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Second Party Opinion

Vasakronan's Green Finance Framework

Nov. 10, 2023

Location: Sweden Sector: Real estate

Alignment With Principles

Aligned = ✓

Conceptually aligned = **O**

Not aligned = X

✓ Green Bond Principles, ICMA, 2021 (with June 2022 Appendix 1) Green Loan Principles, LMA/LSTA/APLMA, 2023

See Alignment Assessment for more detail.

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Medium green

Activities that represent significant steps towards a low-carbon climate resilient future but will require further improvements to be long-term low-carbon climate resilient solutions.

Our Shades of Green Analytical Approach >

Strengths

Vasakronan aims to achieve carbon neutrality by 2030 across the value chain.

We view this as particularly ambitious considering the short time frame and stillhigh emissions related to construction materials and tenants' energy use. The issuer's focus on improving the energy performance of its properties underpins its positive track record of emissions reductions.

Efforts to address its most material emission source, embodied emissions, is part of the framework's criteria. We consider this best practice, since minimizing embodied emissions stemming from construction and renovation is key to decarbonizing the real estate sector.

Reporting includes advanced green indicators. These include material intensity, as well as energy performance, which we view as particularly relevant indicators.

Weaknesses

No weakness to report.

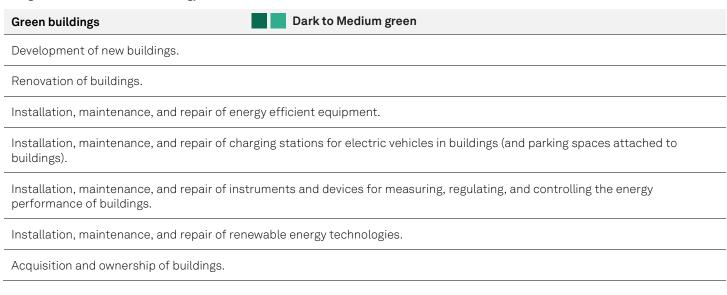
Areas to watch

Impact reporting of commercial paper (CP) can be a challenge for issuers due to the short tenure of CP. However, Vasakronan will report quarterly on the total amount of green projects identified in its green asset pool and that of green instruments outstanding, thus allowing investors to monitor the allocation of green proceeds. The entity also commits to not issue any green instruments unless there is sufficient headroom in the green asset pool, which we view as another mitigating factor.

Despite limiting embodied emissions being among the project criteria, new construction may entail high emissions. Most proceeds will go to existing assets and renovation projects. But, in the sector, knowledge and methodologies regarding embodied emissions are still evolving. Therefore, new construction projects may be associated with high emissions.

Eligible Green Projects Assessment Summary

Eligible projects under Vasakronan's green finance framework are assessed based on their environmental benefits and risks, using Shades of Green methodology.



Renewable energy



Solar energy projects including the construction and production of electricity generation facilities that produce electricity using solar photovoltaic (PV) technology.

See Analysis Of Eligible Projects for more detail.

Issuer Sustainability Context

This section provides an analysis of the issuer's sustainability management and the embeddedness of the financing framework within its overall strategy.

Company Description

Vasakronan is a real estate company with approximately 300 employees, headquartered in Stockholm, Sweden. The company is owned by the First, Second, Third, and Fourth Swedish national pension funds. Vasakronan owns, manages, and develops 2.4 million square meters across 166 office and retail properties in Sweden's four largest regions: Stockholm, Uppsala, Gothenburg, and Malmö. As of June 30, 2023, 76% of Vasakronan's contracted rent was from office premises; 16% from retail, hotel, and restaurant; and the remaining 8% from residential and other premises. In 2022, the company reported rental revenue of Swedish krona (SEK) 8.17 billion (equivalent to about €698 million).

