Water: pure, refreshing defensive growth

Our Goldman Sachs framework for investing in the global water sector
Sustainable investing: Environmental focus
Biography and Goldman Sachs water-related research

• Deane M. Dray, CFA
  - Joined Goldman Sachs in 1997; works in the capital goods sector covering Electrical Equipment and Multi-Industry companies.
  - Prior to joining Goldman Sachs, worked for Lehman Brothers as an institutional salesperson and then in equity research covering diversified technology companies.
  - Received an M.B.A. from New York University and a B.A. (with honors) from Brown University; he is a Chartered Financial Analyst.
  - Recently appointed to the Board of Safe Water Networks a nonprofit organization developing portable emergency water filtration systems for developing markets.

• Goldman Sachs water-related research highlights
  - Water primer, June 2005: Water: pure, refreshing defensive growth
  - Water utility survey, June 2006: Growth flows steady
  - UN presentation on global water sector consolidation, October 2005
  - Hosted numerous Goldman Sachs water-related investor forums
Our thesis on the water sector: *Water: pure, refreshing defensive growth*

- Water sector is an attractive defensive growth opportunity
  - $365 billion global water market, $87 billion in the US
  - Developed countries: 4%-6% → infrastructure rebuild
  - Developing countries: 10%-15% → new treatment systems

- Surging toward a global water oligopoly in equipment and services
  - Best positioned are GE, ITT, Danaher, and Siemens
  - Buyout targets are evaporating; remaining assets expensive

- Focus on high-end water treatment systems with more growth, higher margins, and more after-market:
  - Filtration - Reverse osmosis/desalination
  - Ultrafiltration - Water test
Market composition of the water sector

Source: Company reports, Goldman Sachs Research estimates.

Global: $365 billion

- Water test: $4 billion
- Residential: $18 billion
- Other water-related: $20 billion
- Pumps: $25 billion
- Valves: $40 billion
- Infrastructure: $40 billion
- Industrial water treatment: $80 billion
- Water and wastewater treatment: $138 billion

US: $87 billion

- Water test: $2 billion
- Residential: $6 billion
- Other water-related: $8 billion
- Pumps: $8 billion
- Valves: $8 billion
- Infrastructure: $12 billion
- Industrial water treatment: $22 billion
- Water and wastewater treatment: $24 billion
## Top 25 global water companies and their leverage to our water themes

<table>
<thead>
<tr>
<th>Company (ticker)</th>
<th>Market Cap (in $bil)</th>
<th>Water as % of Total Revs</th>
<th>2005 Water Revs (in $mil)</th>
<th>End market</th>
<th>Leverage to water themes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Pumps</td>
<td>Valves</td>
</tr>
<tr>
<td>Veolia (VE)</td>
<td>$21.1</td>
<td>40%</td>
<td>$11,600</td>
<td>34%</td>
<td>&lt;13%</td>
</tr>
<tr>
<td>RWE (RWEOY)</td>
<td>$49.7</td>
<td>&lt;25%</td>
<td>$11,500</td>
<td>&lt;13%</td>
<td>&lt;13%</td>
</tr>
<tr>
<td>Suez (ZSE)</td>
<td>$53.7</td>
<td>16%</td>
<td>$8,500</td>
<td>14%</td>
<td>23%</td>
</tr>
<tr>
<td>Pentair (PNR)</td>
<td>$3.0</td>
<td>75%</td>
<td>$2,200</td>
<td>30%</td>
<td>11%</td>
</tr>
<tr>
<td>Mueller Water Products (MWA)</td>
<td>$1.9</td>
<td>100%</td>
<td>$1,700</td>
<td>38%</td>
<td>11%</td>
</tr>
<tr>
<td>ITT Industries (ITT)</td>
<td>$9.3</td>
<td>25%</td>
<td>$1,650</td>
<td>12%</td>
<td>11%</td>
</tr>
<tr>
<td>Siemens (SI)</td>
<td>$75.6</td>
<td>&lt;2%</td>
<td>$1,600</td>
<td>&lt;1%</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>General Electric (GE)</td>
<td>$343.8</td>
<td>&lt;2%</td>
<td>$1,500</td>
<td>&lt;1%</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Nalco (NLC)</td>
<td>$2.6</td>
<td>40%</td>
<td>$1,300</td>
<td>40%</td>
<td>18%</td>
</tr>
<tr>
<td>Tetra Tech (TTEK)</td>
<td>$1.0</td>
<td>85%</td>
<td>$1,100</td>
<td>85%</td>
<td>✓</td>
</tr>
<tr>
<td>Watts Water Technologies (WTS)</td>
<td>$1.1</td>
<td>100%</td>
<td>$825</td>
<td>42%</td>
<td>20%</td>
</tr>
<tr>
<td>Tyco International (TYC)</td>
<td>$54.3</td>
<td>2%</td>
<td>$850</td>
<td>&lt;2%</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Danaher (DHR)</td>
<td>$20.3</td>
<td>10%</td>
<td>$800</td>
<td>8%</td>
<td>2%</td>
</tr>
<tr>
<td>Aqua America (WTR)</td>
<td>$2.9</td>
<td>100%</td>
<td>$450</td>
<td>100%</td>
<td>✓</td>
</tr>
<tr>
<td>Pall Corporation (PLL)</td>
<td>$3.4</td>
<td>18%</td>
<td>$350</td>
<td>18%</td>
<td>✓</td>
</tr>
<tr>
<td>Rockwell Automation (ROK)</td>
<td>$11.0</td>
<td>&lt;5%</td>
<td>$205</td>
<td>&lt;5%</td>
<td>✓</td>
</tr>
<tr>
<td>Millipore (ML)</td>
<td>$3.4</td>
<td>20%</td>
<td>$180</td>
<td>20%</td>
<td>✓</td>
</tr>
<tr>
<td>Flowserve Corporation (FLS)</td>
<td>$2.9</td>
<td>7%</td>
<td>$175</td>
<td>3%</td>
<td>3%</td>
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<tr>
<td>Roper Industries (ROP)</td>
<td>$4.1</td>
<td>17%</td>
<td>$165</td>
<td>6%</td>
<td>3%</td>
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<tr>
<td>Emerson Electric (EMR)</td>
<td>$34.2</td>
<td>&lt;1%</td>
<td>$160</td>
<td>&lt;1%</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Calgon Carbon Corporation (CCC)</td>
<td>$0.2</td>
<td>44%</td>
<td>$150</td>
<td>39%</td>
<td>5%</td>
</tr>
<tr>
<td>Itron (ITRI)</td>
<td>$1.3</td>
<td>30%</td>
<td>$150</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>Crane Co. (CR)</td>
<td>$2.4</td>
<td>6%</td>
<td>$120</td>
<td>2%</td>
<td>4%</td>
</tr>
<tr>
<td>Honeywell (HON)</td>
<td>$32.2</td>
<td>&lt;1%</td>
<td>$110</td>
<td>&lt;1%</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Hyflux (600.SI)</td>
<td>$0.7</td>
<td>100%</td>
<td>$81</td>
<td>100%</td>
<td>✓</td>
</tr>
</tbody>
</table>

