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Water: resilience in a thirsty world

Where to focus and what to look for with this slippery issue

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- **Water risk is already disrupting company operations, and the future looks stressful**
- **G-20 exposure is greatest in Asia and in the utilities and food sectors**
- **We highlight key water risk priorities and list stocks in HSBC's equity coverage with revenues related to the theme**

Water risk is here and will intensify

The growing number of water extremes – droughts, floods, storms – is making water management a key issue for long-term investors. In this report, we show that water stress is already impinging on company operations in terms of availability, quality, costs, regulation and reputation.

In the future, rising water demand, poor management of the resource and climate change factors are conspiring to accentuate the risks. Corporate disclosure is improving but remains incomplete and inconsistent, partly because companies are nervous about disclosing information that could be used to a competitive advantage. As a result, equity valuations generally do not price in exposure to water risk.

We believe that China and India are the most water vulnerable G-20 economies and are therefore regional priorities; however, the Middle East has high absolute scarcity. On a sector basis, the power sector inland and the food production sectors emerge as exposed, but companies in other sectors (such as mining) can also be heavily impacted. In this context, we believe the key for investors is to be able to identify stocks with resilience – those that are least exposed to disruption and are able to bounce back from external water shocks. We identify a growing convergence in what constitutes water risk management – and highlight the ability of companies to locate water stress in the value chain as a basic competence.

In *Global Water Management – Innovation and Investment Opportunities*, November 2012, we highlighted the structural forces driving increased spending on water solutions. In this report, we note 31 stocks from HSBC's equity coverage, which have identified water as a revenue driver.

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Water disruption is here

- Just over of half of water-exposed companies reporting on the issue experienced detrimental effects in the past five years
- Floods, shortages and regulations are the most frequent events, resulting in disruptions to operations
- Consumer staples and materials are the worst hit

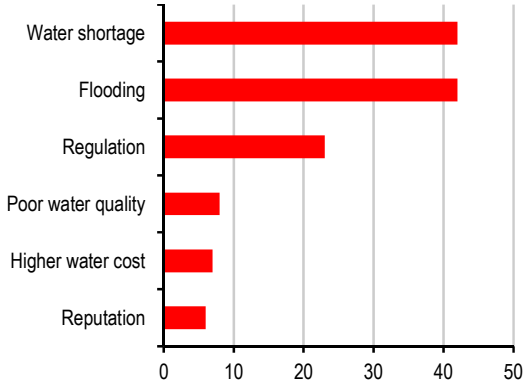
Disclosure is improving…

The ability of investors to evaluate the contribution of water to corporate risk and reward is improving steadily.

Key to this is the Water Disclosure Project (WDP), which, like its parent the Carbon Disclosure Project (CDP), deploys investor concern to expand reporting. In 2012, 470 investors with assets of USD50trn asked 318 major companies from water-intensive sectors to participate. Around two-thirds – or 191 companies – obliged. Just over half of these (99) revealed that they were already experiencing negative water impacts on their businesses, illustrated in Chart 1. Water shortages could be the result of drought or poor municipal infrastructure. Regulatory drivers include rising compliance costs, uncertain policy direction as well as more stringent water withdrawal, recycling and discharge guidelines. Reputational issues include community opposition to water source changes or complaints over water infrastructure development.

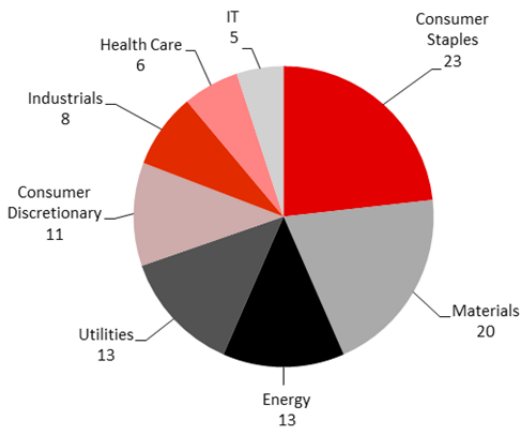
Chart 2 shows the sector split of these companies – highlighting consumer staples and materials as most affected – and Table 1 highlights the types of problems that companies in HSBC's equity coverage have reported.