Material Sustainability Factors

Climate transition risk

Increased energy use in buildings has been a major contributor to climate change, representing about one-third of global greenhouse gas emissions on a final-energy-use basis according to the International Energy Agency (IEA). This leaves the sector highly susceptible to rising public, political, legal, and regulatory pressure to accelerate climate goals. Building occupiers and operators may face higher energy bills as power prices rise, and higher capital expenditure for upgrades required to accommodate the energy transition and meet more stringent efficiency standards. This could affect households' purchasing power and the competitive strengths of commercial and industrial properties. Incremental climate-related investments can require significant capital outlays but will potentially reduce the risk of obsolescence due to changes in regulation or climate goals. In addition, low-carbon properties may achieve higher cost efficiencies or attract premium rents in the longer term, thereby enhancing their value. Embodied emissions from building materials are a major source of emissions when looking at the carbon footprint of a building over its life cycle.

Physical climate risk

The geographically fixed nature of real estate assets exposes them to physical climate risks. While varying by location, these could include acute risks--such as wildfires, floods, and storms--which are becoming more frequent and severe, as well as chronic risks--such as long-term changes in temperature, precipitation patterns, and sea levels. Acute and chronic risks could damage properties or put tenants' health and safety at risk, as well as require investments to manage potential effects or, in severe cases, relocation of tenants. While the aggregate impact is moderate--since the type, number, and magnitude of these risks vary by region--highly exposed regions may be subject to material physical climate risk exposure. Most participants have some insurance coverage, but it could become more difficult to secure insurance for the most exposed assets in the future, absent adaptation to climate change. For the Nordic building sector, the most severe physical impacts will likely come from increased flooding, snow loads, and urban overflow, as well as a higher incidence of storms and extreme weather.

Customer health and safety

Properties can adversely affect tenant health and safety, especially for office and residential properties, since people spend most of their time indoors. Although the probability of major risks, such as fire or failure of a property's structural integrity, is low, the impact could be significant, often resulting in serious injury or death, and tend to be more severe in older properties and regions with less stringent safety codes. The long-term nature of leases, as well as the diversity of tenants and assets, can largely mitigate temporary disruptions in performance, in our view.

Issuer And Context Analysis

Both project categories in the financing framework--green buildings and renewable energy--aim to address climate transition risk, which we consider to be one of the most material sustainability factors for Vasakronan. In addition, the physical climate risk is relevant in the context of the framework, since buildings and the renewable-energy sector are generally highly exposed to the impact of the changing climate.

The company has set ambitious greenhouse gas emission-reduction targets, which include the entire value chain. We view as positive that the company has been reporting on such emissions since 2006, in accordance with the GHG Protocol, and since then reduced its scope 1 and 2 (market-based) footprint by 90%. This has been achieved thanks to sourcing of fossil-free electricity and significant energy efficiency measures and renovations, which greatly improved the energy performance of the property portfolio. As part of its goal to achieve climate neutrality across the entire value chain by 2030, Vasakronan commits to reducing absolute scope 1, 2, and 3 greenhouse gas emissions 90% by 2030 versus the figures in 2016. We note materials used in construction still had a material impact on the company's carbon footprint in 2022, accounting for 67% of total emissions. We see as a strength that these targets have already been validated by the Science-Based Target initiative and that Vasakronan will use carbon offsets only as a last resort (10%). Furthermore, the issuer is committed to becoming self-sufficient in energy, primarily through increasing the share of owned renewable-energy sources. As a result, in 2022 there were 86 solar PV systems installed on roofs and facades, as well as one solar park in operation, leading to the generation of 9,000 megawatt hours (MWh), equivalent to 12% of the electricity used in Vasakronan's property portfolio. Additionally, Vasakronan is well on track to achieving its target of a 100% environmentally certified portfolio. Currently 93% of its buildings have already obtained certification, 64% LEED gold and 23% LEED platinum. These are the highest two levels of this global green building rating system, demonstrating the entity's strong commitment to energy use and environmental performance.

Vasakronan's ability to measure embodied carbon in construction materials is advanced, and contributes to its climate objectives. The company conducts a life-cycle analysis to measure the amount of carbon emitted during construction and renovation projects. Due to the completion of several construction projects, Vasakronan's scope 3 emissions increased 82% compared to 2021, mostly related to construction materials. Thus, we note as positive the company's efforts to reduce its overall use of materials through design solutions, substitution with less carbon intensive alternatives, and increasing the use of reused and recycled ones. The company has also implemented a price mechanism that gives contractors an incentive to favor reused construction materials, thus helping to limit embodied emissions. We also note Vasakronan's efforts to use actual data for calculating embodied emissions and its use of conservative estimates when such data is unavailable.

