

FROM BLACK TO BLUE



Moving the climate focus beyond carbon and on to water: Understanding water-stress exposure in an investment portfolio

Russell Investments Research Summary



A lot of work has gone into identifying how carbon can be measured, managed and invested in for tomorrow's green economy. But there is more to the "E" in environmental than carbon. Here we ask: "what is the next big thing in the environmental space?"— for us, it's water.

Water risks are regional, multi-dimensional and very distinct from carbon. In researching how to incorporate water issues systematically into an investment portfolio we have identified:

- #1** The who, what, why and how of water-related investment themes.
- #2** Four key considerations for investors seeking to incorporate water into their portfolio.
- #3** Existing water-based frameworks and data sets are inadequate. Use our decision-tree approach to enhance decision making.

Overall, we have concluded that the current water-related investment tools available are insufficient and inhibit investors from converting insights into meaningful action. So, we have developed a unique decision-tree approach to tackle this problem and better enable investors to make material investment decisions.

Risks related to water

Water risks are multi-dimensional

The *impact* of water-related risks on communities is potentially catastrophic, given water's place as a critical input to all facets of life. It is this that makes risks related to water multi-dimensional. Furthermore, not only do we need to know how much water is used (i.e. volume), but we also need to plot that against where the unit of water is used (location).

Water risks are distinct from carbon – introducing physical risks

Unlike carbon risks, water-related risks primarily relate to physical risks associated with climate change. Physical risks can be broken down into direct and indirect. Physical risks include direct damage to assets while indirect risks cover supply chain disruptions and water availability, for example.

Who, what, how and why of water-related investment themes

Many frameworks touch on the water, including: The Task force on Climate-related Financial Disclosures (TCFD); The Sustainability Accounting Standards Board (SASB); The Global Reporting Initiative (GRI); United Nations Sustainable Development Goals (SDGs); The Carbon Disclosure Project (CDP) and Ceres' Investor Toolkit.

Given the amount of work that has already been devoted to the topic of water by these organisations, we ask: “what collective insights can we leverage?”. By analysing each of these frameworks, we have identified that together they can, roughly speaking, help to address the “who, what, why and” of water-related themes.

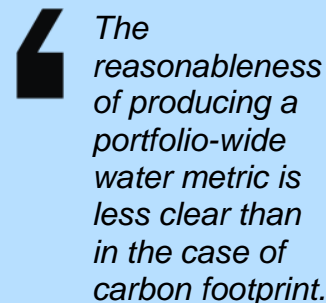
- **Who:** Be industry-specific and identify industries where water really matters to the portfolio
- **What:** Include location to add other dimensions to the data
- **How:** Recognise that water data is still developing
- **Why:** Be forward-looking and think outside the box to recognise proactive companies

Four key considerations for investors seeking to incorporate water into their portfolio

Armed with an understanding of some of the key issues surrounding water, we next turn to the available data. In asking “what is the current state of water data in terms of both quantity and quality?” we’ve identified four key considerations for investors seeking to incorporate water into an investment portfolio

Consideration #1: Data reporting is low

- For securities in the global large cap universe, water withdrawal coverage is 43%. In industries where water *is* a material issue, coverage tends to be higher with industries such as chemicals, metal & mining and semiconductors above 80%¹.
- Water consumption is a material issue for only a few industries, so as one would expect, coverage on water consumption is lower than withdrawal at roughly 16% for the MSCI ACWI Index.
- Given that water is not necessarily a material issue for all companies, coupled with the additional insight that coverage at the universe level is low, the reasonableness of producing a portfolio-wide water metric is less clear than in the case of carbon footprint.
- We have found that there are many industries where water *is* a financially material issue, but companies are not disclosing. This suggests ample opportunities exist for engaging with companies about improving water-related disclosures.




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¹ Source of data throughout this document Russell Investments unless otherwise stated.

Consideration #2: Water usage is highly concentrated

- Water usage, both in terms of withdrawal and consumption, is highly concentrated in a handful of companies. This is similar to what is observed in carbon data: a small number of companies make up a significant share of a portfolio's aggregate carbon emissions.
- In the case of water withdrawal, this feature is even more extreme with 10% of companies contributing 91% of the portfolio's aggregate water withdrawal.
- The highest water usage is found in the utilities, materials and energy sectors



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Consideration #3: The market is highly exposed to water-stressed regions

- When it comes to understanding water risks, a regional lens is critical.
- Ideally, available data would tell us not just how much water was consumed, but also what percent was in high-stress regions. Unfortunately, the data is not this granular (yet). Instead, we proxy for exposure to high-risk regions by looking at companies with more than 20% of operations in high water-risk regions. We find that 71% of the companies in the portfolio meet this criterion, suggesting exposure to regional water risk is significant.
- There are a lot of companies in high-risk regions, but these are not necessarily high water-users. That's the (relatively) good news. The bad news is that there are significant unknown risks in the high-risk regions: 32% of companies have exposure to high-risk regions and do not disclose water use.

Consideration #4: Identify forward-looking information and proactive companies

- One piece of forward-looking data that can be considered is a company's water-related targets. Increasingly these are being reported in corporate disclosures where water is a material part of a company's business.
- Where water is a material issue, approximately 29% of companies by name count have set water-use targets. The underlying premise here is that companies going to the effort to set a water reduction target are making a higher commitment to manage water use than a peer with comparable water use who has not.

