

INVESTING IN BLUE GOLD

THE WORLD'S MOST IMPORTANT AND
PREVALENT COMMODITY IS IN SHORT SUPPLY,
CREATING OPPORTUNITIES FOR INVESTORS.

BY LEILA BOULTON

Water is a commodity that's distinct in two fundamental ways: It doesn't trade on an exchange and it has no substitute at any price. Yet water, as boring and ubiquitous as it may seem, is something strategic investors are watching carefully these days. That's because the world supply of clean, affordable water is under duress, and it's having a noticeable impact on world economies and markets.

"Water is under siege from multiple angles," says Garvin Jabusch, chief investment officer of Boulder, Colo.-based Green Alpha Advisors.

Green Alpha seeks out companies that offer cutting-edge solutions to society's biggest problems, such as global warming, population growth and resource constraints. Water is central to all these themes, Jabusch says.

For advisors and their wealthy clients, the global water crisis could present unique opportunities. Some investors are so bullish they refer to water as "blue gold."

With constant demand and a finite supply, global water investments are considered stable, non-cyclical and low-risk. "In general, water is a defensive and relatively uncorrelated asset class," says Matt Dickerson, a managing director at Summit Global Management.

TAPPED OUT

Viewed from space, Earth appears mostly blue. Three quarters of the planet's surface is covered with water, but most of it is unconsumable. Ninety-seven percent is salt water and 2.5% is mostly frozen in polar ice caps. Less than 0.5% is fresh water readily accessible by humans. Much of that tiny amount is contaminated and unfit for any application.

Population growth is the primary driver of the world's water woes.

People need at least two liters of water per day to survive, and more for basic sanitation. Food can't be grown without water and most forms of energy can't be produced without it.

As the world population grows, aquifers are shrinking and reservoir levels are falling. Major rivers are drying up before reaching the ocean. Experts say climate change will only exacerbate these problems. Worse yet, the supply of water is fixed. There's no more water now than when the dinosaurs roamed and there won't be any more in the future.

In 2000, 6 billion people inhabited the planet. The population now stands at 7 billion and is expected to grow to 8 billion by 2025. Overpopulation and increasingly severe weather will leave half the world's population facing water shortages by 2030, according to a recent National Intelligence Council forecast. As it is, 1.1 billion people already lack an adequate supply of clean drinking water and 2.6 billion are short of the most basic sanitation facilities.

The distribution of water around the globe is seriously uneven, experts say. Sixty percent of the world's fresh water can be found in just nine countries. Unlike other commodities, water isn't easily transported over long distances. It's too heavy and voluminous, which explains why water prices are dictated by local supply and demand.

This imbalance of supply and demand is already impacting the cost of water to businesses and consumers. Circle of Blue, a global water information resource, reports a 25% increase in water prices in 30 major U.S. cities since 2010. "Moreover, water is still abusively undervalued relative to its real economic worth, so huge room exists for asset price expansion," according to a 2012 report by San Diego-based Summit Global Management, an investment management firm that buys water rights and water-related equities.

WATER WORLD

The water industry is the third-largest in the world behind oil and gas production and electricity generation. Summit estimates that the global market for water products and services is \$500 billion annually. The firm says there are at least 400 public companies worldwide operating in this space, with a combined market capitalization of over \$1 trillion.

The market includes a broad spectrum of businesses spanning many industries, including companies that collect, treat, store, save and distribute water. Summit breaks these various

companies down into two major groups: water utilities (15%) and water industrials (85%).

In most of the world, water utilities, whether public or private, are responsible for delivering clean water to the industrial or domestic end user and removing wastewater. Numerous public and private companies manufacture the products and provide the services necessary to support water delivery and treatment. These include manufacturers of meters to measure water use; makers of pumps, pipes and valves to deliver water; and providers of chemical and bio-

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logical treatments to sanitize water.

Industry insiders say the biggest growth areas will be expanding water services in developing countries and repairing water infrastructure in developed countries, especially the U.S. and the nations of Southern Europe.

Consulting firm Booz Allen Hamilton estimates that up to \$22 trillion will be needed to fully modernize global water and wastewater systems over the next 20 years. Water industrials that manufacture the equipment necessary to address this market should see significant growth.