Chart 1: Negative water impact



Source: Water Disclosure Project, 2012

Chart 2: Consumer staples and materials worst hit sectors



Source: Water Disclosure Project, 2012

…but still a minority sport

The WDP rightly focuses on the largest, most water-intensive companies. Globally, Bloomberg has created an index (BESGPRO Index), which lists companies that have disclosed various ESG Key Performance Indicators (KPIs), including 20 water data points. Of the 9,909 companies in the index, 8,258 had not reported any of water data points.

Yet, we believe that the breadth and depth of water reporting and management will potentially improve faster than the carbon equivalent. It is worth remembering that at an equivalent stage in the evolution of the CDP, the response rate of companies was 50%; for water it is already 60%.

One hindrance on the evolution of water disclosure is the perception by companies that exposing regional water reliance could be competitively disadvantageous. One way around this would be to disclose on a non-public basis through the WDP. That way, only paying signatories could access the data.

No company is an island

For investors, the key is to identify whether corporate value chains are operating within available water capacity in ways that ensure that others can also meet their needs. Water is invariably a shared resource, where the actions of others profoundly impact a company's ability to sustain its operations.

This three-way interaction between company operations, carrying capacity and other users has both positive and negative dynamics: "the most efficient and low-polluting operation can still be at risk when other users, including factories, farms or households, overuse or pollute the resource" concludes the *CERES Aqua Gauge, A Framework for 21st Water Risk Management*.

The rest of this report explores how investors can effectively grapple with this slippery issue.

Table 1: Facing disruption – examples from the 2012 Water Disclosure Project results

Sector	Company	Negative Impacts
Materials	AngloGold Ashanti	Discharge of cyanide and arsenic led the Ghanaian EPA to issue an Enforcement Notice for the closure of tailings storage facilities in 2007, 2008 and 2009.
Materials	Antofagasta	Fines were imposed due to pipeline rupture.
Materials	Barrick Gold Corp.	Water shortage in 2010 caused a process plant shutdown for two weeks in Papua New Guinea.
Energy	BG Group	Tight discharge requirements in Egypt made BG bring its produced water onshore for treatment.
Utilities	CLP Holdings Ltd.	Salt water intrusion of aquifers led to higher water treatment costs.
Utilities	FortumOyj	There was a need to reduce production to comply with maximum temperature discharge rules.
Utilities	Iberdrola SA	The cost of procurement rose 22.1% totalling EUR9.6bn, as a result of lower water availability.
Energy	Statoil ASA	Alberta Water Act charged the company with contravening its license to withdraw water.
Consumer Staples	The Coca-Cola Co.	Received notices of violations of the United States Clean Water Act.

Source: Water Disclosure Project, 2012

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Mapping water stress

- Location determines the nature of water risk
- Utilities are the biggest direct water users; food production has the largest indirect risk
- Of the G20, India and China are the most vulnerable to water stress, but absolute water scarcity already exists in the MENA region

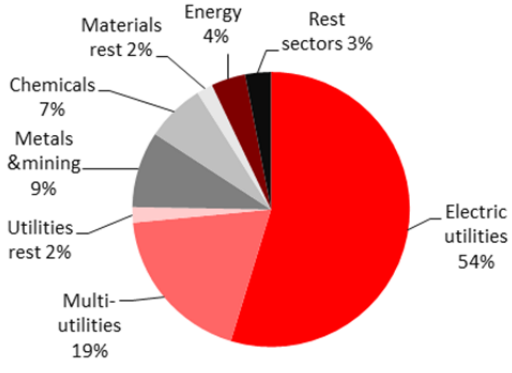
Thirsty sectors

Utilities and materials use the most

Water risks for companies arise not just because of shortages of absolute availability – insufficient infrastructure is also a contributor, as well as deteriorating quality levels. Our previous report *Water Stress – Analysing the global challenges*, September 2012, demonstrated that historical water supply trends are no longer reliable in the face of climate change.

To assess the future potential disruption of water shortage on companies, we think investors should start with the most intensive users in the most stressed locations. To determine the most water-intensive sectors we have taken the MSCI All World Index constituents and looked at water use, using data provided by Thomson Reuters Datastream. Aggregating the stock constituents by sector reveals that utilities account for 75% of MSCI water use; materials accounts for a further 17% (Chart 3). However, for utilities, we note that water exposure is tempered by location. For example, a power facility situated near the coast is less at risk from a facility further inland.

