

# Glas Cymru Holdings Cyfyngedig




Corporates | Water/Wastewater Utility | United Kingdom | ESG Entity Rating

ESG Rating Type	ESG Rating <sup>a</sup>	Score	Analysis Type
Entity	2	75	Full Entity
Instrument	Not Applicable	Not Applicable	Not Applicable
Framework	Not Applicable	Not Applicable	Not Applicable

<sup>a</sup> ESG Rating of 1-5, where 1 is the strongest. Date ESG Rating and score assigned: 2 October 2023.

Note: For Framework, analysis types can be green, social, sustainability, sustainability-linked, conventional, or other.

## Credentials

		
Transition	ICMA	EU Green Bond Standard

See Key Terms appendix for definitions of Transition, ICMA and other details.

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## The Entity – Highlights

Glas Cymru Holdings Cyfyngedig (Glas Holdings) is a not-for-profit holdings company, and the ultimate parent of the group of companies established under a whole business securitisation structure that forms the Glas group. Dwr Cymru Cyfyngedig (Welsh Water) is the main operating subsidiary; it supplies drinking water and wastewater services to over 3 million people across most of Wales and some parts of western England. The company is the sixth largest of the 10 regulated water and sewerage companies in England and Wales.

Glas Holdings is also the ultimate parent of the non-Glas group companies that undertake commercial activities.

The company has integrated sustainability across its overall business; its strategy encompasses ESG aspects ranging from a net-zero emissions strategy for the short to long term, creating benefits for communities, providing financial assistance to customers, and developing a sustainable procurement policy for its supply chain, to ensuring fair employment practices and transparent corporate governance. The strategy is extensive and includes 10 key objectives established to focus on delivering the company's long-term strategy "Welsh Water 2050", including its 18 strategic action plans. Long-term planning and sustainability is at the core of its objectives.

Sustainable Fitch has affirmed Glas Holding's ESG Entity Rating at '2', reflecting the company's overall good ESG profile. Furthermore, we assess the group's environmental profile as average, and its social and governance profiles as good. The environmental profile has been lowered to average from the good level achieved in the prior assessment carried out in 2022, and the company's corporate profile has also been lowered to good from excellent.

The group's environmental profile reflects its comprehensive level of disclosure of environmental data, and it having targets across material environmental outcomes. However, there is an element of variance in the emission trends for some Scope categories over the financial year to end-March 2020 (FY20) to FY23, part of which is the result of additional categories being included for some Scopes. This, along with a relatively high and increasing number of serious pollution incidents reported over the last three years, has had a negative effect and led to the environmental profile's lower assessment.

Also affecting the assessment is the deteriorating performance in other environmental areas, as shown in the performance assessment published by the Welsh regulator, Natural Resources Wales (NRW), and also in the regulatory commitments it agreed with the Water Services Regulation Authority (Ofwat).

Glas Holdings demonstrated a good social profile, based on a low gender pay gap, good engagement with the community and customers, and well-managed safety incidents with no fatalities across its employees and contractors in the past three years. Despite the equal

## The Entity – Highlights

representation of genders at the executive level, the gender imbalance at the overall workforce level negatively affects its social profile.

The company's corporate governance profile is assessed as good, reflecting the group's status as a not-for-profit company, a structured audit process and a high level of independent non-executive directors. We also positively considered its good practices in the management's remuneration, including linkage with key performance indicators, and its solid risk and tax management systems. The impact of the misreporting on leakage and per capita consumption weighs negatively on its governance profile, as these are perceived to be an indication of shortcomings in the governance and risk management processes in place, for which the group has already put measures in place to rectify and prevent them from occurring in the future.

Glas Holdings has committed to reduce its total carbon footprint (covering operational and embedded carbon) by 90%, with a target of having total emission levels of around 30,000tCO<sub>2</sub>e to 35,000tCO<sub>2</sub>e by 2030, subject to funding through the regulatory review process. It has also committed to achieving net-zero carbon emissions for Scopes 1, 2 and 3 by 2040.

During 2023, the company reinforced its processes for the identification, scoring and prioritisation of climate-related risks within its enterprise risk management (ERM) framework, which covers risk identification, assessment, mitigation and monitoring at an asset, project, function and strategic level.

It reports non-financial information with granular data in an integrated form in its annual report, which also incorporates the reporting standards of the Task Force on Climate-related Financial Disclosures. It is encouraging that the company is contemplating reporting in line with the guidelines of the Taskforce on Nature-related Financial Disclosures, as published in October 2023, within its reporting.

The comprehensive ESG-related data in its annual report, as well as in Welsh Water's regulatory annual performance report, is complemented by an extensive range of ESG disclosure reports and policy statements, including its Journey to Net Zero, Wellbeing Commitments 2020, Making Time for Nature 2020, and other technical reports such as a drainage and wastewater management plan, a water resources management plan, and the 2020–2025 business plan for the current regulatory period.

Glas Holdings identifies eight material UN Sustainable Development Goals (SDGs), including SDGs 6 (clean water and sanitation), 9 (industry, innovation and infrastructure) and 11 (sustainable cities and communities), and provides a high level of detail on how each SDG is related to its activities and where its contribution is from.

Source: Sustainable Fitch, Glas Holdings annual report 2023, Welsh Water annual performance report FY23, other reports from the company's website

## Entity Analysis

### Broader Perspective on Sector

Sector Trajectory	Fitch's View
Short Term	<ul style="list-style-type: none"> <li>The water and sewerage industries are essential components of the overall utilities sector. Supplying clean, safe drinking water to consumers around the world is an essential activity that caters for the most basic of physical needs. Sewage collection, treatment, disposal and recycling are essential activities that are relied on to maintain basic sanitation, and to generate minimal damage from the disposal of sewage waste.</li> <li>Companies operating in these sectors should meet the EU directives for environmental impact and biodiversity standards, as well as any more specific national standards.</li> <li>The average energy consumption of the front-to-end water supply system should be improving, and the leakage rate of the water supply network decreasing. EU taxonomy thresholds should be minimum level for short-term targets.</li> <li>Within sewage treatment, emphasis should be placed on doing no significant harm from wastewater treatment emissions to water, sewer overflow and sludge treatment, and on minimising detrimental impact to ecosystems.</li> <li>Combined storm overflows (CSOs) are a feature of combined sewer systems where sewage and storm water are carried in one sewer to a centralised wastewater treatment plant. CSOs are only legal when specific conditions are met (e.g. persistent rain), and must be reported. However, they also sometimes occur due to blockages and operational issues.</li> <li>Ofwat and the UK Environment Agency (UK EA) launched separate investigations into CSOs in November 2021 to establish whether companies are complying with their statutory and licence obligations, following reports of widespread, unpermitted releases of sewage into the environment by water and wastewater companies. In March 2022, Ofwat opened enforcement cases into five water companies (Anglian Water, Northumbrian Water, Thames Water, Wessex Water and Yorkshire Water), which was followed by one for South West Water in June 2022. The enforcement cases resulted from the regulator's concerns over the environmental performance across a number of metrics submitted by the companies in December 2021.</li> <li>Ofwat has indicated that all water companies in England and Wales remain subject to this investigation, which is ongoing, and to date, no indication has been provided as to when the findings or any consequences for the water companies will be published. The UK EA has not provided any indication of when its findings would be published,</li> </ul>