Vasakronan is refining its physical climate risk and vulnerability assessment for each property and commits to performing such assessments on buildings to be financed under the framework. We view as positive that Vasakronan has already conducted a climate-related scenario analysis on its existing portfolio. The most recent one was performed in 2019, under which Vasakronan investigated how operations would be affected until 2100 with climate scenarios based on Intergovernmental Panel on Climate Change's RCP1 (RCP: representative concentration pathway) of 2.6, 4.5, and 8.5. As per the findings, none of the properties were deemed at risk of permanent flooding until 2100. Furthermore, in 2022, the company performed a break-down analysis of all physical climate risks by individual property and integrated the results into the different processes and portfolio planning. Some of the measures Vasakronan has taken to mitigate such risks include raising buildings and street levels, moving critical technical equipment to higher levels, and building stronger foundations to minimize erosion risk.

Alignment Assessment

This section provides an analysis of the framework's alignment to the Green Bond and Loan principles.

Alignment With Principles

Aligned =

Conceptually aligned = **O**

Not aligned = X



- ✓ Green Bond Principles, ICMA, 2021 (with June 2022 Appendix 1)
- Green Loan Principles, LMA/LSTA/APLMA, 2023

Use of proceeds

The issuer commits to allocate the net proceeds issued under the framework exclusively to eligible green projects. Please refer to the Analysis Of Eligible Projects section for more information on our analysis of the environmental benefits of the expected use of proceeds. We note that green CP is on the list of eligible instruments in the framework.

Process for project evaluation and selection

Vasakronan's green finance committee, which meets at least quarterly, is responsible for evaluating potential projects against the framework's green eligibility criteria. Based on this analysis, the committee selects projects. Its responsibilities also involve replacing investments that no longer meet the eligibility requirements. A list of eligible green assets, referred to as the green asset pool, will be maintained by the treasury department. The list will show whether there is sufficient headroom to issue green finance instruments. We view as positive that the Chief Sustainability Officer holds a veto power on the committee's decisions. The process by which the issuer identifies and manages social and environmental risks is guided by its corresponding internal policies, under which any potential negative impact is considered for the selection of each eligible green asset. These risks are also addressed under the alignment of eligible activities with the EU taxonomy's DNSH (do no significant harm) criteria, leading to a lower impact.

Management of proceeds

The allocation of proceeds will be tracked by the company's treasury department to ensure that they exclusively finance eligible projects. In case the value of outstanding instruments exceeds the value of the assets in the green asset pool, the unallocated proceeds will be credited to a special account. Such unallocated proceeds will be held in the form of cash or term deposits. The issuer will allow a transfer from the special account only if the value of the green asset pool exceeds the value of outstanding instruments. We view as positive that the internal tracking method and balance of the special account will be reviewed by an external auditor.

Reporting

Vasakronan commits to reporting annually on the allocation of proceeds and the impact of the green financing instruments within its Green Finance Impact Report, as long as green financing instruments are outstanding. The report will, among other aspects, provide project descriptions, as well as environmental and social impact indicators. In our opinion, some of these indicators are advanced and very relevant, such as materials intensity and energy performance. We view as positive that the issuer will align its impact reporting with ICMA's Harmonised Framework for Impact Reporting and provide transparency on the calculation method. Another strength is that Vasakronan will appoint an external independent auditor to review the allocation of the proceeds each year, although we note the absence of such a commitment regarding impact indicators reporting. Additionally, it is positive that Vasakronan commits to publish, each quarter, the values of the green asset pool together with the total amount of green finance instruments outstanding. This allows investors to gauge the remaining headroom of green projects identified compared to the green proceeds raised, which is particularly relevant in our view, considering that CP is eligible under the framework.

Analysis Of Eligible Projects

This section provides details of our analysis of eligible projects, based on their environmental benefits and risks, using the Shades of Green methodology.

Vasakronan expects to allocate the majority of proceeds raised under the framework to financing and refinancing the acquisition and ownership of buildings.

Overall Shades of Green assessment

Based on the project category shades of green detailed below and because the majority of proceeds are expected to be allocated to the acquisition and ownership of buildings, we assess the framework Medium green.