Chart 3: Water withdrawal by MSCI World constituents, 2011



Source: Thomson Reuters Datastream

Beyond this, indirect supply chain risks are greatest for the food and beverage value chain: globally, agriculture accounts for c70% of water use. Historically, water availability has been crucial in determining food production and trade, and we expect this to heighten in the future. According to Bunge, global trade in grains and oilseeds is expected to double from 300m tonnes to 600m tonnes by 2050. This increase will be driven in part by an increase in the trade of "virtual" water –water embedded in products such as agricultural commodities. This, in turn, contributes to global water security and efficiency by maximising the production and consumption of "greenwater" crops – those grown via non-irrigated, rain-fed production systems." The continuing drought in the USA has revealed the volatility and complexity of how food markets respond to severe weather shocks.

Stressed regions

China and India most vulnerable

In *Water Stress – Analysing the global challenges*, September 2012, and *No water, no power – Is there enough water to fuel China's power expansion?*, September 2012, we highlighted the structural vulnerability of both India and China to water quantity and quality risks. Together China and India hold seven out of the 10 most populated river basins in the world.

Nearly half of China's GDP is earned in water-scarce provinces. The government is responding with tough new water quotas, as well as pollution reduction targets. In India, the country's new 12th Five-Year Plan (2012-17) estimates that water demand in 2031 could be 50% greater than today, of which only one-fifth can be delivered through additional supply. This places a priority on water efficiency, which will be achieved through a focus on water pricing, as well as on companies having to file 'water returns' along the lines of tax returns.

Of the 191 respondents to the Water Disclosure project, 27% or 52 companies responded that they have operations in these two countries. Looking across HSBC's equity coverage, Table 2 highlights how companies in these countries are responding both globally and locally.

The disadvantage of the WDP, however, is that it only targets the largest and what it deems to be the most water-exposed companies. Therefore, the results are subject to size and reporting bias and don't necessarily capture where the greatest risks lie.

We examined levels of disclosure among utilities in China and India and found that only 6 out of 161 listed utilities had historic water data disclosed on Bloomberg. Looking ahead, these two countries account for over three-quarters of global proposals for new coal-fired power stations, according to the World Resources Institute. For those new facilities able to access seawater, there shouldn't be a significant problem, but for new facilities further inland, water availability would be a crucial factor in determining the location of power stations.

Table 2: Confronting water risk in China and India – selected companies from HSBC's equity coverage

Company	Exposure	Response strategy
Atlas Copco	India & China	Globally, Atlas Copco's goal is to keep water consumption at current levels. It has used the WBCSD's Water Risk tool to identify water stressed areas and is targeting water-efficient products for intensive sectors.
BASF	India & China	At a global level, BASF is aiming to establish sustainable water management at all sites in areas of water stress by 2020. One of its 6 integrated Verbund sites is located in Nanjing, which has implemented a water recycling system.
Holcim	India	Holcim's ACC subsidiary in India is committed to zero discharge of water and has taken initiatives towards plant upgrades enabling lower water consumption during operation.
ITC Limited	India	ITC has delivered a positive water footprint through extensive use of rainwater harvested within its units and wider watershed projects. It has also water conservation programmes in agricultural production.
Nestle	India & China	Nestle's global Water Stress Index has concluded that 40% of its factories are located in water-stressed regions. In India, Nestle's water consumption per tonne of production has fallen 73.5% 1997-2011.
Nokia Group	India & China	Nokia aims to work closely with suppliers operating in water-scare areas, with the aim of improving water management practices, creation of water policies for facilities, and sharing best practices between suppliers.
Oil & Natural Gas Corp	India	ONGC has set targets to reduce fresh water usage in its operations and achieve maximum possible reuse, recycle of waste water and produced water.
PernodRicard	India	PernodRicard has identified 13 of its production units located in water-scarce areas, including India. At its Behror site, the company has cut water consumption per litre of pure alcohol by 26% since 2008 and recycled 50% of all water used.
SABMiller	India	SABMiller addresses water issues through its in-house water assessment model, which takes a value chain approach. It is also working with farmers through its Water Futures Partnership to address broader watershed/basin risks.
Saint-Gobain	India & China	Saint-Gobain is targeting a 6% water reduction goal at sites of concern by 2013. A water-related risks assessment grid is being developed and applied to all sites in 2012.
Volkswagen AG	China	China accounts for 30% of VW production, and it has implemented technology upgrades in China to reduce water consumption, including ultra-filtration, closed loop recycling, and use of dry painting precipitators in newly built paint shops.