### Broader Perspective on Sector

Sector Trajectory	Fitch's View
	<p>but has indicated that once the investigation is completed, it will consider all the options available under its enforcement and sanctions policy.</p> <ul style="list-style-type: none"> <li>Furthermore, six of the water companies are facing a lawsuit brought by a single individual on behalf of customers for alleged higher charges on customer bills as a result of the under-reporting of sewage discharges. The first GBP330 million lawsuit against Severn Trent was filed in early August at London's Competition Appeal Tribunal and is expected to be followed by lawsuits against Thames Water, United Utilities, Anglian Water, Yorkshire Water and Northumbrian Water.</li> <li>We will consider the results of these investigations, and they will be reflected in the assessment of the environmental performance of the water companies we rate.</li> </ul>
Long Term	<ul style="list-style-type: none"> <li>Companies in this sector should have ambitious targets that go well beyond the EU taxonomy thresholds, and aim for zero negative environmental incidents, as well as to continually increase the efficiency of systems.</li> <li>These targets could also be used to help facilitate improvements in less developed societies, where the treatment of water and sewage is significantly less advanced.</li> <li>Beyond this, progress should be made on improving the diversity of the workforce, as waste and wastewater is a white- and male-dominated sector at both the employee and the management level.</li> <li>Companies in this sector should proactively manage the reduction of CSOs, and focus should also be maintained on transparency for investors and other stakeholders when overflows and spills occur. This is due to the irrefutable increase in public interest and concern on the matter.</li> <li>Affordability is also an important issue that is included in the strategic priorities and objectives that the UK and Welsh Government have set for regulators, and which Ofwat sees as a key challenge for the next price control review period, PR24, which covers 2025 to 2030. The regulator and the water companies will have to balance the need to keep customers' bills affordable with that of delivering bigger and better environmental and social outputs through carefully measured investment plans that will need to incorporate a great level of efficiency and innovation.</li> </ul>

Source: Sustainable Fitch

## Entity Analysis

### Broader Perspective on Company

Company Direction	Fitch's View
Short Term	<ul style="list-style-type: none"> <li>The group's ESG profile may benefit from continuing to focus on the most pressing sustainability issues of carbon intensity, water leakages and sewage spills; so far, there is good evidence to show improvements and more stretching targets across these areas.</li> <li>Welsh Water was rated 2-stars in the environmental performance assessment metrics published by the UK EA and NRW for 2022, having achieved 3-stars in 2021. The company was downgraded to a "company that requires improvement" status from a "good company" status mainly due to a notable deterioration in its pollution incidents' performance during the year.</li> <li>This is an area where the company could improve performance through additional investment, and through improved practices and engagement with the Welsh government to encourage better control over plastics entering into sewers, which is one of the principal causes of blockages and subsequent pollution incidents. If the company fails to control the entry of rainwater and plastic into sewers, it will not be able to deliver zero significant-pollution incidents.</li> <li>River water quality is an area of focus in the short term for the group, and one of its priorities is to help other sectors, such as agriculture, with expertise and practical support to tackle pollution. The group has committed to investing GBP833 million to improve its wastewater assets, particularly CSOs on sensitive rivers, over the five years from 2020 to 2025.</li> <li>The group is also making progress delivering on its innovation strategy, which was set up in 2019. The implementation of new technological advances and innovative initiatives to improve work practices – such as catchment solutions, nutrient trading, biodiversity projects and digital customer services – should result in greater ability to achieve the regulatory service outputs, the creation of efficiencies and the reduction in the use of resources and carbon emissions, as well as help the group deliver its 2050 vision.</li> <li>In 2020, the group launched its well-being commitments, which are aligned to the seven well-being goals identified in the Welsh Government's Well-being of Future Generations (Wales) Act 2015. These commitments set out measurable targets for 2025 and beyond. They include areas such as customer support and satisfaction; leakage reduction; increasing access and well-being across the areas where it operates; social tariffs and mobility; removing lead pipes; reducing GHG emissions; and tackling the global water challenge.</li> </ul>

### Broader Perspective on Company

Company Direction	Fitch's View
	<ul style="list-style-type: none"> <li>Going forward, the group intends to incorporate the well-being commitments within the targets it measures under the 10 principles of the ESG strategy approved by the ESG committee in February 2022, and to report consistently on performance against this combined set of objectives.</li> </ul>
Long Term	<ul style="list-style-type: none"> <li>The Welsh government and Ofwat have indicated that for PR24, a specific process will be applied in Wales to support Welsh Water's planning. This will enable the priorities for customers and the environment in its supply area to be the main considerations of the regulatory review process.</li> <li>The group is working on defining the scope of its PR24 objectives as well as the first draft of its 2025–2030 investment plan, and has confirmed that environmental improvement, climate change adaptation and carbon reduction are a prominent part of the initial high-level proposals.</li> <li>The company is expected to submit its draft business plan for the eighth asset management period in the autumn of 2023, following extensive consultation with its customers and other stakeholders during 2022.</li> <li>The group has set out its long-term strategy in the "Welsh Water 2050" and "Welsh Water 2050 Review and Update" publications, which cover key challenges and opportunities faced by the business and how it plans to confront them.</li> </ul>

Source: Sustainable Fitch

## Entity Analysis

### Business Activities

Company Material		Fitch's View	
Core Contributions		Environmental	Social
<b>Water Collection, Treatment and Supply</b>			
<b>ESG Rating</b>	<b>2</b>		
<ul style="list-style-type: none"> <li>Welsh Water provides water services to 3 million people around most parts of Wales, Herefordshire and parts of Deeside. It supplies 828 million litres of water every day through 26,500km of water mains, and maintains 92 reservoirs.</li> <li>The company also operates 12 solar photovoltaic arrays and 19 hydropower stations, through which it generates electricity that it uses in its water treatment plants and pumping stations. During FY23, the company produced 22% of its total energy requirements for both water and wastewater activities.</li> </ul> <p>Represents 41.21% of revenue.</p>		<ul style="list-style-type: none"> <li>The provision of water and wastewater services and the management of water resources are important to improve public health, protect the ecosystem and maintain the security of supply.</li> <li>Providing water is an eligible activity under the EU taxonomy; however, the company does not appear to provide sufficient information for us to determine whether it complies with either of the two thresholds: having a high degree of energy efficiency or using the infrastructure leakage index rating method to show the threshold value is below 1.5.</li> <li>Compliance with the high energy efficiency threshold requires either an average energy consumption of less than 0.5kWh/m<sup>3</sup> of billed or unbilled authorised water supply, when related to the construction, extension and operation of water collection, treatment and supply systems; or for the average energy consumption to decrease by at least 20% when it relates to the renewal of the systems.</li> <li>The assessment of the water business activities also considers the renewable energy generation from the group's solar and hydro plants. The EU taxonomy defines different sets of thresholds for each type of renewable source. Solar is derogated from any thresholds to be aligned with the technical screening criteria of the EU taxonomy.</li> <li>Hydropower is subject to meeting one of the following technical screening criteria to be eligible: the electricity generation facility is a run-of-river plant and does not have an artificial reservoir; the power density of the electricity generation facility is above 5W/sqm; or the life-cycle emissions are lower than 100gCO<sub>2</sub>e/kWh. Furthermore, emissions need to gradually decline to 0gCO<sub>2</sub>e/kWh by 2050. Hydropower activities may also cause additional negative environmental impacts, such as water pollution, generation of waste, and impacts on biodiversity, where the taxonomy requires mitigating measures to be taken for it to remain taxonomy aligned.</li> </ul>	<ul style="list-style-type: none"> <li>The collection, treatment and supply of clean water has an inherent social benefit to the general population, as it is an essential service.</li> <li>In our view, the provision of these services contributes to ensuring high-quality drinking water, the security of the water supply and the effective management of water resources; all of which contribute to the health of the population and to SDGs 6, 9 and 15 (life on land).</li> </ul>
<b>Wastewater Collection, Treatment and Recycling</b>			
<b>ESG Rating</b>	<b>2</b>		
<ul style="list-style-type: none"> <li>Welsh Water provides sewerage services, with over 30,000km of sewers, and manages 800 wastewater treatment works.</li> </ul>		<ul style="list-style-type: none"> <li>The provision of wastewater services is vital to improve public health and protect the ecosystem. It is an essential environmental service for societies; however, a significant</li> </ul>	<ul style="list-style-type: none"> <li>Wastewater collection, treatment and recycling has an inherent social benefit for the general population, as it is an essential service.</li> </ul>

