



Klövern AB

Green Bond Second Opinion

October 5, 2020

Klövern is a large Swedish listed real estate company with a property portfolio consisting of 343 properties with a total area of 2.5 million square meters, valued at SEK 52.4 billion and a rental value of SEK 3.8 billion (as of end 2019). Klöver offer customers premises in large and regional cities across Sweden, as well as in Copenhagen and New York. Klöver is primarily focused on offices but also offer premises for companies and organizations active in health care, education, retail etc. as well as residents.

Categories in this framework covers Green and energy efficient buildings, Renewable energy, and Biodiversity and resilience. The majority of the proceeds (~95%) will go to refinancing Green and energy efficient buildings.

Klövern has as a goal that the management part of Klöver shall be climate neutral by 2025. Currently, greenhouse gas emissions reported cover scope 1 and 2 and partially 3. Emissions from construction and material use is not covered. Klöver has several relevant energy related goals and also targets related to waste and recycling. Altogether this lend credible supports to the green bond framework. The selection process for eligible projects (by inhouse expertise with 'environmental' veto power), the management of the proceeds and the reporting on allocation of proceeds and impacts are all good. The numbers presented in the the impact reporting are based on Klöver's Climate Report/Sustainability Report (calculations according to the Greenhouse Gas Protocol), which is subject for third party verification.

The direct and indirect climate impacts of the real estate sector is of growing concern. It is therefore good that Klöver as a large actor and with a strong governance structure put forward a framework aligned with the Green Bond Principles. The ambition level is not the highest, but represents steps in the right direction. The issuer has informed us that no buildings directly heated by fossil fuels in Sweden will be financed under this framework and life cycle assessments will be carried out for all new building projects. Investors should however be aware that certification level requirement outside of Sweden is weaker (only LEED Silver and BREEAM Good) and could involve significant fossil fuel emissions from use of energy. Also in Sweden the criteria of certification of "BREEAM-In-Use Very Good" with energy performance of less than 100 kWh/m² for buildings built the last 10-15 years may open for some relatively weak projects.

Based on the overall assessment of the project types in the framework of Klöver, governance and transparency considerations, the green finance framework receives an overall **CICERO Medium Green** shading. In order to achieve a Dark Green shading, the green bond framework would need stronger eligibility criteria in the Green buildings category.

SHADES OF GREEN

Based on our review, we rate the Klöver's green bond framework **CICERO Medium Green**.

Included in the overall shading is an assessment of the governance structure of the green bond framework. CICERO Shades of Green finds the governance procedures in Klöver's framework to be **Excellent**.



GREEN BOND PRINCIPLES

Based on this review, this Framework is found in alignment with the principles.





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1 Terms and methodology

This note provides CICERO Shades of Green's (CICERO Green) second opinion of the client's framework dated October 2020 and is an update from a previous Second opinion dated March 2018. This second opinion remains relevant to all green bonds and/or loans issued under this framework for the duration of three years from publication of this second opinion, as long as the framework remains unchanged. Any amendments or updates to the framework require a revised second opinion. CICERO Green encourages the client to make this second opinion publicly available. If any part of the second opinion is quoted, the full report must be made available.

The second opinion is based on a review of the framework and documentation of the client's policies and processes, as well as information gathered during meetings, teleconferences and email correspondence.

Expressing concerns with 'shades of green'

CICERO Green second opinions are graded dark green, medium green or light green, reflecting a broad, qualitative review of the climate and environmental risks and ambitions. The shading methodology aims to provide transparency to investors that seek to understand and act upon potential exposure to climate risks and impacts. Investments in all shades of green projects are necessary in order to successfully implement the ambition of the Paris agreement. The shades are intended to communicate the following:

CICERO Shades of Green



Dark green is allocated to projects and solutions that correspond to the long-term vision of a low carbon and climate resilient future. Fossil-fueled technologies that lock in long-term emissions do not qualify for financing. Ideally, exposure to transitional and physical climate risk is considered or mitigated.



Medium green is allocated to projects and solutions that represent steps towards the long-term vision, but are not quite there yet. Fossil-fueled technologies that lock in long-term emissions do not qualify for financing. Physical and transition climate risks might be considered.