There's little doubt that the U.S. needs massive investment in water and sewer infrastructure—and soon. The U.S. has more than 72,000 miles of water mains that are over 80 years old. About 250,000 to 300,000 of them break annually. The nation, which is the largest per capita consumer of water in the world, loses 1.7 trillion gallons of water to leaks annually, according to the U.S. Geological Survey. The U.S. Environmental Protection Agency says the country needs to invest \$300 billion to \$1 trillion over the next 30 years just to upgrade basic water systems.

Private investments are needed to help fund all the necessary infrastructure repairs because public funds will be insufficient, experts say.

In addition to infrastructure repairs, Summit's research identifies three main areas of emerging opportunities in water-focused businesses: increasing the efficient use of water in agricultural activities; treating the water left over from oil and gas operations, which is typically contaminated with heavy metals, salts and bacteria; and cleaning ballast water in ships, which often provides a pathway for introducing non-native species into fragile aquatic ecosystems.

Worldwide, 70% of water is used for agricultural activities,

22% for industrial processes and 8% for domestic purposes. The Summit report calls agricultural efficiency the “low-hanging fruit” of water supply issues. Nevertheless, the market for water treatment products and services is over \$3 billion annually in the U.S. alone, according to Robert Fenwick-Smith, senior managing director of Aravaipa Ventures, a Boulder, Colo.-based venture capital firm that invests in efficiency technologies.

“Water treatment is becoming more important for some very simple reasons: human crowding, pollution and global warming,” he says. “If rivers and oceans get warmer, bacteria that were historically held in check by lower temperatures will explode. We will have to start treating water for all kinds of applications. ... If you have a good water treatment technology, there’s no geographic limitation to selling it.”

DIVING IN

There are limited ways to invest directly in water. It doesn’t trade like most other commodities and clients can’t buy water futures. “Water is too localized a resource to be securitized like that,” says Dickerson.

Although it’s possible to buy water rights, the process is complicated. “Water rights are illiquid and take very localized expertise and presence in order to execute successfully. In general, water is an asset with a long time horizon and investments must be made with that in mind,” he says.

Australia has a well-regulated market for trading water entitlements, which Dickerson says are similar to water rights. He says Summit has a \$250 million fund that invests in water rights or entitlements and related assets, such as land and infrastructure in the Western U.S. and Southeastern Australia, areas where water is in short supply and can be traded relatively freely.

Most family offices and high-net-worth individuals invest in water indirectly through hedge funds that own water rights

or buy companies positioned to provide solutions to the water crisis. There are also limited opportunities to invest in private equity and venture capital funds. Some affluent investors buy stock in individual companies, or shares of water-oriented mutual funds and exchange-traded funds.

Dickerson estimates there are about five U.S.-based and 10 global private funds that specialize in water. Summit is one of the largest in the U.S., with about \$450 million in assets under management.

