Investments 10.2%, Beijing Origin Water 4.1% and Veolia 4.1%.

Our DCF valuation assumes constant long-term capex of HK$2,600m and EBIT growth beyond our forecast range (ie FY23–25) of 12% pa (previous assumption 15%) to better reflect near-term EBIT growth rates (FY17–20 12% CAGR). We have also lowered our tax rate assumption (23% versus 28% previously). To take account of the present (political and COVID-19) uncertainty, we have increased our discount rate from 8% to 10%, although we continue to assume a terminal growth rate of 2%. Our DCF produces a central case valuation of HK$7.9/share, indicating upside of c 30% from current levels (previously HK$11.9/share April 2019). In Exhibit 14 and Exhibit 15 we illustrate the sensitivity of the DCF valuation to changes in discount rates, terminal growth rates and assumptions regarding long-term EBIT growth rates. In order for our DCF valuation to indicate a valuation broadly equal to the current share price, we would have to assume long-term EBIT growth of 8% pa. Alternatively, we could use a discount rate of 11% and assume a perpetuity growth rate of 1%.

In short, on a forward P/E multiple of 5.6x, CWA's current rating appears modest and does not reflect the impressive track record, the above average peer group returns and the growth opportunities for the business.

Exhibit 13: Peer group comparable valuation multiples

	Ticker	Mkt cap	Price	P/E(x)			EV/EBITDA (x)		Yield (%)		Price/book (x)		PEG (x)
		(local)	(local)	Hist	FY1e	FY2e	FY1e	FY2e	FY1e	FY2e	FY1e	FY2e	2 yr
Guangdong Investment	270:HK	91,399	14.0	18.1	17.6	15.3	11.1	9.7	4.4	4.8	2.1	2.0	2.1
Beijing Entps.Water	371:HK	32,068	3.2	6.5	6.0	5.5	9.2	8.4	6.3	6.9	0.9	0.8	0.7
Beijing Capital Co Ltd	600008 CH	19,217	3.4	20.1	18.3	16.4	12.7	11.2	2.4	2.6	1.1	1.0	1.9
Beijing OriginWater Tech	300070 CH	30,412	9.6	21.4	18.1	14.8	14.6	12.4	1.1	1.5	1.4	1.3	1.1
Chongqing Water Grp	601158 CH	26,112	5.4	15.7	14.8	14.1	8.8	8.4	5.1	5.2	1.7	1.6	2.9
Tus-Sound Resources	000826 CH	12,074	8.4	40.0	15.0	12.9	8.7	7.9	0.3	1.5	0.8	0.7	0.5
Suez SA	SEV FP	6,689	10.6	21.7	128.6	18.1	7.4	6.4	5.3	5.8	1.1	1.1	2.3
Veolia	VIE FP	11,131	19.6	N/A	23.2	15.8	6.3	5.7	3.4	4.9	1.8	1.7	N/A
United Utilities	UU/LN	5,951	871.0	13.8	19.1	18.6	13.5	12.9	5.0	5.0	2.0	1.9	-1.0
Median				**16.9**	**17.9**	**15.3**	**9.0**	**8.4**	**4.7**	**4.9**	**1.4**	**1.3**	**1.5**
Median (Excl. European cos)				16.9	15.0	14.5	9.2	9.1	4.4	3.7	1.2	1.2	1.5
China Water Affairs	855:HK	9,464	5.9	5.7	5.6	5.1	6.5	6.5	5.6	5.7	1.0	0.9	0.8

Source: Edison Investment Research, Refinitiv. Note: Prices as at 17 July 2020.

Exhibit 14: CWA DCF valuation sensitivity to discount rates and terminal growth rates

Valuation (HK$ per share)	Terminal growth rate		
Discount rate	0%	1%	2%
8.00%	8.5	10.1	12.2
9.00%	7.0	8.2	9.7
10.00%	**5.8**	**6.7**	**7.9**
11.00%	4.8	5.5	6.4
12.00%	3.9	3.8	4.4

Source: Edison Investment Research

Exhibit 15: CWA DCF valuation sensitivity to changes in long-term growth assumptions

EBIT growth FY23–25e (%)	Valuation (HK$/share)	Upside from current share price (%)
8%	5.7	2.3%
10%	6.8	22.1%
12%	**7.9**	**42.1%**
14%	9.0	61.6%
16%	10.2	83.1%

Source: Edison Investment Research

Financials

Below we set out the principal assumptions underlying our financial forecasts for FY21 and FY22.