Light green is allocated to projects and solutions that are climate friendly but do not represent or contribute to the long-term vision. These represent necessary and potentially significant short-term GHG emission reductions, but need to be managed to avoid extension of equipment lifetime that can lock-in fossil fuel elements. Projects may be exposed to the physical and transitional climate risk without appropriate strategies in place to protect them.



Brown is allocated to projects and solutions that are in opposition to the long-term vision of a low carbon and climate resilient future.

Examples



Wind energy projects with a strong governance structure that integrates environmental concerns



Bridging technologies such as plug-in hybrid buses



Efficiency investments for fossil fuel technologies where clean alternatives are not available



New infrastructure for coal

Sound governance and transparency processes facilitate delivery of the client's climate and environmental ambitions laid out in the framework. Hence, key governance aspects that can influence the implementation of the green bond are carefully considered and reflected in the overall shading. CICERO Green considers four factors in its review of the client's governance processes: 1) the policies and goals of relevance to the green bond framework; 2) the selection process used to identify and approve eligible projects under the framework, 3) the management of proceeds and 4) the reporting on the projects to investors. Based on these factors, we assign an overall governance grade: Fair, Good or Excellent. Please note this is not a substitute for a full evaluation of the governance of the issuing institution, and does not cover, e.g., corruption.



2 Brief description of Klöver's green bond framework and related policies

Klöver is a large Swedish listed real estate company. As of 31 December 2019, Klöver's property portfolio consisted of 343 properties with a total area of 2.5 million square meters, valued at SEK 52.4 billion and a rental value of SEK 3.8 billion. The Klöver shares are listed on Nasdaq Stockholm. Klöver offer customers premises and actively contribute to urban development in Stockholm, Gothenburg and Malmö but also in several strong regional cities across Sweden, as well as in Copenhagen and New York. Klöver is primarily focused on offices but also offer premises for companies and organizations active in health care, education, retail as well as in warehouse/logistics. Furthermore, Klöver is working on a number of residential development projects.

Klöver's overarching sustainability goal is to provide environmentally adapted premises, developed and managed with the minimum possible use of resources and the least possible environmental impact. To support this aim, Klöver has set sustainability targets and taken steps to integrate these into the organizations. Moreover, Klöver supports the principles of the UN Global Compact. Besides complying with legislation, Klöver has thereby undertaken to comply with and promote international conventions and standards on protection of human rights, working environment and working methods, environmental consideration and anti-corruption.

Klöver published a green bond framework in March 2018, which got a Medium Green shading from CICERO Green. This second opinion is an update of the previous version from March 2018.

Environmental Strategies and Policies

Klöver has a strong sustainability governance, as recognized by e.g. the high ranking on the Sustainable Brand Index B2B for 2019 and earlier years¹. Strategic goals are clear, and responsibilities clearly assigned. Since 2011, Klöver has been environmentally certified in accordance with the Swedish standard "Svensk Miljöbas". The certification, which identifies for instance the significant environmental impacts of Klöver's operations, has led to the introduction of an environmental management system in line with ISO 14001. An environmental audit is carried out each year by an external body.

Central sustainability targets and achievements to date for Klöver are:

- **Klöver shall have only renewable energy in buildings by 2022.** During 2019, the share of renewable energy increased from 61.9 to 68.2%. All electricity used in Klöver's properties are from hydro or solar power.
- **At least half of all properties should have a specific energy use less than 100 kWh/m².** This target was achieved already in 2019, and the average energy use was 95.4 kWh/m². This can be compared to the real estate average of 160 kWh/m². Since 2010, the building's energy performance has improved by almost 30%.
- **5% of all electricity use should be renewable and own produced electricity by 2025.** 5% corresponds to approximately 5 GWh electricity. In 2019, 580 MWh was produced based on solar power.
- **The management part of Klöver shall be climate neutral by 2025.**
- **The energy use per m² shall be halved by 2030 relative to 2018.** In 2018 it was close to 100 kWh/m².