## Entity Analysis

### Business Activities

Company Material		Fitch's View	
Core Contributions		Environmental	Social
<b>Wastewater Collection, Treatment and Recycling</b>			
<b>ESG Rating</b>	<b>2</b>		
<ul style="list-style-type: none"> <li>The group owns over 70 operational renewable energy assets for renewable energy generation including hydro, combined heat and power (CHP), wind and solar.</li> <li>The company operates 12 solar photovoltaic arrays, two wind turbines and 10 CHP plants that use biogas produced in its anaerobic sewage sludge digesters to generate energy that is used in its wastewater treatment plants and anaerobic digesters. The excess electricity, and excess biogas that is converted to biomethane, are exported to the electricity and gas grids, respectively, while the sludge product resulting from the anaerobic digestion is used as a fertiliser in farmland.</li> </ul> <p>Represents 57.72% of revenue.</p>		<p>proportion of GHG emissions come from treating wastewater due to the highly energy-intensive processes involved.</p> <ul style="list-style-type: none"> <li>The provision of wastewater services is an eligible activity under the EU taxonomy, subject to it meeting thresholds such as for energy consumption levels, which depend on the treatment plant's capacity, and it assessing and disclosing the direct GHG emissions.</li> <li>In addition, renewal of wastewater collection and treatment services is also subject to certain thresholds, such as improving energy efficiency by 20% compared to the baseline performance average over three years.</li> <li>The assessment of the wastewater business activities also considers the renewable energy generation from the group's wind turbines, solar plants and its CHP and anaerobic digestion plants. Renewable generation from wind and solar are eligible activities under the EU taxonomy and are currently derogated from demonstrating alignment under any taxonomy threshold.</li> <li>CHP generation fuelled by biogas from sewage facilities provides renewable energy generation from bioenergy, which is an eligible activity under the EU taxonomy if it generates an 80% reduction in carbon emissions compared to the substitute fossil fuel. Welsh Water's CHP assets are certified as "Good Quality" under the UK government's CHP quality assurance programme, which the company reports is aligned with the EU taxonomy threshold of 80%; however, we have not been able to confirm this based on the certification information published by the UK government.</li> <li>Anaerobic digestion of sewage sludge is aligned if a monitoring and contingency plan is in place to minimise methane leakage at the facility, and if the produced biogas is used directly for the generation of electricity or heat, upgraded to bio-methane for injection in the natural gas grid, or used as a vehicle fuel or as feedstock in the chemical industry. The composting of separately collected bio-waste must meet requirements for emissions, leachate contamination and fertilising materials to be taxonomy compliant.</li> <li>The company does not appear to disclose enough information on the majority of the activities mentioned above for us to assess its alignment with the EU taxonomy.</li> </ul>	<ul style="list-style-type: none"> <li>The treatment of wastewater contributes to eliminating bacteria, viruses, nitrogen, phosphorus and other pollutants that can pose a risk to human health. We view the provision of this service as beneficial from a social viewpoint, with a direct contribution to SDGs 6 and 9, while the energy generation supports SDG 7 (affordable and clean energy).</li> </ul>



## Entity Analysis

### Business Activities

Company Material		Fitch's View	
Core Contributions		Environmental	Social
<b>Other Commercial Activities</b>			
<b>ESG Rating</b>	<b>2</b>		
<ul style="list-style-type: none"> <li>Other commercial activities are limited and consist of organic energy and waste processing activities that are complementary to the company's core operations, and that sit outside of the group's regulated water and sewerage business.</li> <li>Glas Holdings' subsidiary Welsh Water Holdings Limited is the intermediate holding company for Welsh Water Infrastructure Limited, Welsh Water Organic Energy Limited, Welsh Water Organic Energy (Cardiff) Limited and Welsh Water Organic Waste Limited.</li> <li>Welsh Water Infrastructure pursues commercial activities while Welsh Water Organic Energy and Welsh Water Organic Energy (Cardiff) generate and supply electricity, through anaerobic food digestion and food waste composting, to the group's wastewater treatment plant in Cardiff.</li> <li>The companies operate a contract to process all domestic food waste from the Cardiff and Vale of Glamorgan Councils over a 25-year period, while also recycling domestic green waste at the same site.</li> <li>Welsh Water Organic Waste provides effluent waste disposal services for trade customers.</li> </ul> <p>Represents 1.07% of revenue.</p>		<ul style="list-style-type: none"> <li>Anaerobic digestion of biowaste activities makes a positive contribution to the environment as it is a renewable source of energy and does not exploit natural resources, since it uses waste products to produce energy. It also produces by-products such as compost and fertiliser that are used in farms, and improves water quality through the removal of phosphorous and other metals that are found in waste products. Furthermore, this activity reduces the GHG emissions released by waste, as it gets treated instead of being sent to landfills.</li> <li>Anaerobic digestion of bio-waste is EU taxonomy aligned depending on its methane leakage compliance and how the biogas it produces is used; while the composting of separately collected bio-waste must meet requirements for emissions, leachate contamination and fertilising materials to be taxonomy compliant.</li> <li>In addition, electricity generation from bioenergy must achieve GHG emission savings of at least 80% compared to the relevant fossil fuel comparator.</li> <li>The company does not appear to disclose enough information on all the activities mentioned above for us to assess its alignment with the EU taxonomy.</li> </ul>	<ul style="list-style-type: none"> <li>Power generation in well-supplied and connected markets, such as the UK, is not perceived by us as making significant contributions to the SDGs.</li> <li>Electricity generation from renewable energy, such as anaerobic digestion and food waste composting, is considered as intermittent compared to conventional generation as it requires the increased deployment of storage and grid-balancing technologies to deliver global electricity security. Furthermore, these generation sources have varied consequences when it comes to the impact on human health from their influence on air and land pollution.</li> </ul>
Source: Glas Holdings annual report 2023, Welsh Water annual performance report FY23, other reports from the company's website		Source: Sustainable Fitch, based on Glas Holdings annual report 2023, Welsh Water annual performance report FY23, other reports from the company's website	