- **Revenue** – In the period 2013–20 CWA achieved a CAGR in revenue of 21%, although for the more recent (and shorter) period of 2017–20 the CAGR dropped to 15.1%. We assume growth in revenue of 12% in FY21 and 11% in FY22. The more modest growth rate assumptions reflect a more cautious outlook for growth rates in the Water Supply, Environmental Protection and Property Development businesses in light of COVID-19 related uncertainties. The core water business accounted for 83% of revenue in FY20 and under our projections is expected to account for c 86% of revenue in 2022e.

- **Operating margins** – In FY20 CWA achieved an operating margin of 36.6% and in the period FY13–20 the margin has fluctuated between 30% and 40%. For our forecast period we assume margins of around 37%.
- **Associates** – In FY20 associates contributed HK$413m to CWA's profits, with KIE accounting for HK$323m (including a fair value adjustment to CWA's holding in KIE's of HK$215m). In the absence of further positive fair value adjustments (as in FY20) we assume an overall contribution from associates of HK$212m in FY21 and HK240m in FY22.
- **Capex** – We assume capex on average of HK$2,600m for the period FY20–22 (FY18 HK$2,700m, FY19 HK$ 2,700m).
- M**inorities** – For FY21 and FY22 we assume profit attributable to minorities at the rate of c 35% of net income (FY20: 34.6%).
- **EPS –** As a result of our assumptions outlined above, EPS are predicted to rise by 5.8% in FY21 and 12.9% in FY22.The modest growth rate in FY21 (compared to FY22) is the result, in large part, of the year-on-year fall in associates (FY21 versus FY20 – see above).
- **DPS** – In FY20 CWA's DPS of HK$0.30 was covered 3.4x by EPS. We forecast cover to remain at 3.4x in broad terms, leading to DPS increases of 7% in FY21 and 12% in FY22.
- **Gearing** – In FY20 CWA had a ratio of total liabilities to total assets of 66.4%. We expect this ratio to decline to 65% in FY21 and 63% in FY22. We calculate that CWA had a net debt/equity ratio of 76.5% in FY20 and that this will fall to 56.6% by FY22.