¹ For details of the ranking see <https://www.sb-index.com/b2b-results/>



- **Klövern will seek to minimize waste going to deposits or energy, and increase the share that is reused or recycled.**
- **Klövern will secure resource efficient projects with as low a climate footprint as possible.**

In 2019, Klöverner has also secured 265 charging stations for electrical vehicles, all based on renewable energy, and work has started to environmentally certify all properties. Klöverner has today 14 certified buildings, representing 11% of total area, with Miljöbyggnad Silver or Gold or similar levels according to BREEAM and LEED. We note that voluntary environmental certifications cover many important sustainability issues, but fall short of guaranteeing zero or low emissions buildings.

Klövern has internal guidelines on how to make environmentally sound (or best option available) purchases, and contracts for building projects are accompanied with technical and environmental guidelines to ensure that technology put into buildings are energy efficient and that environmental considerations, such as waste management, are executed as defined in the contract. Life cycle assessments are carried out for all new building projects.

The results of Klöverner's sustainability work are reported annually, according to GRI, and are published in the annual and sustainability report and on the company's website, <https://www.klovern.se>. From 2016, Klöverner also reports sustainability performance pursuant to CDP, and scored B in 2019 Climate Change report. In April 2019, Klöverner made a commitment to set Science Based Targets, emissions reduction targets in line with climate science. Klöverner currently performs qualitative climate-related scenario analysis, but plan to add quantitative analysis in coming years in line with TCFD recommendations.

Greenhouse gas emissions reported cover scope 1, 2 and partly 3. Scope 3 includes e.g. emissions from waste and business travels, but not for instance material use in new constructions. Scope 2 represents the largest share of total emissions (about 2/3) which amounted to 12,681, 14,890 and 15,500 tCO₂e in 2017, 2018 and 2019, respectively. That is equivalent to 5.2, 5.1 and 5.3 kg CO₂e/m² with the recent increase due to sale of some of the more energy efficient units. Over the longer time since 2010, the improved energy performance and transition towards renewable energy sources has resulted in decreased CO₂ emissions per m² with nearly 25%.

Use of proceeds

An amount equivalent to the net proceeds from Klöverner's green bonds shall be used to finance or re-finance, in part or in full, eligible assets providing distinct environmental benefits ("Green Eligible Assets"). The green pool mainly consists of existing buildings. Thus, a majority of the proceeds from the green bonds will be used for refinancing, and only a minor part to new financing. Current pool of Green Eligible Assets consists of properties in Sweden built from 2000 and onwards; going forward some properties in Denmark and the US might be added. The categories covered are Green and energy efficient buildings, Renewable energy and Biodiversity and resilience. The majority of the proceeds (about 95%) will be used for Green and energy efficient building, with only about 4% for Renewable energy projects and 1% for Biodiversity and resilience purposes.

The proceeds of Klöverner's green bonds will not be used to finance fossil fuel energy generation and infrastructure, nuclear energy generation, the weapons and defence industries, potentially environmentally negative resource extraction, gambling or tobacco.



Selection

The selection process is a key governance factor to consider in CICERO Green's assessment. CICERO Green typically looks at how climate and environmental considerations are considered when evaluating whether projects can qualify for green finance funding. The broader the project categories, the more importance CICERO Green places on the governance process.

The selection of Green Eligible Assets is managed by a dedicated group, the Green Bond Committee ("GBC"). The evaluation process is mainly dependent of externally provided environmental certifications and data from National Board of Housing, Building and Planning. In the process of planning construction of new buildings, ESG risks are considered including screening of potential controversial projects. Depending on the size of the project different methods are applied. For city development projects for example there is a documented process to identify and manage potential ESG risks, called the Klöver method for sustainable city development.

The GBC consist of members from the Finance Department and Sustainability team. Klöver will make sure the sustainability expertise always relies within the GBC. The Head of the Sustainability is responsible for communication and has a veto in all decisions connected to the selection of the Green Eligible Assets.

A list of Green Eligible Assets is kept by the Finance Department and the Head of Finance is ultimately responsible for keeping this list up to date. The list of Green Eligible Assets is monitored on a regular basis during the term of the Green bonds to ensure that the proceeds are sufficiently allocated to Green Eligible Assets. This is also a responsibility of the GBC.

Klöver will follow the development of the green bond market and manage any future updates of the Green Bond Framework to reflect current and future market practices (such as the upcoming EU Taxonomy) and potential updates to the GBP.