Source: Water Disclosure Project, 2012, Company reports

Table 3: Disclosing Risk? HSBC covered utilities in India and China

Company	Ticker	Water consumption disclosure	Waste water discharge disclosure	Remarks
India				
Adani	ADANI IN			Adopted the latest ISO-Dutch technique (first in India) in highly saline sandy soil and water
CESC	CESC IN			Water is recycled to handle bottom ash
Lanco	LANCI IN			Effluent management systems and equipment are deployed at sites
NTPC	NTPC IN			Installed ash water recycling system
Reliance Infra	RELI IN			Harvested rainwater in all sites; employed water-efficient plumbing fixtures; treatment of sewage water
Tata Power	TPWR IN	Yes	Yes	Focus on continually increasing recycling and reuse and expanding rainwater-harvesting initiatives
China				
China Resources Power	836 HK			No meaningful water information available
CLP Holdings	2 HK	Yes	Yes	Uses tools to map water use and assess risks; bids for projects with water in mind.
Huaneng Power	902 HK	Yes		Carries out water balance test and water consumption examinations
Power Asset Hld.	6 HK	Yes	Yes	"Reduce, reuse, recycle and recover" approach; committed to reducing the risk of spills

Source: Company reports, Bloomberg, HSBC estimates

Groundwater availability will also become an issue given the need for pure process-water at power stations.

MENA: Surviving on scarcity

Absolute water scarcity already exists in countries that are significant contributors to the global economy. Among the G-20, Saudi Arabia is the most water scarce with availability of just $87m^3$ per capita per year, but the United Arab Emirates (UAE) is even more stretched at just $19m^3$ per capita per year. Both countries are well aware of their natural resource constraints, however, and have been planning and rolling out desalination facilities for over 30 years. The downside of desalination is the energy-intensive nature and environmentally damaging side effects of discharge. Nevertheless, there are currently around 15,000 desalination facilities in operation globally, which supply around 0.6% of global water supply. The biggest step change currently happening in the desalination arena is the transition to using renewables to power the energy-intensive facilities instead of oil.

Saudi Arabia is the biggest water producer. Other producers in the top ten from the MENA region include the UAE, Kuwait, Algeria and Qatar. Since Saudi Arabia, the UAE and Kuwait are also in the top ten oil producers in terms of barrels per day, it has made sense to look for alternative sources to power the desalination plants while keeping oil for export; Saudi Arabia alone uses 1.5m barrels of oil per day at its plants, clearly highlighting the potential for energy substitution.

Given the abundance of sunshine hours in the region, solar is the renewable of choice. Currently, the world's largest solar PV desalination plant using novel nano-membrane technology is under construction in the city of Al Khafji, in Saudi Arabia. It will be implemented in three stages over nine years with the first phase delivering water to meet the needs of some 100,000 people and is due for completion at the end of 2013. In addition, Saudi Arabia's Saline Water Conversion Corporation (SWCC) announced plans to establish three new solar-powered facilities. The aim, driven by Saudi Arabia's government, is to gradually convert all desalination plants to run on solar. Other

renewable energy-driven desalination plants are in Cyprus, Egypt, Jordan, Morocco, Turkey, Abu Dhabi (UAE) and the Canary Islands (Spain). So far, however, only 1% of total desalinated water is based on energy from renewable sources, with solar photovoltaic the dominant technology.

The costs of desalination plants have declined from USD1.60/m^3 in 1990 to USD0.63/m^3 in 2002 and USD0.5/m^3 currently. The market for desalination is likely to grow, and for some companies such as utilities that are highly water dependent it may become economically viable to fund in-house desalination projects. Global water intelligence estimates that total investment in seawater desalination will be USD15bn to 2017.

Local stress matters too

As discussed, the exposure to water shortages in the utilities sector is heavily dependent on location (inland vs coast). Other sectors can be exposed to stress in specific regions or countries beyond obvious areas of absolute water stress or major water imbalances, for example, in the mining sector.