Exhibit 16: Financial summary

HK$m	2018	2019	2020	2021e	2022e
Year end 31 March	HKFRS	HKFRS	HKFRS	HKFRS	HKFRS
PROFIT & LOSS					
Water Supply revenue	6,204	6,376	7,224	8,235	9,264
Environmental Protection revenue	814	1522	1074	1095	1117
Other segments revenue	562	404	396	401	406
Revenue Total	7,580	8,302	8,694	9,731	10,787
Operating Profit	2,691	3,022	3,181	3,601	3,997
Net Interest expense	(289)	(319)	(429)	(439)	(426)
Associates		69	413	212	240
Profit Before Tax	2,462	2,772	3,165	3,374	3,810
Tax	(701)	(642)	(657)	(708)	(800)
Profit After Tax	1,762	2,130	2,507	2,665	3,010
Net profits contributable to shareholders	1,141	1,369	1,639	1,732	1,957
Average Number of Shares Outstanding (m)	1,571	1,609	1,605	1,604	1,604
EPS – fully diluted (c)	71.8	85.1	102.1	108.0	122.0
Dividend per share (c)	23.0	28.0	30.0	32.0	36.0
Operating Margin (%)	35.5	36.4	36.6	37.0	37.0
BALANCE SHEET					
Fixed Assets	**19,581**	**24,493**	**28,614**	**30,685**	**32,317**
Intangible Assets	13,499	16,514	18,878	20,861	22,793
Plant, property and equipment	1,695	2,020	2,224	2,164	2,104
Investment properties	909	912	1,031	1,031	1,031
Investment in associates	661	676	2,228	2,376	2,136
Other	2,817	4,371	4,253	4,253	4,253
Current Assets	**9,008**	**11,332**	**13,289**	**15,079**	**17,224**
Properties Under Development	1,370	1,274	1,506	1,506	1,506
Properties Held for Sale	597	816	752	752	752
Inventory	348	531	630	706	782
Trade and Bills Receivables	1,055	1,243	1,325	1,483	1,644
Due from Non-controlling Equity Holders of Subsidiaries	260	288	211	227	256
Due from Associates	563	227	13	13	13
Prepayments, Deposits and Other Receivables	1,293	1,550	1,597	1,788	1,982
Pledged Deposits	570	645	963	963	963
Deposits and cash	2,511	3,973	5,641	6,991	8,676
Other	440	785	650	650	650
Current Liabilities	**8,649**	**10,019**	**12,336**	**12,823**	**13,283**
Trade and Bills Payables	1,626	2,410	3,107	3,100	3,100
Accrued Liabilities, Deposits and Other Payables	2,306	1,979	2,483	2,839	3,156
Short-term Borrowings	3,450	3,437	4,091	4,091	4,091
Other	1,267	2,192	2,655	2,793	2,937
Long Term Liabilities	**8,786**	**12,903**	**15,468**	**16,942**	**18,079**
Long-term Borrowings	7,432	11,494	13,298	14,298	15,298
Other long-term liabilities	1,354	1,409	2,170	2,644	2,781
Shareholders' Equity	11,154	12,902	14,099	15,998	18,178
CASH FLOW					
Net Cash Flows from Operating Activities	**1,330**	**1,018**	**3,301**	**3,298**	**3,680**
Purchase of property, plant and equipment	(200)	(225)	(100)	(100)	(100)
Increase in concession rights for Water Supply and sewage processing	(2,500)	(2,338)	(2,400)	(2,500)	(2,500)
Acquisitions/disposals	46	(392)	(1,200)	(361)	0
Increase in prepayments and other receivables	423	(702)	0	0	0
Others	64	288	148	165	182
Net Cash Flows from Investing Activities	**(2,167)**	**(3,370)**	**(3,552)**	**(2,796)**	**(2,418)**
Dividends	(383)	(434)	(481)	(513)	(577)
Shares issue and/or options exercised	301	0	(34)	0	0
Other	(973)	4,244	2,434	1,361	1,000
Net Cash Flows from Investing Activities	**(1,054)**	**3,809**	**1,919**	**848**	**423**
Net Cash Flow	(1,891)	1,457	1,667	1,349	1,685
Opening net debt (CWA definition)	6,232	8,123	6,666	4,999	3,649
Closing net debt/(cash)	8,123	6,666	4,999	3,649	1,964
Total Liabilities/Total Assets	61.0%	64.0%	66.4%	65.0%	63.3%
Cash at the beginning of the year	4,314	2,511	3,973	5,641	6,990
Net increase in cash + cash equivalent	(1,891)	1,457	1,667	1,349	1,685
FX & Other Adjustments	89	4	0	0	0
Cash at the end of the year	2,511	3,973	5,641	6,990	8,675

Source: China Water Affairs Group accounts, Edison Investment Research. Note: CWA has reported only profit & loss and balance sheet items for FY20. The cash flow statement remains Edison estimates.

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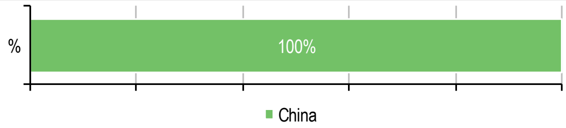
Revenue by geography



Management team

Executive chairman: Mr Duan Chuan Liang

Mr Duan worked for the Ministry of Water Resources of the PRC for more than 10 years and has over 30 years' experience in the water sector as a whole. He was also the chairman and non-executive director of China City Infrastructure Group Limited. Mr Duan joined CWA in 2003 and currently holds 29% of the shares.

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Principal shareholders (taken from Refinitiv 30/6//20)	(%)
Mr Duan Chuan Liang (executive chairman)	29.4%
Orix Corp	18.2%

Companies named in this report

Kangda International (6136:HK), Guangdong Investment (270:HK), Beijing Enterprise Water (371:HK), Beijing Capital (600008 CH), Beijing OriginWater (300070 CH), Chongqing Water Grup (601158 CH), Tus-Sound Resources (000826 CH), Suez (SEV FP,) Veolia (VIE FP), Untied Utilities (UU/LN)

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