## Entity Analysis

### Environmental View

ESG Rating: 3

Profile	Fitch's View	ESG Rating
Policies	<ul style="list-style-type: none"> <li>Glas Holdings has policies and remediation plans for water use, land, biodiversity, and pollution; with the supply of high-quality water and wastewater services to customers at an affordable price being its top priority as water is at the core of the group's business model.</li> <li>Environmental protection is embodied in the group's policies and wider strategy, and is established through its environmental policy statement, the "Welsh Water 2050" vision document and the group's biodiversity plan "Making Time for Nature".</li> <li>Additionally, the group's "Journey to Zero" plan includes six strategic principles, which include increasing self-generation and sourcing remaining electricity from Welsh-based renewable generators; prioritising the use of sewage derived biogas to decarbonise heat and transport; and gradually replacing the fleet with vehicles that use low-carbon fuels (e.g. hydrogen and biomethane) or electricity.</li> <li>The remaining strategic principles include controlling and reducing the fugitive emissions from wastewater treatment processes by fully automating the control of all aeration plants; monitoring and reducing the carbon emissions associated with construction and refurbishment of its assets; and maximising the carbon sequestration and biodiversity potential of its land holdings.</li> <li>In February 2022, the group published its updated biodiversity strategy and its second biodiversity report, which include plans to reduce its impact on rivers and facilitate investment in CSOs in areas where the company can improve water quality. The plan includes 30 commitments for improving biodiversity, which cover the areas of drinking water supply, treatment of wastewater and management of surface water, education, climate change, looking after protected sites, and working in partnerships. The group expects to publish an updated report in December 2023.</li> </ul>	1
Disclosure	<ul style="list-style-type: none"> <li>Glas Holdings reports on its Scopes 1, 2 and 3 emissions, including granular disclosure by business activity. It also reports on emission reductions related to the renewable power it exports to the grid and the renewable energy it procures through the purchase of renewable energy guarantee of origin (REGO)-backed electricity from its suppliers.</li> <li>For FY23, the group reported its total Scopes 1, 2 and 3 gross emissions (market-based method) were 90,100tCO<sub>2</sub>e. The company has indicated that it has achieved a reduction of around 70% as of FY23 compared to the FY11 baseline total emissions of 335,000tCO<sub>2</sub>e.</li> <li>Energy consumption, energy intensity and carbon intensity metrics are also disclosed by business activity. We find this level of disclosure to be comprehensive, and this is reflected positively in the group's ESG profile.</li> </ul>	2

### Environmental View

ESG Rating: 3

Profile	Fitch's View	ESG Rating
	<ul style="list-style-type: none"> <li>The company reports mandatory Scope 3 emissions related to business travel, fuel- and energy-related activities, waste generated in operations, outsourced activities, and transmission and distribution losses associated with electricity use; however, the carbon emissions related to purchased good and services, and to downstream transportation and distribution of goods, are not included in the reported figures. It also reports on voluntary Scope 3 emissions; specifically, an estimate of the embedded carbon emissions associated with the capital investment programme.</li> <li>The group monitors and measures its carbon footprint by using the UK water industry's carbon accounting tool (the Carbon Accounting Workbook), which follows the 2013 UK Government Environmental Reporting Guidance and the GHG Protocol's Corporate Accounting and Reporting Standard (2015). The net carbon emissions (market-based) have been verified using ISO 14064.</li> <li>Data on natural resources are available through the outcome delivery incentives (ODI) indicators reported in the company's annual performance report, which is prepared in line with Ofwat's regulatory requirements, and includes metrics related to raw water transport, raw water storage, water treatment, treated water distribution mains analysis, communication pipes, metering and leakage activities, bioresources sludge, operating expenditure analysis, bioresources energy, and sludge treatment and disposal data.</li> </ul>	
Evolution	<ul style="list-style-type: none"> <li>Its total Scopes 1, 2 and 3 gross emissions (using the market-based method) show an unclear trajectory, as they increased to 90,100tCO<sub>2</sub>e in FY23 from 87,700tCO<sub>2</sub>e in FY22, while the emissions reported for FY20 were higher at 92,300tCO<sub>2</sub>e. Its total Scopes 1, 2 and 3 net emissions (using the location-based method) also increased to 169,000tCO<sub>2</sub>e in FY23 from 165,000tCO<sub>2</sub>e in FY22 after a gradual reduction from the reported 187,000tCO<sub>2</sub>e in FY20.</li> <li>Its total Scopes 1, 2 and 3 gross emissions (market-based method) were higher in FY22 mainly due to less renewable energy being procured during the year to offset gross emissions; it offset 81,600tCO<sub>2</sub>e compared to 94,400tCO<sub>2</sub>e in FY21. The gross emissions reported by the group are offset through a combination of the company's own renewable generation, electricity bought from suppliers, and the purchase of REGO-backed electricity from suppliers, but the company no longer reports the amounts of offset or the net emissions.</li> <li>Reporting on the annual environmental performance for Welsh Water is published by the Welsh regulator NRW, with contribution from the UK EA as the latter regulates the company's operations in England. In 2022, Welsh Water achieved a 2-star rating, which indicates that the company requires improvement. It dropped from the 3-star "good company" rating achieved in 2021 and the 4-star "industry leading" rating achieved in 2020. This was the result of further deterioration in performance compared to 2021, and it falling below targets related</li> </ul>	4



## Entity Analysis

### Environmental View

ESG Rating: 3

Profile	Fitch's View	ESG Rating
	<p>to the areas of total pollution incidents, self-reporting of pollution incidents and discharge permit compliance, while performance for serious pollution incidents was significantly below target.</p> <ul style="list-style-type: none"> <li>Welsh Water's total pollution incidents for sewerage deteriorated as the number increased by 7% compared to 2021. It also reported five serious sewerage incidents that had a high (category two; defined as incidents that have a lesser, yet significant, impact according to the UK EA) environmental impact, which reflects a deterioration in performance compared to the three sewerage pollution incidents reported in 2021 and the one reported in 2020. For self-reporting of pollution incidents, the company was required to self-report at least 80% of its pollution incidents; in 2022, it achieved 69% (compared to 76% in 2021 and 80% in 2020).</li> <li>Discharge permit compliance for sewage treatment works and water treatment works is another area where performance is still below target, at 98.5%, and similar to the 98.3% achieved in 2021. This metric related to permits for water discharges issued by NRW and the UK EA that need to meet specific criteria to not cause harm to the environment.</li> <li>On the other hand, its delivery of the national environment programme for the current asset management plan period was above target, with all 19 schemes being delivered as planned. The improvements delivered by the programme will mean assets achieve higher standards and deliver water quality improvements. The company is also 100% compliant for the sludge use and disposal metric, which was reintroduced in 2022 and which assesses the company's compliance with relevant legislation related to the storage, recycling and/or disposal of sewage sludge.</li> <li>The supply-demand balance index was also better than targeted. This metric measures how the actual supply-demand balance has performed compared to what is set out in a water company's water resources management plan; the NRW expects companies to have a score of 100, which the company achieved for 2022.</li> <li>Welsh Water's FY23 annual performance report includes 56 performance commitments, 15 of which are common across all the water companies while the remaining 41 are bespoke. These commitments are associated with financial and reputational ODIs. The company has met 28 of these commitments, performing well in areas such as overall customer satisfaction and relative environmental performance but lagging behind in supply interruptions, leakage, and water quality.</li> <li>For FY23, Welsh Water did not meet its leakage target of a 7.3% reduction in leakage from the three year average from the starting baseline of FY20, and reported a significant underperformance level, with an 11.5% increase, as previously reported leakage for FY21 and FY22 was understated. The restated reported levels are a result of an independent review carried out in March 2022 that identified two areas of non-compliance with Ofwat's prescribed methodology for</li> </ul>	