Nine respondents to the WDP reported that 100% of their operations were located in water-stressed regions. Five of these are covered by HSBC: Anglo American, Antofagasta, Newmont Mining Corporation, POSCO, and Taiwan Semiconductor Manufacturing. Table 4 sets out how these companies are managing this exposure.

Table 4: 100% stressed – companies declaring all operations in areas of water scarcity

Company	Country	Sector	Managing Water Stress
Anglo American	UK	Materials	Setting operational targets via Water Efficiency Target Tool; assessing financial and broader value of water. By 2030, aiming for 'zero net water consumption'.
Antofagasta	UK	Materials	Operates in the Atacama Desert. 40% of water used is seawater, 85% of water used is recycled, investing in Chile's largest wind farm, and supplying water in the region.
POSCO	S Korea	Materials	Reuse discharged water, reduce water usage, new infrastructure investment.
Newmont Mining Corp.	USA	Materials	40% of water used is seawater. Half of water used is recycled; evaluating water balance via scenario tool
Taiwan Semiconductor	Taiwan	IT	Water recycling rate reached 84.6% in 2011. It has installed organic/acid water recycling, wastewater recycling, a reserve backup water source and monitors local reservoirs.

Source: Water Disclosure Project, 2012, Company Reports, HSBC estimates

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Building resilience

- Quantitative performance analysis remains difficult, given data gaps and portfolio differentials
- Water risk management is common sense but is not yet commonly applied
- From a revenue perspective, we highlight 31 companies with products or services linked to the water management theme

Managing risk in a data desert

Investors like to measure performance. However, water analysis remains in its infancy – both in terms of environmental sustainability and the investment implications in terms of financial materiality. A blizzard of different performance indicators are used across key industrial sectors (Table 5).

The need for improved disclosure is obvious. However, investors cannot wait for comprehensive, universal reporting until they integrate water into portfolio risk management.

In the interim, investors need to know that their holdings in water-intensive value chains in water-stressed regions are able to generate robust cash flows into the future. The CERES Aqua Gauge provides a useful, common sense four-step approach for institutional investors to compare water risk management: 1) measure; 2) manage; 3) engage; and 4) disclose. Below we illustrate the first three of these with examples from HSBC's equity coverage, inevitably mostly from OECD countries.

Table 5: Water intensity metrics reported by respondents to the Water Disclosure Project, 2012

Sector	% reporting water intensity	# reported metrics	# types of metric	Types of metrics
Consumer Discretionary	48%	17	5	Vehicles produced, garments produced, revenues, stores, employees
Consumer Staples	81%	40	4	Weight produced, units produced, volume produced, items sold
Energy	48%	19	3	Barrels of oil equivalent, energy used, tonnes of coal equivalent
Health Care	29%	11	7	Units produced, volume produced, weight produced, revenue, headcount, floor area, raw materials used in production
Industrials	28%	7	3	Weight produced, length produced, area produced
IT	26%	8	4	Revenues, units produced, volume of water used, area produced
Materials	58%	31	1	Weight of commodity produced or processed
Utilities	68%	5	3	Energy produced, weight of steam, volume of gas

Source: Water Disclosure Project, 2012, HSBC estimates

Measure: collect data and assess risk

The starting point, of course, is for companies to understand their water footprint in terms of drivers, volumes, costs and compliance. Companies then need to identify which areas of their operations are most at risk.

The World Business Council for Sustainable Development's Water Tool has proved a useful mechanism for identifying operations in water scarce regions. Nestle's Water Stress Index has identified that 40% of its factories are located in water-stressed regions; Water Resource Reviews are then conducted. Unilever is using data from the Water Footprint Network to estimate the water requirements of key crops and identify its biggest risks in terms of agricultural water. In the capital goods segment, ABB has chosen to develop an in-house tool for mapping water flows, identifying 43 facilities in 21 stressed watersheds in 12 countries that will develop specific action plans.

Manage: plan and integrate

Companies need to understand and communicate what could affect these parameters in the future – not least rising demand from other consumers in emerging economies, the potential for deteriorating quality, as well as disruptions to historical patterns from climate change. Hyundai Mobis is concerned by a potential loss of productivity due to water scarcity, for example.