Management of proceeds

CICERO Green finds the management of proceeds of Klöver to be in accordance with the Green Bond Principles (2018)².

Equivalent to the net proceeds from Klöver's Green bonds will be tracked by using a spreadsheet where all issued amounts of Green bonds will be inserted. The spreadsheet will also contain the list of Eligible Assets. Information available in the spreadsheet will in turn serve as basis for regular reporting.

All Green bonds issued by Klöver will be managed on a portfolio level. This means that a Green bond will not be linked directly to one (or more) pre-determined Green Eligible Assets. The Company will keep track and ensure there are sufficient Green Eligible Assets in the portfolio. Assets can, whenever needed, be removed or added to/from the Green Eligible Assets' portfolio. Any unallocated proceeds temporary held by Klöver will be placed on the Company's ordinary bank account or in the short-term money market.

Reporting

Transparency, reporting, and verification of impacts are key to enable investors to follow the implementation of green finance programs. Procedures for reporting and disclosure of green finance investments are also vital to

² Green Bond Principles published in June 2018 are voluntary process guidelines for issuing Green bonds established by International Capital Markets Association (ICMA), <https://www.icmagroup.org/green-social-and-sustainability-bonds/green-bond-principles-gbp/Guidelines>



build confidence that green finance is contributing towards a sustainable and climate-friendly future, both among investors and in society.

To be fully transparent towards sustainability investors and other stakeholders, Klöver commits to regular reporting as long as it has Green bonds outstanding. The report will be published on the company's website on an annual basis at an aggregated level and will cover the following areas:

Allocation of proceeds reporting will contain information on: total amount of green bonds issued; share of proceeds used for financing/re-financing as well as share of proceeds used for categories described in table 1 in the next section; share of unallocated proceeds (if any) and examples of the relevant green eligible assets

Furthermore, Klöver intends to report on quantitative impact indicators where feasible and relevant data is available for the three main categories:

Green and energy efficient buildings:

- Type of certification and degree of certification for buildings
- Energy performance certificate (if relevant)
- Energy performance for buildings (kWh/m²/year)
- Reduction in energy consumption (%)
- Estimated annual greenhouse gas emissions reduced or avoided for buildings (tCO₂e)

Renewable energy:

- Annual renewable energy generation (MWh or GWh)
- Estimated annual greenhouse gas emissions reduced or avoided (tCO₂e)

Biodiversity and resilience:

- Area occupied by invading species before and after the project (m²)
- Number of species

The numbers presented in the Impact Reporting are based on Klöver's Climate Report/Sustainability Report (calculations according to the Greenhouse Gas Protocol), which is subject for third party verification. The grid factor on electricity used, is the Nordic residual mix as defined by Energimarknadsinspektionen (Energy Market Inspectorate) (Svensk Energi "Ursprungmärkning av el"). For the Climate report 2019 (based on grid factor 2018) the CO₂e was 251 kg/MWh. The Finance Department and Head of Finance is ultimately responsible for the reporting.



3 Assessment of Klöver’s green bond framework and policies

The framework and procedures for Klöver’s green bond investments are assessed and their strengths and weaknesses are discussed in this section. The strengths of an investment framework with respect to environmental impact are areas where it clearly supports low-carbon projects; weaknesses are typically areas that are unclear or too general. Pitfalls are also raised in this section to note areas where Klöver should be aware of potential macro-level impacts of investment projects.

Overall shading

Based on the project category shadings detailed below, and consideration of environmental ambitions and governance structure reflected in Klöver’s green bond framework, we rate the framework **CICERO Medium Green**.

Eligible projects under the Klöver’s green bond framework

At the basic level, the selection of eligible project categories is the primary mechanism to ensure that projects deliver environmental benefits. Through selection of project categories with clear environmental benefits, green bonds aim to provide investors with certainty that their investments deliver environmental returns as well as financial returns. The Green Bonds Principles (GBP) state that the “overall environmental profile” of a project should be assessed and that the selection process should be “well defined”.