### Environmental View

ESG Rating: 3

Profile	Fitch's View	ESG Rating
	<p>reporting leakage and per capita consumption metrics. For FY21 and FY22, also per capita consumption was overstated.</p> <ul style="list-style-type: none"> <li>As a result of this, the company has implemented changes to the management of its leakage reduction activities and strengthened its reporting and governance processes. It is also investing an additional GBP54 million in comprehensive leakage reduction projects during the last two years of asset management period 7. However, Ofwat announced it was launching an investigation in May 2023 into the company's reporting of these two metrics, which is still ongoing.</li> </ul>	
Targets and Supply Chain	<ul style="list-style-type: none"> <li>The group's environmental targets are embedded in its strategic objectives and performance tracking. The performance commitment plan for the main operating company, Welsh Water, includes ODI targets for the 2020–2025 period, as required by Ofwat. These cover areas such as leakage, supply interruptions, sewer flooding (internal and external), and pollution incidents.</li> <li>Performance-related pay in the executive directors' remuneration is linked to a range of performance measures based on operational performance, which comprises metrics for regulatory ODI commitments, such as water quality, leakage, pollution incidents and sewer flooding; customers, which include Ofwat's customer measure of experience for customer satisfaction (C-MeX) and the developer measure of experience for customer service for newly connected customers (D-MeX); and strategic metrics, such as kilometres of river improved, which is one of the group's core environmental key performance indicators, and female senior management appointments, which together have a more explicit sustainability focus.</li> <li>Welsh Water joined the UN Race to Zero initiative in June 2021, and has set targets that are measured annually and verified to ISO 14064-1:2018 and CEMARS. These targets are considered science-based and aligned to the Paris Agreement, and ensure strong accountability on the group's path to net-zero emissions.</li> <li>Welsh Water relies heavily on energy to deliver its essential service; it currently generates 23% of its own energy needs through wind, hydro, solar and advanced anaerobic digestion, with the rest procured from 100% renewable energy sources.</li> <li>The company plans to be 35% energy self-sufficient by 2025, and will make an additional investment of GBP21 million to achieve this during the current regulatory investment period to 2025. Welsh Water's aim is to become 100% energy self-sufficient and energy neutral by 2050.</li> <li>Welsh Water has recently invested GBP50 million into the Cog Moors Wastewater Treatment Works in the Vale of Glamorgan to generate clean, green energy from sewage through its anaerobic digestion facility, thus creating enough energy to power the works, which will make it an energy-neutral site.</li> </ul>	2

## Entity Analysis

### Environmental View

ESG Rating: 3

Profile	Fitch's View	ESG Rating
	<ul style="list-style-type: none"> <li>The company is also adapting its assets and services to mitigate climate risks; it has set aside a budget of over GBP80 million for research and innovation over the next five years to achieve this. The company's plans include innovative ways to harness nature through its biodiversity plan, peatland restoration, wetland treatment and catchment management. Other initiatives include support for two EU LIFE-funded river habitat restoration projects led by the NRW, and investment in nature-based solutions, particularly in catchment and wastewater nutrient management work. It has also committed to investing GBP833 million to improve its wastewater assets, particularly CSOs, over the five-year regulatory period from 2020 to 2025.</li> <li>The group also works closely with its supply chain partners on developing green solutions that benefit the environment and is developing a sustainable procurement policy; however, market best practice would be to include environment-linked commitments in suppliers' contracts. This would also be positive for its ESG profile.</li> </ul>	
Risks and Incident Treatment	<ul style="list-style-type: none"> <li>During 2022, Welsh Water reported five serious pollution incidents classified as category two.</li> <li>These incidents were related to its wastewater assets. Compared to peers, the company ranks joint sixth with Wessex Water and Southern Water, with United Utilities and Northumbrian Water reporting zero pollution incidents each, while Anglian Water and Thames Water are the worst performers, reporting 11 and 17 pollution incidents, respectively.</li> <li>The company is investing in new technology to reduce the risk of serious pollution incidents from burst rising mains, and has also started a review of drainage plans for its high-risk water treatment works in order to ensure that any spillages are contained and do not enter surface water drainage.</li> <li>In June 2021, Welsh Water was fined GBP180,000 due to a pollution incident at the Five Fords wastewater treatment plant in Wrexham that affected a 9km stretch of River Clywedog in north Wales, where around 675,000 litres of untreated sewage was washed into the river in September 2018 when storm tanks overflowed. The environment body NRW indicated that the discharge had resulted in the largest fish kill recorded in north Wales, with over 3,000 fish perishing in the incident.</li> <li>Welsh Water was also subject to a formal caution in 2021 due to a pollution incident in September 2019 at its Maerdy Treatment Works, where it committed an offence under the Environmental Permitting (England and Wales) Regulations 2016.</li> </ul>	4

Source: Sustainable Fitch, based on Glas Holdings annual report 2023, Welsh Water annual performance report FY23, other reports from the company's website

## Entity Analysis

### Social View

ESG Rating: 2

Profile	Fitch's View	ESG Rating
Human Rights	<ul style="list-style-type: none"> <li>The group has stated its commitment to respect human rights in relation to employees and its supply chain; its support is shown through its commitment to the UN Global Compact principles. The group's code of conduct includes a number of policies such as anti-bullying and anti-harassment, whistleblowing, anti-bribery and anti-corruption, and anti-fraud.</li> </ul>	1
Labour Rights	<ul style="list-style-type: none"> <li>The company worked on strengthening its health and safety management systems and processes during FY23, and has continued with the implementation of its strategy, which focuses on health and safety leadership, risk management, health and well-being, safety and colleague engagement, and contractor management. The group's health and safety procedures and policies are aligned with ISO 45001.</li> <li>In our view, the company could strive to follow the conventions of the International Labour Organization to cement its workforce social practices, which would also underpin and boost its recent commitment to support labour rights principles under the UN Global Compact.</li> <li>The company's employee turnover was 1.19% in FY23, similar to the 1.29% reported in FY22. The turnover ratio is low compared to market standard, and also to peers such as United Utilities (at 6.3%) and Yorkshire Water (at 9.7%), and is reflected positively in its social profile.</li> <li>Most of the categories of occupational health and safety performance have continued to show improvements in FY23 compared to prior years. The group reported a lost-time injury rate of 0.18 for FY23, reflecting the number of hours lost per 100,000 hours worked. This represents a modest improvement on the FY22 rate of 0.22. In addition, its injuries reported under the reporting of injuries, disease and dangerous occurrences regulations were five for FY23, showing an improvement compared to the nine reported for FY22.</li> <li>There were no fatalities in direct employees, contractors and subcontractors from FY21 to FY23. However, during FY22, a critical incident involving a subcontractor was reported and an incident investigation was carried out by the main contractor, while Welsh Water also carried out a serious incident review. The contractor has put in place a health and safety improvement plan with progress against this being monitored; it also launched a focused campaign on cable strike prevention that will continue during FY23.</li> <li>In FY23, Welsh Water retained its Royal Society for the Prevention of Accidents Gold Award for Health and Safety, and the Welsh government's Platinum Corporate Health Standard.</li> </ul>	1
Diversity	<ul style="list-style-type: none"> <li>The group has several key initiatives to promote diversity and inclusivity in all of its businesses. It also has a number of memberships to organisations that focus on different aspects of</li> </ul>	2