Water then needs to become part of the core performance metrics for priority operations and the company as a whole. Rio Tinto requires all group businesses to set a freshwater efficiency target and a water recycling target for a five-year period (2008-13). Longer term, Unilever has set the goal of ensuring that by 2020 water abstraction at all its factories will be at or below 2008 levels. Mining group Anglo-American is aiming for zero net water consumption by 2030, while chemical group BASF has set the goal of establishing sustainable water management at all sites in areas of water stress by 2020.

Just as important as setting the right goals is the identification and expansion of internal capacity. Global companies can benefit from transferring expertise from one region to another: WalMart Mexico has become a leader in water stewardship within the wider group. To become real, water goals have to be incorporated into routine management systems, including budgeting and capital allocations. Information on the costs and returns of water investments are particularly few and far between. Nestle, for example, did disclose CHF28m in water-saving and cleaning programmes during 2011, a minute proportion of Nestle's overall costs. Volkswagen de Mexico has financially supported a reforestation project to combat the reduction of groundwater.

Engage: reaching the influencers

The shared nature of the water resource means that corporate resilience relies on good relations with others who influence the quality and availability of water, both locally and globally. Mining majors such as Anglo-American have recognised that 'being a responsible water user is an opportunity to build stronger relationships'. In the consumer sector, three of Nestle's five W.AT.E.R commitments are externally focused:

- Work to achieve water efficiency across our operations
- Advocate for effective water policies and stewardship
- Treat effectively the water we discharge
- Engage with suppliers, especially those in agriculture
- Raise awareness of water access and conservation

Finally, companies need to communicate their understanding of water exposure and how they are managing it to various stakeholders.

Identifying water solutions

Rising water stress is driving an expansion of water solutions markets. Full analysis on opportunities for the water utilities is given in *Global Water Management – Innovation and Investment Opportunities*, November 2012. Below we set highlight 31 companies that illustrate the theme in terms of the potential for revenue growth.

