WATER AS AN INFRASTRUCTURE INVESTMENT OPPORTUNITY
Water as an infrastructure investment opportunity

When most investors think about big infrastructure projects, water tends to be overlooked. Instead what comes to mind are large transport projects like airports, ports, railways and motorways, or telecom projects like fibre optic networks and big power projects such as large electricity power stations. But in fact water infrastructure is a very big business – and an investable one. According to a McKinsey study, almost $12 trillion will be spent in water-related infrastructure projects between 2013 and 2030. This is one of the largest infrastructure categories globally, similar in size to telecom and power. But while many investors have large exposure to power and telecom, most have relatively little exposure to water, and particularly to water equities.

It is easy to see where the $12 trillion needs to be spent. The existing water infrastructure, in most regions, has been in place for many decades and is breaking at an increasing rate. It is becoming more commonplace to see images of sinkholes and geysers from degraded water pipes. A large portion of the huge investment opportunity is independent of the economy - it is simply driven by fixing and maintaining the existing infrastructure. Also, incremental supply of water to meet growing global demand is coming from further away or from a starting point of wastewater, seawater, or brackish groundwater. There are a number of infrastructure opportunities associated with companies providing solutions to these challenges, which can be broadly categorised as follows:

- Increasing water supply and access
- Applying innovation to reduce water consumption
- Repair and maintenance of existing water infrastructure
- Improving water quality
- Cyclical growth opportunities
- Infrastructure investment opportunities from unique once-off regulation
- Extreme weather events

The Investment Case

Many investors invest in infrastructure via illiquid projects which force the investors to tie up their funds in single projects, for long lock-up periods. Others try to get around the liquidity and single-project concentration of risk by investing in infrastructure funds. But that brings its own problems as a large proportion of the funds invested may in practice sit in cash (or in broad market equities) for a considerable time period before actually being invested in projects. In contrast, investing in water infrastructure equities is an excellent way to diversify and a good deal more straightforward. A decision to invest in water infrastructure equities can be implemented almost immediately and — perhaps more importantly — can similarly be quickly reversed. There is also the additional comfort of investing in securities that are listed on (regulated) stockmarkets, and of course publicly traded infrastructure stocks have less leverage which is especially beneficial during times of rising interest rates. Finally, there are transparency benefits — portfolio valuations of publicly traded equities are based on readily available market prices. Ultimately, this approach to water infrastructure investing is more comprehensive, transparent, liquid and diverse than a typical infrastructure fund.

So why do most investors lack exposure to this important segment of the infrastructure sector? Oftentimes it is a result of not knowing about the opportunity. Many water companies are down the market cap scale and are somewhat less intensively covered by broker research than large cap companies, which incidentally can create the opportunity for generating alpha (excess return). Others may doubt whether there is a strong enough correlation between listed water stocks and infrastructure stocks. But in fact the relationship is robust, as the chart below shows, with a correlation of close to 0.9 over time.
Bringing this all together, we can conclude that:

- Water infrastructure spending is one of the largest components of global infrastructure spend
- Investing in listed water equities removes the ‘liquidity problem’ barrier to investing in infrastructure
- The KBIGI Water Strategy has outperformed the broader market over many years *
- Investing in water public equities, via the KBIGI Water Strategy, offers strong correlation with the S&P infrastructure index

* Source: KBI Global Investors. The KBIGI Water Strategy has outperformed the MSCI World Index in 11 out of the 14 full calendar years since its inception in 2000. Performance is gross of fees in USD.
Increasing water supply and access
There is not really a global water shortage. There is a shortage of clean, fresh, and local water. Among the solutions to add to global supply is desalination whereby salt water or brackish water is treated to produce fresh water suitable for human consumption or industry. Desalination plants still offer one of the most viable ways of supplementing the world’s depleting water supplies and are most widely used in areas of severe water stress such as the Middle East. The construction process involved in these plants is extensive, providing opportunities for companies across different areas of water infrastructure and technology. Water recycling – extensively treating wastewater for re-use in various markets – uses a similar process to desalination and is expected to drive even more investment over the coming decade given its lower energy consumption and total costs.

The dislocation between water supply and demand is evident in many parts of the world but is most prevalent in emerging economies where population growth and urbanisation is most significant. In China, the ‘Chinese South-North Water Transfer Project’ is designed to bring water from the southern region of China (which has water in abundance) to the northern Chinese cities where large percentages of the population live. This is a massive project that will be constructed from now until 2050. This project will provide opportunities for companies across the water infrastructure spectrum – manufacturers of pipe, pumps and valves as well as companies involved in design and construction – for many years to come. On a smaller scale, there are currently several long distance water transfer pipelines under construction in Texas, as a reaction to droughts earlier this decade.