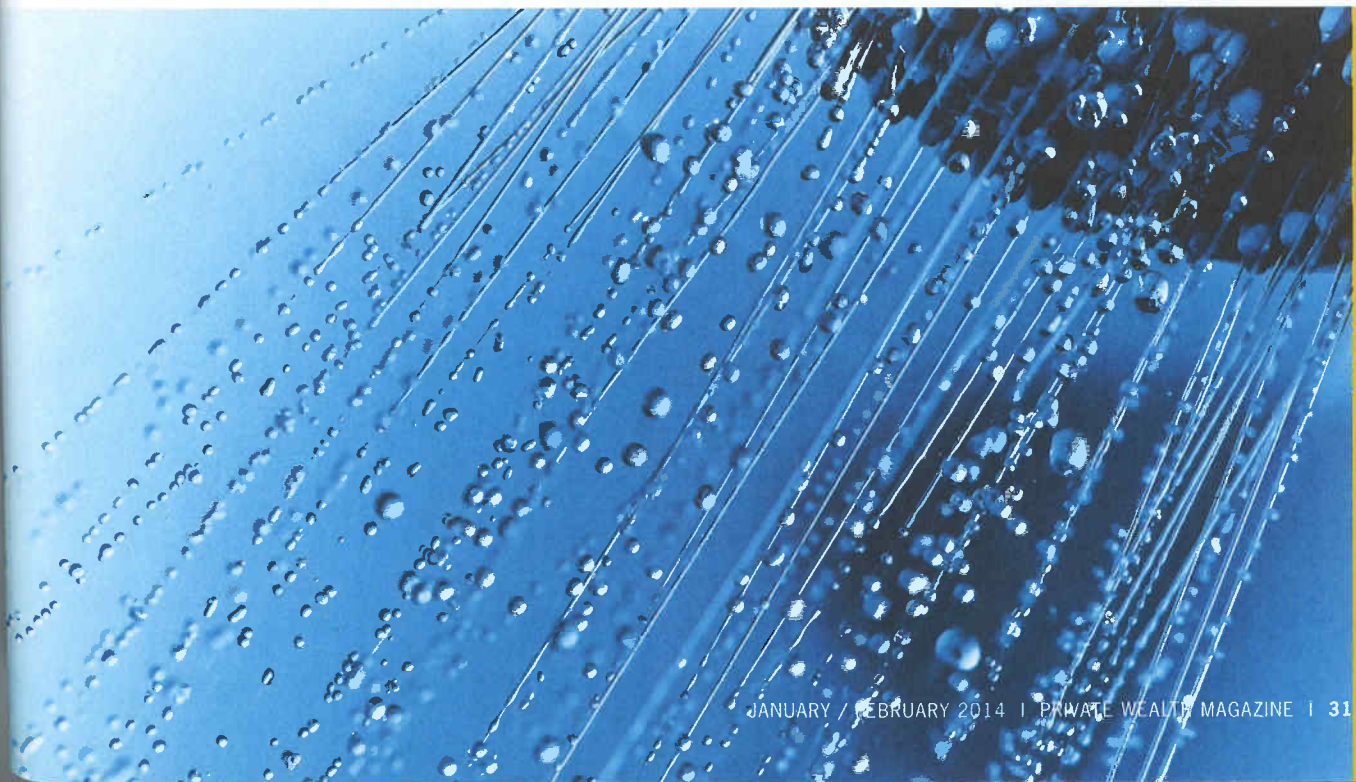
New York City and San Francisco-based Water Asset Management is the other major water-focused investment management firm in the U.S. Chief Operating Officer Marc Robert says the firm has about \$400 million in assets under management.

Robert says his firm runs a long-only and a long-short public equity fund, as well as a private equity fund. Most of the firm’s holdings are in global public equities and domestic private equity investments in water resources. The funds have outperformed broad market indices since inception, he says. Investors include high-net-worth individuals, family offices, a pension fund and a sovereign wealth fund. The investment minimum is typically \$1 million.

At least one relatively large venture capital firm, Toronto-based XPV Capital, has a water-only focus. XPV has \$150 million under management, according to a recent article in *The New York Times*. The company’s Web site indicates it has seven portfolio companies. One of those companies, FilterBoxx, provides potable water and wastewater treatment systems to drilling and mining operations. Another business, Newterra, designs and manufactures systems that remove organic and inorganic contaminants from sewage and wastewater in remote areas.

There are also smaller venture capital firms that invest in water treatment and conservation technologies. One of Aravaipa Ventures’ portfolio companies, Silver Bullet, has a patented and award-winning technology that disinfects and descales water in cool-

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ing towers in commercial buildings without the use of hazardous chemicals. The technology also kills bacteria in ballast water and agricultural water. Silver Bullet's investors include family offices and affluent individuals. The minimum investment is \$100,000.

"The single biggest problem we have in selling the technology is that most people say, 'It's too good to be true.' But it's a proven technology. We have 450 systems out in the field paying rent today," says Fenwick-Smith.

PUBLIC POOLS

In addition to private investments, clients may want to consider public global and domestic companies.

Water-focused equities have generated a 16.9% return annually over the last 20 years, compared with a 6.6% return for the S&P 500, with slightly less volatility, according to data collected by Water Asset Management.