| Category | Eligible project types | Green Shading and some concerns |
|---|---|--|
| Green and energy efficient buildings | <p>New construction and major renovations:</p> <p>Applicable in Sweden:</p> <ul style="list-style-type: none"> - New construction that either have or with the objective to receive minimum “Miljöbyggnad Silver” certification after the completed construction. - New construction that i) either have or with the objective to receive minimum certification of “LEED Gold” or “BREEAM Very Good” after the completed construction and ii) have an energy performance at least 20% below the applicable national building regulation. - New construction with energy performance certificates (EPC) A or B in Sweden. Outside Sweden corresponding EPC levels. - Major renovations with the objective to receive a certification after the completed renovation corresponding to the categories mentioned above and with an energy | <p>CICERO Medium Green</p> <ul style="list-style-type: none"> ✓ The issuer informs us that the majority of the green bond proceeds (i.e. ~95%) will be used for this category. ✓ The building criteria are good, but do not represent the highest standard levels. According to IEA, efficiency of building envelopes needs to improve by 30% by 2025 to be aligned with the Paris target. We note that energy label A and B will secure energy use at least below 75% of regulation. ✓ In addition to climate issues, Miljöbyggnad, LEED and BREEAM cover a broader set of issues, which is important to overall sustainable development. Miljöbyggnad also has specific energy efficiency requirements for each certification level. That is not the case for LEED and BREEAM. |



performance at least 20% below the applicable national building regulation. ✓

Applicable outside Sweden:

- New construction that either have or with the objective to receive minimum certification of “LEED Silver” or “BREEAM Good” after the completed construction and have an energy performance at least 20% below the applicable national building regulation. ✓

Existing buildings:

- Existing buildings with certification from the construction phase mentioned above that is not older than ten years.
- Existing buildings with obtained certification of “BREEAM-In-Use Very Good” and with energy performance of less than 100 kWh/m².
- Existing buildings with energy performance certificates (EPC) A and B. Outside Sweden corresponding EPC levels are eligible. ✓
- Improvements conducted for existing buildings resulting in reduced energy use by at least 30%. Improvements may include some of the following: onsite renewables incl. solar panels or geo-thermal energy, energy retrofits such as installing heat pumps, converting to LED lights or improvements in the ventilation system, activities enabling clean transportation such as installing charging stations for electric cars etc. ✓

Refurbishment of existing buildings are often better than new constructions from a climate point of view, but should ideally come with greater improvements in energy efficiency.

✓ The issuer has informed us that they expect buildings to achieve certification within 24 months of being added to the pool of eligible assets.

✓ The issuer informs has the ambition of only using renewable energy from 2022. District heating networks in Sweden and Denmark that does not offer a green or renewable product will be climate compensated for the fossil share. The climate compensation will be certified according to the Gold Standard. Properties in the US will most likely be responsible for fossil fuel emissions.

✓ In addition, the criteria for new construction outside of Sweden is potentially quite weak, in particular with respect to US investments.

✓ Existing commercial buildings will have dedicated energy management systems in place.

✓ The Green and energy efficient building category will also includes some dark green projects, including onsite renewables and charging stations for electric cars.

✓ Be aware of potential rebound effects following energy efficiency improvements.

Renewable energy - Off-site solar and wind energy projects developed and owned by Klöver.

CICERO Dark Green

- ✓ Facilities will have to operate at lifecycle emissions lower than 100 gCO₂e/kW to be aligned with the EU Taxonomy.
- ✓ There should be a screening for controversial projects.

Biodiversity and resilience - Beehives on the roofs in a city environment that benefits pollination in the urban environment.
- Other improvements/investments leading to more resilient societies such as construction of

CICERO Dark Green

- ✓ Construction of green areas, local dams or creeks in city development projects are very useful to absorb excess water



green areas, local dams or creeks in city
development projects.

from flooding of natural creeks/ponds or
stormwater from heavy rainfalls.

Table 1. Eligible project categories

Background

The construction and real estate sector have a major impact on our common environment. According to the National Board of Housing, Building and Planning's environmental indicators, it accounts for 32% of Sweden's energy use, 31% of waste and 19% of domestic greenhouse gas emissions. Calculations from Sveriges Byggindustrier indicate that the climate impact of new production of a house is as great as the operation of the house for 50 years.