### Social View

ESG Rating: 2

Profile	Fitch's View	ESG Rating
	<p>diversity and inclusivity, such as the Stonewall Diversity Champion for LGBT members; Women in Science and Engineering Membership; Business Disability Forum; Education Engineering Scheme Wales; Business in the Community; Work With Me (through Scope); Time to Change Wales (mental health); Chwarae Teg (promoting equality in Wales); Legacy International (access to work for disable people); and the Armed Forces covenant (support for ex-armed forces members).</p> <ul style="list-style-type: none"> <li>Glas Holding's overall workforce was 70.3% male, with female representation at 29.7% for FY22. This is in line with the average for the water sector, but much lower than across all other sectors, according to a report by the Energy &amp; Utilities Skills Partnership, which found women make up 29.1% of the workforce in the water industry, compared to 47.3% in the UK's workforce across all sectors. Gender diversity at the senior management level was slightly better, at 35.3% female representation. The group also reports on ethnic minority diversity, which reached just under 5% in FY22.</li> <li>The median gender pay gap scores are relatively good, at 3.6% for FY22, compared to peers such as United Utilities at 14.7%, Severn Trent at 9.4% or Yorkshire Water at 5.1%; the median gender pay gap of companies in the water sector in 2022 was 15.5%, according to the UK Office of National Statistics Data, while the national average median pay gap was 11.7%, as reported by the UK government. We reflect this positively in the group's ESG profile.</li> <li>The company provided us with the gender pay gap at the senior management level, which compares favourably to market standards. However, the best practice would be to include this information as well as other diversity metrics covering the percentage of employees with disabilities, LGBTQ and other minority groups in the company's publicly available reporting. This would be useful for investors and other stakeholders, and also help the group's reporting transparency.</li> </ul>	
Community and Customers	<ul style="list-style-type: none"> <li>Welsh Water reports on customer satisfaction through Ofwat's C-MeX and D-MeX measures.</li> <li>Welsh Water achieved 82.92 out of 100 in the C-MeX, and ranked fourth against all other water companies in the sector for FY23. Performance achieved against the D-MeX measure placed the company in 13th position, with a score of 84.68. The company expects to remain in the bottom half of the industry league tables, as it claims the methodology does not take into account policy differences between England and Wales that affect developer customers, such as build standards.</li> <li>The group has demonstrated proactivity in working with local communities; it also makes donations and works with food banks and other agencies to promote the support it provides to its vulnerable customers. Welsh Water provides more financial assistance to customers who struggle to pay their bills than any other utility company. Since the not-for-profit ownership model was set up 20 years ago, Welsh Water's customers have benefited from more than</li> </ul>	1

## Entity Analysis

### Social View

#### ESG Rating: 2

Profile	Fitch's View	ESG Rating
	<p>GBP440 million through additional investment in its services, and it helped more than 127,000 customers pay their water bills through the company's social tariffs scheme during FY23.</p> <ul style="list-style-type: none"> <li>Customers are represented through "The Customer Challenge Group", which is an independent, customer-focused stakeholder group formed of representatives from organisations working on behalf of older people and people in vulnerable circumstances, as well as environmental organisations. This group challenges Welsh Water's customer strategy by providing independent scrutiny from household and business customer representatives. It also assesses the group's progress against the Wellbeing Commitments published in 2020.</li> </ul>	
Targets and Supply Chain	<ul style="list-style-type: none"> <li>The group has a sustainable procurement policy in place, and is working with key suppliers to improve transparency and promote fair employment practices. The group launched its supplier code of conduct in 2021, which incorporates references to Glas Holding's anti-modern-slavery policy.</li> <li>In our view, the company could strive to include a process to negotiate and monitor sustainability-linked commitments in suppliers' contracts, which would be best practice and positive for its ESG profile.</li> <li>During FY23, the group reached its target of having 80% of employees add details about their personal characteristics into the group's human resources system in order to create a baseline set of metrics against which it can measure attraction, retention and progress through the company for generally under-represented groups.</li> <li>However, it appears to lack social targets compared to other UK water companies. This could be addressed by it having short- and long-term social targets for areas such as employee satisfaction, under-represented gender and races, and social mobility, which would be complementary to the set of metrics that the group plans to report on in the future. This would also be beneficial for its ESG profile.</li> </ul>	2
Risks and Incident Treatment	<ul style="list-style-type: none"> <li>There were no social incidents reported related to Glas Holding's business activities, and no public fatalities have been recorded or reported; however, the indirect potential social effects of sewage pollution have been taken into account in our analysis.</li> </ul>	2

Source: Sustainable Fitch, based on Glas Holdings annual report 2023, Welsh Water annual performance report FY23, other reports from the company's website

## Entity Analysis

### Governance View

ESG Rating: 2

Profile	Fitch's View	ESG Rating
Financials and Reporting	<ul style="list-style-type: none"> <li>Glas Holding's financial statements are prepared according to UK-adopted international accounting standards and audited by KPMG.</li> <li>There have been no relevant audit remarks in the last three years, and no fines related to financial reporting.</li> </ul>	1
Top Management and Control	<ul style="list-style-type: none"> <li>Glas Holdings is a not-for-profit company, limited by guarantee, and it has a body formed of 72 Glas members, including those on the board of directors, instead of shareholders. Glas members do not have a financial stake in the group, are unpaid and independent, and chosen mainly from around Welsh Water's operational area.</li> <li>The role of the Glas members is to perform a governance function as stewards of the business, by holding the board accountable for the good running of the company. They do not make strategic decisions, but are able to approve amendments to the group's articles of association and also approve the remuneration policy of the board.</li> <li>There is a good structure for the audit process, which is independent from the senior management and reports directly to the audit board committee. It has comprehensive layers of governance to enable strong oversight and accountability, including several committees such as the audit, nomination, technology, finance, remuneration, quality and environment, and ESG committees.</li> <li>The company's CEO and the chair of the board roles are performed by different individuals. We view this separation of roles as improving the governance structure and as having better checks and balances.</li> <li>We view positively that the number of female board members has improved, at 50% in FY23 versus 37.5% in FY22. This is above the company's target of at least 33% female representation on the board by end-2025, and compares well to peers such as United Utilities with 44% and Yorkshire Water with 36%. Furthermore, the group has also incorporated an additional form of diversity as it appointed to the board a non-executive director from a Black, Asian or minority ethnic background during FY23, well ahead of its 2025 target.</li> <li>Of the nine members on the board (including the CEO and the chief financial officer, and excluding the chairperson), seven are independent, which indicates an independence of 78%. We consider the majority of board members being independent as a positive practice, as independency of the board improves the transparency of the firm's governance structure. All board members are directors of both Glas Holdings and the regulated operating company, Welsh Water, which ensures a unified approach by aligning the interests of all the companies in the group.</li> </ul>	2
Remuneration	<ul style="list-style-type: none"> <li>The remuneration policy for the executive directors is well defined and transparently reported, including the criteria for awarding short-</li> </ul>	1