Turning research into action: A decision-tree approach

Understanding water-related risks is a vital component of evaluating the long-term sustainability risks and opportunities of an investment portfolio. However, the tools for properly assessing water-related issues systematically are still developing. Through this research we have found that the existing frameworks and data sets for water are in our view, insufficient and inhibit investors from converting insights into meaningful action.

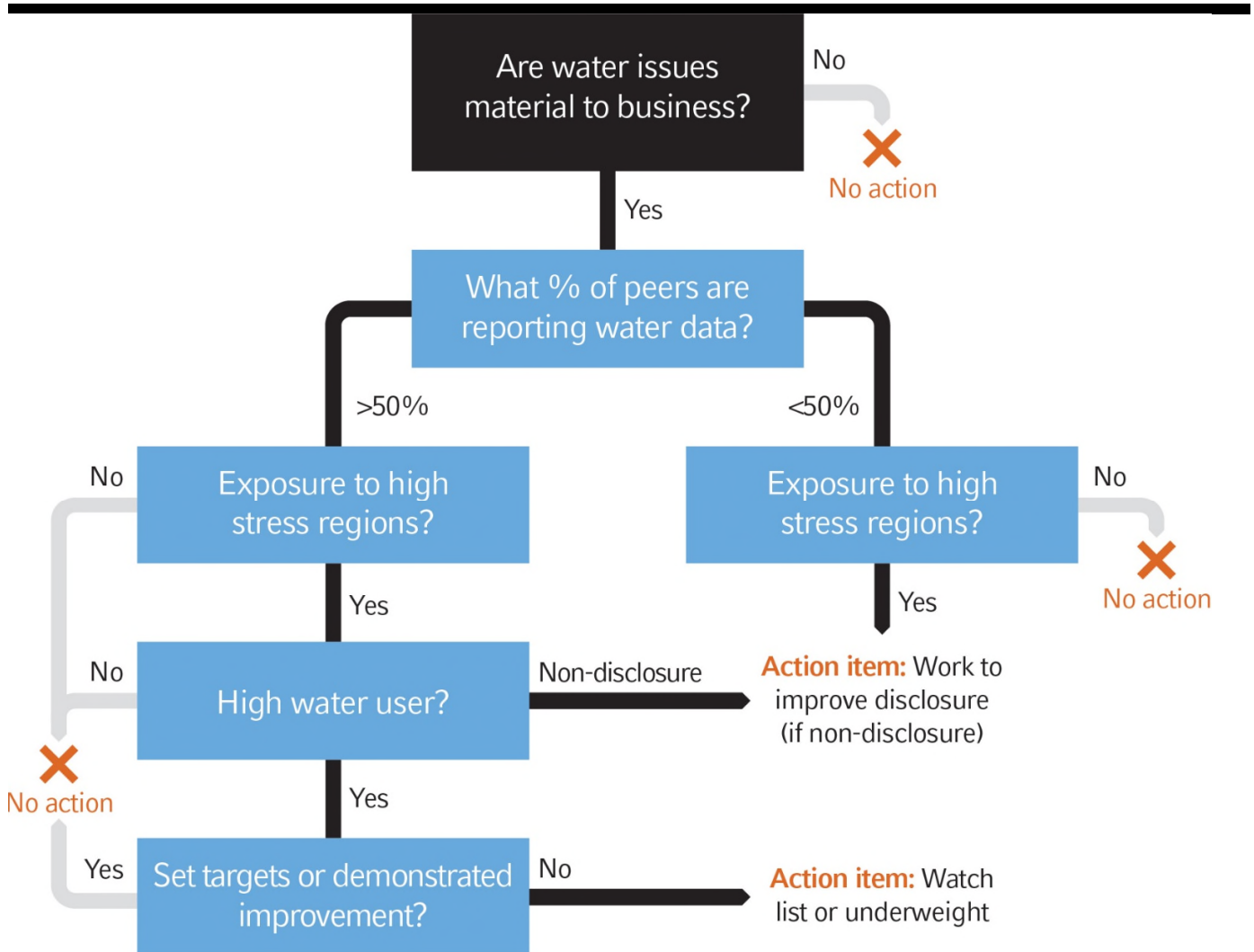
The most useful tool we have found for combining the myriad of considerations into a simple actionable framework is a decision tree approach (overleaf). This tree can be used to sort companies into three buckets: those targeted for improved water disclosure; those added to a water watchlist or underweighted and finally those where no water-related action necessary.

In using this structured approach, we have identified the following:

- Better disclosure is the first step
- Avoid penalising companies who are industry leaders
- Identify the sources of highest known risk in the portfolio
- Incorporate positive attributes and forward-looking metrics

Armed with this framework as a starting point, we can now start tackling the challenge of addressing this critical element of "E" within environmental, social and governance (ESG) more explicitly.

Decision-tree approach to sorting companies in the portfolio



Source: Russell Investments, for illustrative purposes only.

Conclusion

A nuanced topic that requires a thoughtful line of attack

In the full research paper, we provide an overview of key water-related investment issues, an assessment of water data as well as a new framework for incorporating water issues into an investment process.

Ultimately, although many useful industry groups and frameworks have emerged over the last few years, data limitations will inhibit investors from converting the insights from these frameworks into action. The most useful tool we have found for combining the myriad of considerations into a simple actionable framework is the decision tree approach. Armed with this framework as a starting point, we can now start tackling the challenge of addressing this critical element of “E” within ESG more explicitly.

Details of the methodology and analysis used in our research is included in the full research paper, available upon request. Please contact us to obtain a copy.

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