Table 6: Companies covered by HSBC providing water products and services

Stock	Ticker	Currency	Price	Rating	Analyst	Country	Sub-theme	Company activities relating to water
ABB	ABBN VX	CHF	19.56	N	Colin Gibson	Switzerland	WEM	Supplies motors, drives, flow and pressure meters, water quality analysers, controllers, transformers, substations, pumping stations and control systems to municipal treatment plants, desalination plants, irrigation networks, pumping stations, distribution networks, industrial treatment and re-use plants, and waste water treatment and end-use plants.
Acciona	ANA SM	EUR	61.45	N(V)	Sean McLoughlin	Spain	WM	Designs, builds and operates plants for treating drinking water and waste water, tertiary treatment of waste water for reuse, and reverse osmosis desalination.
American Water Works	AWK US	USD	37.91	N	Verity Mitchell	U.S.A	WM	Provides water supply and wastewater treatment services to residential, commercial and industrial customers in the United States and Canada.
Andritz	ANDR AV	EUR	49.2	UW	Joerg-Andre Finke	Austria	WEM	Pumps for drinking water supply along with equipment for hydro power.
Aqua America	WTR US	USD	26.87	OW	Verity Mitchell	U.S.	WM	Operates regulated utilities providing water or wastewater services in the USA.
Arabian Pipe	APCO AB	SAR	31.3	N(V)	Raj Sinha	S Arabia	WEM	Produces carbon steel pipes used for water supply infrastructure.
BASF	BAS GR	EUR	73.86	N	Geoff Haire	Germany	WM	Supplier of organic flocculants and coagulants technologies, and ultrafiltration technologies for water treatment.
China Everbright	257 HK	HKD	4.43	OW(V)	Elaine Lam	China	WM	Construction, upgrade, and operation of waste-water treatment plants, reusable water treatment plants, and surface water treatment plants in China.
China State Construction	3311 HK	HKD	10.48	OW	Carson Ng	China	WID	Infrastructure projects, including water treatment, water supply and sewage treatment.
Empresas ICA	ICA* MM	MXN	37	OW	Francisco Suarez	Mexico	WID	Infrastructure projects in water supply and sewage system.
Geberit	GEBN VX	CHF	215.7	OW	Tobias Loskamp	Switzerland		Leading provider of sanitary and piping systems for water management in buildings in Europe.
Hutchison Whampoa	13 HK	HKD	85.85	OW	Mark Webb	Hong Kong	WID	Infrastructure projects in the water sector.
Hyflux	HYF SP	SGD	1.3	UW	Neel Sinha	Singapore	WM	Provides integrated water management solutions, including desalination facilities, to municipal and industrial clients in Southeast Asia, India, China, the Middle East and North Africa.
IJM Berhad	IJM MK	MYR	4.9	OW	Tarun Bhatnagar	Malaysia	WID	Water treatment.
Keppel Corp	KEP SP	SGD	11.35	N	Neel Sinha	Singapore	WID	Waste water treatment, drinking water treatment and supply projects.
Linde	LIN GR	EUR	133.4	OW	Sebastian Satz	Germany	WM	Waste water treatment, drinking water conditioning, improvement of raw water quality, water purification and process water treatment.
Philips Electronics	PHIA NA	EUR	21.39	N	Michael Hagmann	Netherlands	WEM	Product portfolio includes home water purification solutions, which are mainly marketed in emerging markets such as India and Brazil.
POSCO	005490 KS	KRW	358000	OW	Brian Cho	Korea	WEM	Seawater desalination projects in Gwangwang Donghoan.
Saint Gobain	SGO FP	EUR	31.54	OW	John Fraser-Andrews	France	WEM	Manufactures pipes for water supply and sewer networks.
Saudi Arabian Amiantit Co	SAAC AB	SAR	14.5	N	Raj Sinha	S Arabia	WEM	Serves municipal, civil engineering, industrial, energy, and agricultural markets with pipes and accessories for water supply and sewage systems.
SembCorp Ind.	SCI SP	SGD	5.37	OW	Neel Sinha	Singapore	WM	Water treatment and supply services to industrial and municipal customers.
Severn Trent	SVT LN	GBP	1587	N	Verity Mitchell	U.K.	WM	Water and wastewater treatment and provision in the Americas, Europe, the Middle East, North Africa, and Asia Pacific.
Shanghai Ind.	363 HK	HKD	27.25	OW	Stephen Wan	China	WID	Water supply and sewage treatments in China.
Siemens	SIE GR	EUR	83.71	N	Michael Hagmann	Germany	WEM	Products and services for drinking water supply, industrial water and wastewater treatment.
Strabag	STR AV	EUR	19.63	UW	Tobias Loskamp	Austria	WID	Planning and construction of projects in drinking water treatment, sewage treatment, desalination, pipelines and networks for water supply.
Suez Environ	SEV FP	EUR	9.525	N	Verity Mitchell	France	WM	Provides water supply and waste water treatment services to municipal and industrial clients in Europe, Asia, Pacific, North America, Africa, the Middle East, and South America.
Syngenta	SYNN VX	CHF	398.1	OW	Geoff Haire	Switzerland	WM	Provides unique water solutions through special plant breeds, which reduce water requirement without affecting growth and yield. Promotes water management practices to farmers.
Unilever	UNA NA	EUR	29.14	OW	Cedric Besnard	Netherlands	WEM	Water purifier for domestic use.
United Utilities	UU/ LN	GBP	720.5	N	Verity Mitchell	U.K.	WM	Provides water and wastewater services in England and Wales.
Veolia Environ	VIE FP	EUR	9.2	OW(V)	Verity Mitchell	France	WM	Provides water and wastewater services, including the management and operation of large-scale and customised drinking water plants in several countries in Europe and Asia.
Welspun Corp	WLCO IN	INR	100.9	N	Puneet Gulati	India	WEM	Produces steel pipes and tubes with use in agricultural and construction sectors for water supply.

Source: Water Disclosure Project, 2012, Bloomberg (priced as of 21 January 2013), Company reports, HSBC estimates; OW – Overweight, N – Neutral, UW – Underweight, V - volatile
Note: WEM=Water Equipment Manufacturing, WM=Water Management, WID=Water Infrastructure Development

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Disclosure appendix

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Important disclosures

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Rating definitions for long-term investment opportunities

Stock ratings

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*A stock will be classified as volatile if its historical volatility has exceeded 40%, if the stock has been listed for less than 12 months (unless it is in an industry or sector where volatility is low) or if the analyst expects significant volatility. However, stocks which we do not consider volatile may in fact also behave in such a way. Historical volatility is defined as the past month's average of the daily 365-day moving average volatilities. In order to avoid misleadingly frequent changes in rating, however, volatility has to move 2.5 percentage points past the 40% benchmark in either direction for a stock's status to change.

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