### Governance View


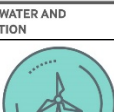



ESG Rating: 2

Profile	Fitch's View	ESG Rating
	<ul style="list-style-type: none"> <li>and long-term performance-related pay and how it is linked to the underlying performance of the company.</li> <li>The reported CEO pay ratio for FY23 of 8x (against median employee pay) is lower than the 15x reported in FY22 and compares well against some peers in the utilities sector, such as Severn Trent, Yorkshire Water and United Utilities, which have reported CEO pay ratios of 73.1x, 28x and 47x, respectively, for FY23, and also the average CEO pay ratio of 109x for companies in the FTSE 100 and the average ratio of 63x across FTSE 350 companies for 2022.</li> </ul>	
Risk Management	<ul style="list-style-type: none"> <li>The group's ERM framework describes how risks are identified, evaluated, treated, monitored and governed, including an increased focus on risks related to climate change and cyber threats. The ERM process is based on three lines of defence, where risks are assessed, managed and mitigated at an asset, project, function and strategic level.</li> <li>During FY23, the group reviewed its ERM framework and also the independent, third-party reviews related to the misreporting of leakage and per capita consumption metrics. The review concluded that these key measures had been inaccurately reported for FY21 and FY22.</li> <li>The group has robust processes in place that identified the problem in FY22, but the company has confirmed that there were shortcomings in its governance and management processes that failed to identify the issue sooner. As a result of this, the group has established a focused oversight committee led by the chair to govern the investigation into the causes of the misreporting, how it is reporting to Ofwat and the actions to rectify it.</li> <li>The company clearly identifies cyber risk within the principal risks, and has mitigation measures such as policies, insurance and collaboration with security bodies; there have been no major examples of cyber or IT incidents in the past three years.</li> </ul>	2
Tax Management	<ul style="list-style-type: none"> <li>All of the group companies are UK tax residents, and subject to UK corporation tax on their profits. As the group has no shareholders and is run solely for the benefit of its customers, it seeks to use available tax reliefs and incentives put in place by the government in order to maximise funds available to benefit its customers.</li> <li>The group does not use tax havens for tax avoidance purposes, and has a group tax policy and risk management framework in place to ensure that tax policies and objectives are fully complied with and applied at all levels.</li> </ul>	1

Source: Sustainable Fitch, based on Glas Holdings annual report 2023, Welsh Water annual performance report FY23, other reports from the company's website

## Entity Analysis

### Relevant UN Sustainable Development Goals – Entity

6.1:	By 2030, achieve universal and equitable access to safe and affordable drinking water for all	
6.4:	By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity	
7.2:	By 2030, increase substantially the share of renewable energy in the global energy mix	
9.1:	Develop quality, reliable, sustainable and resilient infrastructure, including regional and trans-border infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all	
15.3:	By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world	

Source: Sustainable Fitch, UN

Note: Sustainable Fitch evaluates the relevant UN Sustainable Development Goals at the entity level by considering direct contributions, not generic support.



## Appendix A: Key Terms

Term	Definition
<b>Debt types</b>	
Green	Proceeds will be used for green projects and/or environmental-related activities as identified in the instrument documents. The instrument may be aligned with ICMA Green Bond Principles or other principles, guidelines or taxonomies.
Social	Proceeds will be used for social projects and/or social-related activities as identified in the instrument documents. The instrument may be aligned with ICMA Social Bond Principles or other principles, guidelines or taxonomies.
Sustainability	Proceeds will be used for a mix of green and social projects and/or environmental and social-related activities as identified in the instrument documents. The instrument may be aligned with ICMA Sustainability Bond Guidelines or other principles, guidelines, taxonomies.
Sustainability-linked	Financial and/or structural features are linked to the achievement of pre-defined sustainability objectives. Such features may be aligned with ICMA Sustainability Bond Guidelines or other principles, guidelines or taxonomies. The instrument is often referred to as an SLB (sustainability-linked bond) or SLL (sustainability-linked loan).
Conventional	Proceeds are not destined for any green, social or sustainability project or activity, and the financial or structural features are not linked to any sustainability objective.
Other	Any other type of financing instrument or a combination of the above instruments.

Term	Definition
<b>Standards</b>	
Transition	A term applied to green, social, sustainable or sustainability-linked instruments, only when the purpose of the debt instrument is to enable the issuer to achieve a climate change-related strategy according to Fitch criteria or methodology.
ICMA	International Capital Market Association. The "ICMA" credential on page 1 refers to alignment with ICMA's Principles and Guidelines: a series of principles and guidelines for green, social, sustainability and sustainability-linked (or KPI-linked) instruments.
EU Green Bond Standard	A set of voluntary standards <a href="#">created by the EU</a> to "enhance the effectiveness, transparency, accountability, comparability and credibility of the green bond market".
LSTA	Loan Syndications and Trading Association. We refer to alignment with LSTA's Loan Principles: a series of principles and guidelines for green, social, sustainability and sustainability-linked (or KPI-linked) instruments.
<b>Other terms</b>	
ESG debt	Green, social, sustainability and sustainability-linked types of debt.
Short term	Within five years.
Long term	At least six years away.
Entity's business activity overlap with use of proceeds	The share of the entity's total business activities that can use proceeds from the debt instrument in question.
NACE	An industry standard classification system for economic activities in the EU, based on the United Nations' International Standard Industrial Classification of All Economic Activities (ISIC).

Source: Sustainable Fitch, ICMA, UN, EU Technical Expert Group

## Appendix B: Methodology and ESG Rating Definitions

Fitch's ESG Ratings are designed to indicate an entity's Environmental, Social and Governance (ESG) performance and commitment, as well as its integration of ESG considerations into its business, strategy and management, with a focus on actions and outcomes rather than purely on policies and broader commitments.

There are three ratings: the ESG Entity Rating (ESG ER), ESG Instrument Rating (ESG IR) and, for debt instruments linked to ESG key performance indicators (KPIs) and/or use of proceeds, the ESG Framework Rating (ESG FR). ESG Ratings are on a scale from one to five, where one represents full alignment with ESG best practice. Behind each rating sit scores of zero to 100, as well as sub-scores for even greater granularity.

Sustainable Fitch's analysts assess all the business activities of an entity and more than 40 additional headline factors, covering all three ESG pillars. For debt instruments, they assess use of proceeds and more than 20 additional headline factors.

Fitch provides individual datasets with grades and commentary through a feed. The score and sub-score database allows direct comparison of entities and instruments, on a full ESG basis or on selected fields.

ESG ERs consider the issuer's strategy, how it relates to sustainability, and how sustainability is embedded in the issuer's business, including ESG policies, procedures, and outcomes. The entity is broken down into constituent business units, with NACE codes, for a granular assessment of E and S factors. Fitch assesses G aspects at the company level.

ESG FRs consider any type of bond, with varying analysis if there is a defined use of proceeds, KPI-linked coupon, or conventional bond. The rating aims to identify the strength of the bond framework on a standalone basis, separate to the entity, regardless of any self-assigned descriptions. Fitch analysts categorise bonds as Green, Social or Sustainability (GSS) types independently, based on their view of the main area covered by the use of proceeds, rather than automatically using the entity's categorisation. They will also determine if the bond should be classed as a transition bond and if it aligns with the EU Green Bond Standard and ICMA principles. Analysis considerations include the use of proceeds and sustainability-linked targets that form the primary purpose of the instrument, and the structure and effectiveness of the framework being used to further that purpose.