Medium green

Activities that represent significant steps towards a low-carbon climate resilient future but will require further improvements to be long-term low-carbon climate resilient solutions.

Our <u>Shades of Green</u> Analytical Approach >

Green project categories

Green buildings

Assessment

Dark to Medium green

Description

i) Construction of new buildings: Financing of new buildings (built after Dec. 31, 2020) that have or will have a PED at least 25% lower than the nearly zero-energy building requirement.

A life-cycle analysis of the global warming potential will be performed and allows a maximum amount of embodied carbon of 275 kilograms (kg) of carbon dioxide equivalent (CO2e) per square meter gross floor area.

Vasakronan will perform a material physical climate risk and vulnerability assessment of the new building and its expected lifespan. Based on this assessment, it will, if needed, take actions to make the asset climate resilient for people and financial values.

The company will also take the waste hierarchy into account and safeguard preparation for reuse or recycling of at least 90% (by weight) of all nonhazardous construction and demolition waste generated at the construction site. The building is also to have or will have an environmental certification of either:

- LEED New Construction or Core and Shell, with a minimum certification level of Platinum; or
- BREEAM New Construction with a minimum certification level of Outstanding.

ii) Renovation of existing buildings: Financing of major renovations of buildings that have or will lead to a reduction of PED of at least 40%.

Vasakronan will perform a material physical climate risk and vulnerability assessment of the building and its expected lifespan. Based on this assessment, Vasakronan will, if needed, take actions to make the asset climate resilient for people and financial values.

The life-cycle analysis of the global warming potential will allow maximum embodied carbon of 140 kg CO2e per square meter gross floor area. The building is also to have or will receive an environmental certification of either:

 LEED Core and Shell or Existing Buildings: Operations and Maintenance, with a minimum certification level of Platinum; or

- BREEAM with a minimum certification level of Outstanding.
- iii) Financing of individual renovation measures consisting of the installation of energy efficiency equipment associated with insulation, energy efficient windows, doors, or lights as well as heating, ventilation, and low water and energy equipment.
- iv) Financing of the installation of charging stations for electric vehicles in buildings and parking spaces attached to buildings.
- v) Financing of the installation of instruments and devices for measuring, regulating, and controlling energy performance of buildings associated with zoned and smart thermostats, sensing equipment, management and light control systems, smart meters, and facade and roofing elements with solar shading.
- vi) Financing of the installation, maintenance, and repair of renewable energy technologies onsite associated with solar PV systems, water panels, heat pumps, wind turbines, transpired collectors, energy storage, micro combined heat and power plants, and heat exchangers or recovery systems.
- vii) Acquisition and ownership of buildings: Financing of the acquisition and ownership of buildings (built before Dec. 31, 2020) that have an EPC of class A or a PED within the top 15% of the national or regional building stock, valid at the time of the approval. However, the PED shall not exceed 80 kWh/sqm for office buildings. For other types of buildings, the framework refers to Fastighetsägarna's "Topp 15 och 30 procent av de bästa byggnaderna" paper.

Vasakronan will perform a material physical climate risk and vulnerability assessment of the building and its expected lifespan. Based on this assessment, Vasakronan will, if needed, take actions to make the asset climate resilient for people and financial values.

In addition, for buildings where Vasakronan is in control of the electricity purchases, 100% fossil-free electricity must be purchased and used. The building is also to have or will receive a certification either:

- From the construction phase (see Economic Activity 7.1: Construction of New Buildings above); or
- LEED for Existing Buildings: Operations and Maintenance, minimum certification level of Gold.