Source: Goldman Sachs Research, FactSet.
Surging toward a global water oligopoly
Best positioned consolidators and pure-plays

Remaining pure-plays
- Aqua America
- Badger Meter
- Calgon Carbon
- Clarcor Corporation
- Hyflux
- Nalco
- Sinomem
- Pentair
- Tetra Tech
- Watts Water

Source: Goldman Sachs Research
Goldman Sachs water valuation continuum

Focus on growth, more technology-embedded business

Implied spectrum of P/Es for key water technologies

Source: Goldman Sachs Research.
Key global trends driving investment in water sector

- Replace aging water infrastructure in developed countries
- China’s and other developing markets’ thirst for water
- Regulatory drivers for water quality and safety
- High-end water treatment technologies, 10%-20% growth
  - Filtration
  - Ultrafiltration
  - Reverse osmosis/desalination
  - Water test
Global water supply versus population

- North America has 15% of the global water supply, but only has 8% of the population. In contrast, China only has 7% of the renewable water supply, but 21% of the population.

- Over one billion people use unsafe drinking water, with 3-4 million people dying each year from waterborne diseases.

- The number of people living in scarce-water conditions globally is expected to double in 20 years, and those in water stressed geographies should increase six times.

Source: UN Educational, Scientific, and Cultural Organization/International Health Programs.
Global profile of water uses: Developed versus developing countries

Patterns of water usage

- Unlike the US pattern of water usage, about 70% of the world’s fresh water goes to irrigation.
- Developing countries’ predominant use of water is for agriculture, while in developed countries, industrial processes represent the greatest percentage of water demand.
- As manufacturing continues its shift to less-developed countries, additional burdens are being placed on already-taxied infrastructures.

Source: United Nations Water Development.
Our investment conclusions

- Water sector is a strategic imperative for many companies in the Multi-Industry sector, increasing prospects for a global water oligopoly

- Expect more investment as developed countries struggle to maintain their aging water infrastructure

- Developing counties still need to build out basic water and wastewater systems

- Filtration, ultrafiltration, reverse osmosis/desalination, and water test have more proprietary, embedded technology and higher growth, margin, and after-market opportunities
Goldman Sachs environmental, social, and governance research mission and methodology

**Mission**

Goldman Sachs’ environmental, social and governance (ESG) research works to integrate ESG issues with industrial analysis and valuation on a sector-by-sector basis, and to identify investment opportunities related to alternative energy, carbon finance, and other ESG issues.

**Methodology for ESG framework – a proxy for management quality**

Industry reports rank companies vs. peers:
- ESG performance (environment, social, governance)
- Competitive positioning on industry themes
- Cash returns (proprietary valuation methodology)

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**ESG framework**

(London ESG team)

- Europe Media: Integrating ESG (Feb 2006)
- Global Mining and Steel: Integrating ESG (Jul 2006)

**Alternative energy**

(Global)

- European Renewable Energy: ESG primer [presentation] (Feb 2006)
- Asia: Alternative Energy: A breath of fresh air (Apr 2006)

**Carbon finance**

(Europe – Utilities)

- European Utilities: Carbon - Putting the fizz into European power markets (Feb 2006)
- European Utilities: Carbon crazy (Apr 2006)

**Water sector**

(US/Asia – Multi-industry)

- Multi-Industry: Water utility survey: Growth flows steady (Jun 2006)

**Portfolio strategy & accounting**

(US)

- Portfolio Strategy: The growing interest in environmental issues is important to both socially responsible and fundamental investors (Aug 2005)
- Portfolio Strategy/Accounting: 2006 accounting agenda – 7 projects to monitor (Mar 2006)

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ESG leaders

+ Industry thematic leaders

+ Cash returns leaders

= Sustainable investing leaders
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Distribution of ratings/investment banking relationships

Goldman Sachs Investment Research global coverage universe

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<th></th>
<th>Buy</th>
<th>Hold</th>
<th>Sell</th>
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<td>14%</td>
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<td>Investment Banking Relationships</td>
<td>57%</td>
<td>49%</td>
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