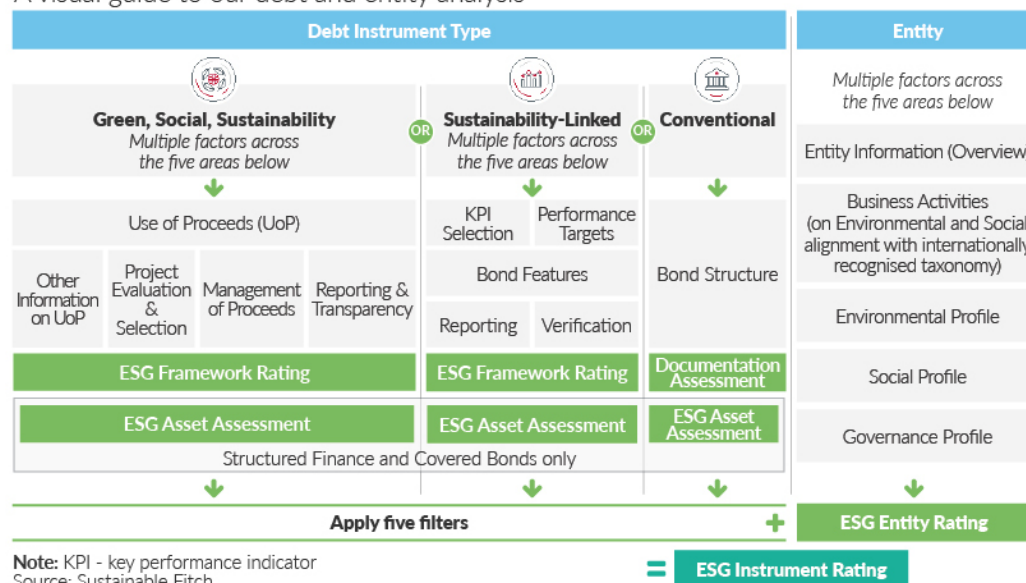
ESG IRs consider different types of debt instruments in the context of the issuing entity, enabling absolute ESG credentials comparisons for similar types of instruments issued by different types of entities, different types of instruments issued by different issuers, as well as different types of instruments issued by a single entity.

### Analytical Process

Analysis considers all available relevant information (ESG and financial), including the entity's ESG report. Fitch's ESG Rating Reports transparently display the sources of information analysed for each section and provide a line-by-line commentary on the sub-factors analysed.

### Fitch's ESG Rating Process

A visual guide to our debt and entity analysis



An important part of the analysis is the assessment of the E and S aspects of the use of proceeds and business activities. In considering those aspects, the rating framework is inspired by major taxonomies (e.g. the EU taxonomy for E aspects, and the UN Sustainable Development Goals for S aspects). Once the analyst has completed the model, with commentary for the related ESG Ratings, it is submitted to the approval committee, which reviews the model for accuracy and consistency. ESG Ratings are monitored annually or more frequently if new information becomes available.

### Use Cases

Sustainable Fitch's ESG Ratings can help inform decisions related to:

- Investment strategy
- Asset allocation and portfolio construction
- Benchmarking and index construction
- Risk management and stress testing
- Identification of transition bonds
- Disclosure and reporting.

## Appendix B: Methodology and ESG Rating Definitions

### Rating Scale and Definitions

	ESG Entity	ESG Instrument	ESG Framework
1	<p>ESG ER of '1' indicates that the entity analysed evidences an excellent ESG profile.</p> <p>Entity is excellent both in terms of alignment of the activities with taxonomies of reference and integration of ESG considerations into the business, strategy and management.</p>	<p>ESG IR of '1' indicates that the debt instrument in the context of the ultimate issuing entity evidences an excellent ESG profile.</p> <p>Entity is excellent both in terms of alignment of the activities with taxonomies of reference and integration of ESG considerations into the business, strategy and management. Instrument is excellent in terms of framework structure and proceeds destination.</p>	<p>ESG FR of '1' indicates that the framework for the instrument evidences an excellent ESG profile.</p> <p>Framework structure is excellent in terms of alignment with ambitious best practises and proceeds are dedicated to excellent environmental and/or social activities/projects according to taxonomies of reference.</p>
2	<p>ESG ER of '2' indicates that the entity analysed evidences a good ESG profile.</p> <p>Entity is good both in terms of alignment of the activities with taxonomies of reference and integration of ESG considerations into the business, strategy and management.</p>	<p>ESG IR of '2' indicates that the debt instrument in the context of the ultimate issuing entity evidences a good ESG profile.</p> <p>Entity is good both in terms of alignment of the activities with taxonomies of reference and integration of ESG considerations into the business, strategy and management. Instrument is good in terms of framework structure and proceeds destination.</p>	<p>ESG FR of '2' indicates that the framework for the instrument evidences a good ESG profile.</p> <p>Framework structure is good in terms of alignment with ambitious best practises and proceeds are dedicated to good environmental and/or social activities/projects according to taxonomies of reference.</p>
3	<p>ESG ER of '3' indicates that the entity analysed evidences an average ESG profile.</p> <p>Entity is average both in terms of alignment of the activities with taxonomies of reference and integration of ESG considerations into the business, strategy and management.</p>	<p>ESG IR of '3' indicates that the debt instrument in the context of the ultimate issuing entity evidences an average ESG profile.</p> <p>Entity is average both in terms of alignment of the activities with taxonomies of reference and integration of ESG considerations into the business, strategy and management. Instrument is average in terms of framework structure and proceeds destination.</p>	<p>ESG FR of '3' indicates that the framework for the instrument evidences an average ESG profile.</p> <p>Framework structure is average in terms of alignment with ambitious best practises and proceeds are dedicated to average environmental and/or social activities/projects according to taxonomies of reference.</p>
4	<p>ESG ER of '4' indicates that the entity analysed evidences a sub-average ESG profile.</p> <p>Entity is sub-average both in terms of alignment of the activities with taxonomies of reference and integration of ESG considerations into the business, strategy and management.</p>	<p>ESG IR of '4' indicates that the debt instrument in the context of the ultimate issuing entity evidences a sub-average ESG profile.</p> <p>Entity is sub-average both in terms of alignment of the activities with taxonomies of reference and integration of ESG considerations into the business, strategy and management. Instrument is sub-average in terms of framework structure and proceeds destination.</p>	<p>ESG FR of '4' indicates that the framework for the instrument evidences a sub-average ESG profile.</p> <p>Framework structure is sub-average in terms of alignment with ambitious best practises and proceeds are dedicated to sub-average environmental and/or social activities/projects according to taxonomies of reference.</p>
5	<p>ESG ER of '5' indicates that the entity analysed evidences a poor ESG profile.</p> <p>Entity is poor both in terms of alignment of the activities with taxonomies of reference and integration of ESG considerations into the business, strategy and management.</p>	<p>ESG IR of '5' indicates that the debt instrument in the context of the ultimate issuing entity evidences a poor ESG profile.</p> <p>Entity is poor both in terms of alignment of the activities with taxonomies of reference and integration of ESG considerations into the business, strategy and management. Instrument is poor in terms of framework structure and proceeds destination.</p>	<p>ESG FR of '5' indicates that the framework for the instrument evidences a poor ESG profile.</p> <p>Framework structure is poor in terms of alignment with ambitious best practises and proceeds are dedicated to poor environmental and/or social activities/projects according to taxonomies of reference.</p>

Source: Sustainable Fitch

## Solicitation

Status	Solicited
The Ratings were solicited and assigned or maintained by Sustainable Fitch at the request of the rated entity.	

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