Governments have traditionally been responsible for water delivery, but, increasingly, private companies have been taking over this function. The three major companies that deliver water on a for-profit basis are French companies Suez Environnement and Veolia Environnement and U.K. company Thames Water. "The large, incessant capital expenditures required to maintain water systems are encouraging a trend from municipal ownership to privatization and consolidation, creating more investable opportunities," according to Summit's research.

Robert likes the prospects for Suez Environnement, one of the largest public global water companies. He thinks they executed particularly well during and after the recent financial crisis. "They're a professionally managed infrastructure company that trades at a 17 multiple, with a 5% dividend yield. That gives you global exposure to many of the trends in the industry," he says.

As an example of a small global company with potential, Jabusch's partner in Green Alpha Advisors and its chief financial officer, Jeremy Deems, cites Consolidated Water. He says the Cayman Islands-based company has a proven and scalable solution to creating fresh water from seawater. "They just won a major deal with San Diego and Tijuana to desalinate billions of gallons of water while integrating solar power," he says. "It's a small company that pays a dividend. It doesn't trade much. It's under the radar."

Although desalination is usually an energy-intensive process, it can be the only viable source of water in some areas. Global Water Intelligence, an industry trade group, says the U.S. is the second-largest desalination market after Saudi Arabia. The group expects the market to experience growth in the high teens over the next five years.

On the domestic front, Jabusch says he likes Milwaukee-based Badger Meter. The company makes smart meters that can significantly reduce over-watering of crops, helping farmers save water while simultaneously improving yields.

A recent report from Water Asset Management says the firm expects rising water prices to drive the need for increased measurement of the quantities consumed, which should cause growth in meter installations to exceed growth in the overall water industry.

Besides investing in individual public companies, water-focused public equity funds and exchange-traded funds are another way to play the space.

The popular Calvert Global Water Fund was up 23.18% year-to-date and returned 20.59% annually over the last five years through November 20. The fund is an all-market-cap mutual fund that invests in global water-related companies. It has about 30% of its assets in water utilities, 30% in water technology providers and 40% in infrastructure companies. About 70% of the companies the fund invests in derive over half their revenue from water-related activities.

Some well-known, large European funds include Pictet Global Water Fund and SAM Sustainable Water Fund. U.S.-based mutual funds include AllianzGI Global Water Fund.

Clients can also invest in exchange-traded funds with a water orientation. The largest ETF, the PowerShares Water Resources Portfolio, tracks the Nasdaq OMX US Water Index. The fund's relative, PowerShares Global Water, replicates the Nasdaq OMX Global Water Index.

The other two ETFs clients can choose from are First Trust ISE Water and Guggenheim S&P Global Water. A recent Morningstar analyst's report cites First Trust's fund as the least expensive and the best performer. It has provided a total return of 10.6% annualized over the past five years, compared with 6.2% for The PowerShares Water Resources Portfolio, 6.8% for PowerShares Global Water and 8.6% for Guggenheim S&P Global Water. The stocks in all these ETFs have an industrial as opposed to a utility focus and should move higher if the economy improves and infrastructure spending increases.

IMPACTING THE PLANET

Water may be the ultimate impact investment—one that has the potential to generate a competitive return for investors while addressing a critical social or environmental problem.

Some object to calling water a "commodity." They see it as a basic human right and believe it should be free for all. But water isn't really free. It costs money to treat and transport. To provide water sufficient for drinking and sanitation, many utilities have rate structures that help the disadvantaged. Moreover, artificially cheap water could actually encourage waste.

As for those who balk at the privatization of water supplies, Deems says they may want to rethink their position. "If we're going to find a solution to our water problems, we're going to need to consider investing in companies that own water to keep it safe and fresh," he says.

Investing in water can have a significant social impact. "In terms of minimizing disease, water and sanitation are at the forefront of keeping populations healthy in both developed and developing countries. In the U.S. alone, there are over 20 million people a year who get ill from some sort of water-borne disease," says Robert.

"It can also be a sound investment," he says. "Everybody loves social media right now, but the business models that we're investing in will be here in 20, 50, 100 years, given the importance of water. Who knows if Twitter will still be here." *RW*