As members of the EU, Sweden and Denmark are subject to the EU's climate targets of reducing collective EU greenhouse gas emissions by 40% by 2030 compared to 1990 levels, increasing the share of renewable energy to 32% and improving energy efficiency by at least 32.5%.³ The European Green Deal aims for carbon neutrality in 2050.⁴ Sweden has developed a National Energy and Climate Plan (NECP) in which it outlines the targets and strategies in all sectors.⁵ These strategies include measures such as increasing renewable energy capacity, increasing energy efficiency, facilitating the large scale implementation of clean transportation alternatives, and increasing carbon sinks through reforestation and the LULUCF sector. Non-ETS emissions, of which public buildings and households are a part, must decrease by 63% by 2030.

The building sector accounts for a large share of primary energy consumption in most countries, and the IEA reports that the efficiency of building envelopes needs to improve by 30% by 2025 to keep pace with increased building size and energy demand – in addition to improvements in lighting and appliances and increased renewable heat sources.⁶ The energy efficiency of buildings is dependent on multiple factors including increasing affluence and expectations of larger living areas, growth in population and unpredictability of weather, and greater appliance ownership and use. Additionally, approximately half of life-cycle emissions from buildings stem from materials/construction. The other half stems from energy use, which becomes less important over time with the increasing adoption of off-grid solutions such as geothermal and solar. All of these factors should therefore be considered in the project selection process. In addition, voluntary environmental certifications such as LEED and BREEAM or equivalents measure or estimate the environmental footprint of buildings and raise awareness of environmental issues. These points-based certifications, however, fall short of guaranteeing a low-climate impact building, as they may not ensure compliance with all relevant factors e.g., energy efficiency, access to public transport, climate resilience, sustainable building materials. Many of these factors are covered under the World Green Building Council's recommendations for best practices for developing green buildings.⁷ CICERO Shades of Green assesses all of these factors when evaluating the climate impact of buildings.

The Exponential Roadmap⁸ lays out a trajectory for reducing emissions by 50% by 2030 and requires that emissions reductions strategies within the buildings sector be rapidly scaled up. The roadmap advocates for standardised strategies that are globally scalable within areas such as new procurement practices for construction and renovation that require dramatically improved energy and carbon emission standards, developing new low-carbon business models for sharing space and smart buildings to achieve economies of scale, and allocating green bond funding for sustainable retrofitting and construction.

³ https://ec.europa.eu/clima/policies/strategies/2030_en

⁴ https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en

⁵ https://ec.europa.eu/energy/topics/energy-strategy/national-energy-climate-plans_en

⁶ <https://www.iea.org/reports/building-envelopes>

⁷ <https://www.worldgbc.org/how-can-we-make-our-buildings-green>

⁸ https://exponentialroadmap.org/wp-content/uploads/2020/03/ExponentialRoadmap_1.5.1_216x279_08_AW_Download_Singles_Small.pdf



EU Taxonomy

The proposed EU taxonomy for sustainable finance includes a number of principles including a “do-no-harm clause” and safety thresholds for various types of activities.⁹ Do-No-Significant-Harm criteria include measures such as ensuring resistance and resilience to extreme weather events, preventing excessive water consumption from inefficient water appliances, ensuring recycling and reuse of construction and demolition waste and limiting pollution and chemical contamination of the local environment. CICERO Green will not here verify Klöver’s framework against the full EU taxonomy, but notes that the taxonomy includes specific thresholds for the real estate sector, briefly summarized as follows:

1. The design and construction of new buildings needs to ensure a net primary energy demand that is at least 20% lower than the level mandated by national regulations.
2. Ownership or acquisition of buildings built before 2021 should have an energy performance in the top 15% of similar stock.
3. Renovations should deliver 30% energy savings.
4. Large non-residential buildings should have dedicated energy management system.

It is currently unclear how this will apply to Sweden, but it is reasonable to expect that buildings with energy use 20% below present regulation would be aligned with the taxonomy. Furthermore, existing buildings with energy performance certificate of class A or B are probably in the top 15% of ‘similar stock’. The taxonomy also highlights the importance of lifecycle emissions including a focus on building material such as wood. Energy saving renovations for existing properties that result in buildings lowering their primary energy demand with 30% are also to be classified as sustainable within the EU Taxonomy. It is further anticipated that activities related to energy efficiency, including installation of solar panels, heat pumps, extension of district heating and cooling, are to be classified as sustainable according to the EU Taxonomy.