Analytical considerations

- The project category is allocated a Dark green to Medium green shade because of very strong framework criteria, especially with regards to renovation projects. Overall, we see as particularly strong, the energy use thresholds, physical climate risks assessment, green building certifications, and advanced consideration of embodied emissions, which have Dark green characteristics. Although the energy criteria for existing buildings allow for energy efficient buildings to be financed, decarbonization pathways, such as the CRREM (Carbon Risk Real Estate Monitor) pathway, show that the energy performance of Sweden's buildings, including what is defined as the top 15% of the national building stock in terms of energy efficiency today, has to continue to improve from today's levels to reach the 1.5 C target. We therefore currently consider these criteria to be Medium green. Considering most of the proceeds will be allocated to the acquisition and ownership of such buildings, this drives our assessment of Medium green overall for this framework. Moreover, construction projects, while representing a small fraction of expected proceeds allocation, fall short of fully corresponding to a low-carbon climate resilient future (and a shade of Dark green) because new construction is still associated with significant emissions and not yet net zero.
- Regarding acquisition and ownership of buildings, the issuer limits eligible projects to buildings that have an EPC of class A or a PED within the top 15% of the national building stock. In Sweden, the PED calculation methodology favors district heating over electricity, meaning that, all else equal, it will be easier for a building connected to district heating to meet the framework's threshold for top 15% than for a building with electric heating. Although a property's applicable emissions factor will depend on the local district heating facility connected to it or the electricity grid, at equal levels of emissions factors, the PED will be stronger for district-heated properties due to the calculation methodology. We view as positive that the framework requires a minimum LEED certification of gold for existing buildings. The certification is performance based and assesses, among other

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things, tenants' energy use, waste, proximity to public transport, and water use. We note as positive that Vasakronan commits to 100% of electricity generated from fossil-free sources to be used for the properties where it is in control of electricity purchases, which we understand to be the case for the vast majority of the portfolio. In our view, considering the particularly high requirements to receive an EPC class A in Sweden as defined today, such buildings are in line with a low-carbon future and could qualify for a Dark green shade.

- In the transition to a low-carbon society, it is essential to renovate and improve existing properties. With that in mind, the framework's criteria for refurbishments, including the 40% reduction in energy consumption, embodied emissions threshold, environmental certifications, and the physical climate risk and vulnerability assessment are considered Dark green characteristics. Although the renovation costs represent Dark green characteristics, after renovation, the building as a whole would need to be aligned with an LCCR future to be considered Dark green.
- For new projects, we note as positive the threshold regarding embodied emissions being applied to construction and renovation projects. Although we believe the threshold chosen will significantly reduce embodied emissions compared to the sector norm, it still falls short of what is needed for new construction to be climate neutral. As part of its aim to reduce embodied emissions, the company will integrate more low-carbon and recycled materials, as well as improve designs to reduce the amount of materials used.
- For new construction, acquisition, and renovation projects, it is a strength that Vasakronan commits to performing material physical climate risk and vulnerability assessments to identify any corrective actions needed to make the asset more resilient. For the Nordic building sector, the most severe physical impact will likely be increased flooding, snow loads, and urban overflow, as well as increased storms and extreme weather. We believe that Vasakronan's ongoing efforts to break down physical climate risks by each individual property will help the company refine its resilience efforts. As an example, Vasakronan has worked on flood-proof construction to prevent leakage into property basements.
- Vasakronan clearly excludes any building with fossil-fuel heating onsite from its framework, but does not have control over the energy used in the generation of district heating used in its buildings. Yet, we believe the risk of fossil-fuel use in heating is partly mitigated by approximately 70% of district heating in Sweden coming from bioenergy, biogenic waste, and residual heat from bio-based industries according to the IEA.
- We view as positive that Vasakronan aims to align its eligibility requirements with the EU taxonomy criteria, including DNSH. For new construction buildings, for example, this includes no development project in greenfield areas, which limits biodiversity risks in our view. Additionally, 90% of non-hazardous construction waste of new buildings should be eligible for reuse or recycling. This is also a positive differentiator for this framework because it is more ambitious than the 70% threshold in the EU taxonomy.

Renewable energy

Assessment

Description



Electricity generation using solar PV technology: Financing of solar energy projects including the construction and production of electricity generation facilities that produce electricity using solar PV technology.