Applying innovation to reduce water consumption
Increasing water supply gets a lot of attention but there is similarly a large opportunity for investors to benefit from infrastructure investments associated with reducing the demand for water. This comes from companies supplying efficient plumbing and irrigation technologies, smart metering, and infrastructure diagnostics and leak detection (one of the more innovative areas to gain traction in the water industry). Infrastructure diagnostics companies can detect where there are leaks and problems with structural integrity underground, allowing for cost-efficient strategic repairs that can save municipalities significant amounts of money and avoid critical environmental and social challenges in cities and regions faced with large scale pipe bursts.

Repair and maintenance of existing water infrastructure
As mentioned, the bulk of the activity in the global water sector relates to maintaining the existing infrastructure. These companies represent the epitome of sustainable businesses. Many have been around for over a century providing critical infrastructure such as pumps, valves, hydrants, and various other pieces of equipment to their long standing customer base. In this business, relationships and proven technology form the backbone and technological obsolescence is a low risk. Similarly, privately-owned water utilities in which we invest, whether regulated monopolies or operating under long term concessions, are charged with maintaining and optimising the efficiency of their water infrastructure systems. In return, they earn a reasonable rate of return on their investments over the long term.

Improving water quality
Water and wastewater treatment plants can be large infrastructure projects. With demographic changes resulting in significant amounts of human, industrial and agricultural waste reaching our water supplies, these projects are now essential. Regulation has emerged as a key support to these initiatives as country’s look to improve their water quality and restore the water ecology function. In China, for example, pollution from industrialisation has led to more than 70% of Chinese rivers, lakes and groundwater being designated as polluted, leading to an urgent need for wastewater treatment. China’s next 5 Year Plan is expected to shift the focus back to Tier 1 and Tier 2 cities to address their severely contaminated surface and ground water and is expected to result in significant investment in new plants and the retrofitting of existing plants.
Cyclical growth opportunities
While the so called break-and-fix market is sizable, there are also more cyclical growth opportunities for investing in water infrastructure companies. These include companies involved in manufacturing, distribution, and construction. The various cycles may relate to residential or non-residential construction or may be more tied to global capital spending in industries ranging from semi-conductors to energy. The variety of end markets and cycles provides multiple ways to benefit from the growing global economy.

Infrastructure investment opportunities from unique once-off regulation
There are a number of companies who are beneficiaries of specific regulations associated with water (which can be very material to earnings growth). The Ballast Water Management Convention is an agreement established to limit the harm caused by invasive species and would require over 50,000 ships globally to be retrofitted with ballast water treatment systems over the next decade. The estimated market from these treatment systems alone is around $50 billion and there are a number of companies well positioned to deliver the required solutions.2

Extreme weather events
Finally, there are significant water infrastructure projects being undertaken to negate the impacts of extreme weather related to climate change. Rising water levels and extreme weather events have increased in recent years such that this is an area that can no longer be ignored. While wastewater treatment and water recycling are key focus areas in regions of extreme drought like California and Australia, perhaps the most significant and notable example is the water infrastructure project undertaken by New Orleans in the aftermath of ‘Hurricane Katrina’. Control pump stations, flood gates and storm walls are examples of infrastructure initiatives to prevent extreme weather events such as the massive flooding that happened in New Orleans during Hurricane Katrina. In the aftermath, the US Army Corps of Engineers built the largest flood control pump station in the world. The city also saw reinforcement of the levee system that failed during the storm and has recently implemented a $6.2bn water plan to protect the city from nature’s forces in the coming years.3
A McKinsey report took three different approaches to measuring the scale of infrastructure spending likely to be seen, globally, over the period to 2030.

1. Independent estimates of future infrastructure need, including those from the OECD, the International Energy Agency and Global Water Intelligence, indicate a requirement for $57tn over the period to 2030, of which water would comprise $11.7tn, or just over 20%.

2. Historically, infrastructure investment has averaged about 3.8% of global GDP. This converts to about $62tn of total investment over the period to 2030. If water represents just over 20% of the total, as per the previous methodology, this results in a likely required spend of $12.7tn.

3. About 12 countries, worldwide, have sufficient data to be able to estimate the value of the total infrastructure in the economy. As a rule of thumb, the value of the infrastructure stock in these countries was around 70% of GDP. If this ratio continues, the total spend on infrastructure over the period to 2030 would be $67tn, of which $13.8tn would be on water.

These three independent measures of required infrastructure spend give estimates that are quite similar, ranging from $11.7tn to $13.8tn.

About KBIGI Water Strategy
KBI Global Investors began investing in water equities nearly 15 years ago. The firm has a fully dedicated specialist team of investment managers looking to identify companies that will be downstream of the significant water infrastructure spend over the coming years.

End Notes
3 https://nextcity.org/features/view/the-recovery-that-wasnt

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