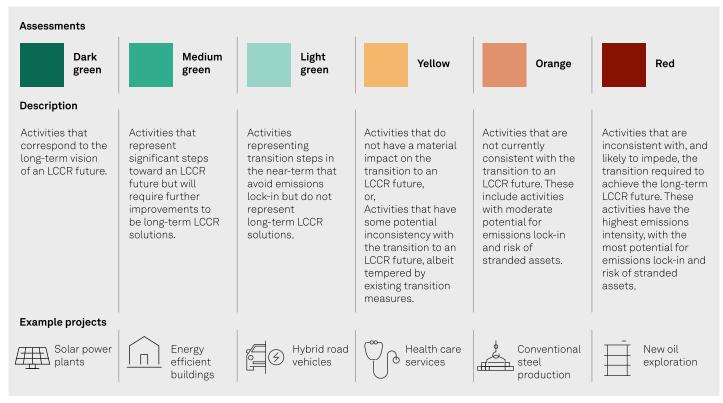
Analytical considerations

- Renewable energy from solar PV is a key element in Vasakronan's 2030 objective to achieve energy self-sufficiency in its properties. This project category aims to finance new offsite solar parks, which will add to Vasakronan's own generation capacity, which currently covers 12% of its annual electricity consumption. Considering the key contribution of these projects to climate mitigation and to the company's decarbonization strategy, this project category is assigned a Dark green shade.
- In 2022, renewable electricity generated by Vasakronan reached 9,263 MWh. This was thanks to the company's 86 solar PV systems in operation, of which the main contributor is a solar park in Uppsala generating 4,600 MWh a year to the grid.
- We view as positive that the issuer does not expect to install solar parks on greenfield land. This is because we believe this significantly limits the risk of harming biodiversity.

Second Party Opinion: Vasakronan's Green Finance Framework

- Vasakronan's procurement practices are comprehensive, and the company requires compliance with its supplier code of conduct. New suppliers are also screened using environmental and social criteria, which we view as positive. Although we note that no major supplier audit was performed in 2022, Vasakronan performed four inspections that year and plans to increase the number of such audits and inspections on Tier-1 suppliers.
- The issuer does not currently have formal disposal processes in place specific to the disposal of its solar electricity generation and storage assets. However, we believe risks from decommissioning are partly mitigated by the issuer's operations being solely in Sweden, where EU regulation on waste applies. For example, the EU's waste framework and the waste from electrical and electronic equipment (WEEE) directives impose requirements on the proper disposal of such waste streams, favoring greater reuse and recycling.

S&P Global Ratings' Shades of Green



Note: For us to consider use of proceeds aligned with ICMA Principles for a green project, we require project categories directly funded by the financing to be assigned one of the three green Shades.

LCCR--Low-carbon climate resilient. An LCCR future is a future aligned with the Paris Agreement; where the global average temperature increase is held below 2 degrees Celsius (2 C), with efforts to limit it to 1.5 C, above pre-industrial levels, while building resilience to the adverse impact of climate change and achieving sustainable outcomes across both climate and non-climate environmental objectives. Long term and near term--For the purpose of this analysis, we consider the long term to be beyond the middle of the 21st century and the near term to be within the next decade. Emissions lock-in--Where an activity delays or prevents the transition to low-carbon alternatives by perpetuating assets or processes (often fossil fuel use and its corresponding greenhouse gas emissions) that are not aligned with, or cannot adapt to, an LCCR future. Stranded assets--Assets that have suffered from unanticipated or premature write-downs, devaluations, or conversion to liabilities (as defined by the University of Oxford).

Mapping To The U.N.'s Sustainable Development Goals

Where the Financing documentation references the Sustainable Development Goals (SDGs), we consider which SDGs it contributes to. We compare the activities funded by the Financing to the International Capital Markets Association (ICMA) SDG mapping and outline the intended linkages within our SPO analysis. Our assessment of SDG mapping does not impact our alignment opinion.

This framework intends to contribute to the following SDGs:

Use of proceeds

SDGs

Green buildings









7. Affordable and clean energy

11. Sustainable cities and communities*

12. Responsible consumption and production

sponsible 13. Climate action

Renewable energy



7. Affordable and clean energy*

^{*}The eligible project categories link to these SDGs in the ICMA mapping.

Related Research

- Analytical Approach: Second Party Opinions: Use of Proceeds, July 27, 2023
- FAQ: Applying Our Integrated Analytical Approach for Use-of-Proceeds Second Party Opinions, July 27, 2023
- Analytical Approach: Shades of Green Assessments, July 27, 2023
- <u>S&P Global Ratings ESG Materiality Map: Real Estate</u>, July 20, 2022

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