Governance Assessment

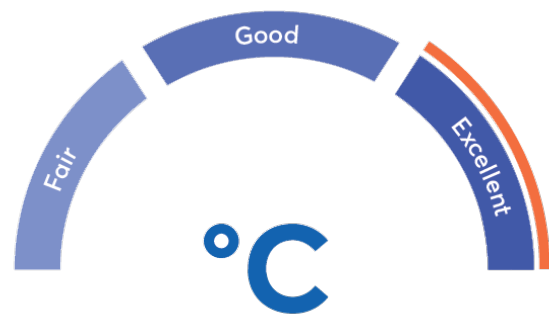
Four aspects are studied when assessing the Klöver’s governance procedures: 1) the policies and goals of relevance to the green bond framework; 2) the selection process used to identify eligible projects under the framework; 3) the management of proceeds; and 4) the reporting on the projects to investors. Based on these aspects, an overall grading is given on governance strength falling into one of three classes: Fair, Good or Excellent. Please note this is not a substitute for a full evaluation of the governance of the issuing institution, and does not cover, e.g., corruption.

In 2022, a Climate declaration act is introduced in Sweden which implicates that a LCA must accompany all new constructions of buildings.

⁹ Taxonomy: Final report of the Technical Expert Group on Sustainable Finance, March 2020.
https://ec.europa.eu/knowledge4policy/publication/sustainable-finance-teg-final-report-eu-taxonomy_en



Klövern has as a goal that the management part of Klöver shall be climate neutral by 2025. In addition, there are several relevant energy related goals and also targets related to waste and recycling. Based on the available information we conclude that Klöver is aware of issues related to handling of construction phase waste and emissions, emissions related to transportation to and from the properties and climate resilience issues. The resilience issue is addressed through systematic use of official local climate scenarios. Altogether this lend credible supports the green bond framework. The selection process for eligible projects (by inhouse expertise with 'environmental' veto power), the managing of the proceeds and the reporting on allocation of proceeds and impacts are all good. The numbers presented in the Impact Reporting are based on Klöver's Climate Report/Sustainability Report (calculations according to the Greenhouse Gas Protocol), which is subject for third party verification. The impact report by itself will not be subject for any additional review.



The overall assessment of Klöver's governance structure and processes gives it a rating of **Excellent**.

Strengths

The direct and indirect climate impacts of the real estate sector is of growing concern. It is therefore good that Klöver as a large actor and with a strong governance structure put forward a comprehensive framework aligned with the Green Bond Principles with clear criteria, including energy criteria, for new and existing properties in Sweden and abroad. The ambition level is not the highest, but represents clear steps in the right direction. This will be supported by transparent allocation and impact reporting at a portfolio level. The green bond framework explicitly excludes fossil fuel energy generation and the issuer has informed us that no buildings in Sweden or Denmark with fossil fuel heating will be financed under this framework. Furthermore, life cycle assessments will be carried out for all new building projects. All of this is a clear strength of the framework.

Weaknesses

There is a possibility that future investments in US properties will represent fossil fuel emissions. Also the criteria for new construction outside of Sweden (a minimum certification of "LEED Silver" or "BREEAM Good" after the completed construction and have an energy performance at least 20% below the applicable national building regulation) is uncertain and possibly quite weak, in particular with respect to the USA. Other than that, we find no obvious weaknesses in Klöver's green bond framework.

Pitfalls

CICERO Green factor in if there have been any considerations around transportation solutions and environmental impacts in the construction phase of the building (building material and waste considerations). Shopping malls in particular have the potential to indirectly generate considerable amount of traffic.

The CICERO Dark Green shading is difficult to achieve in particular in the building sector because buildings have a long lifetime. CICERO Dark Green shading in the building sector should therefore conform to strict measures and is reserved for the highest building standards such as LEED Platinum, Zero-Energy buildings and passive houses. The issuer is encouraged to also consider construction phase emissions and systematically work on reducing emissions related to transportation to and from the properties. The green buildings eligible under Klöver's framework are falling short of the long-term vision of zero-energy buildings or passive houses. In



particular, the criteria of certification of “BREEAM-In-Use Very Good” and with energy performance of less than 100 kWh/m² for existing buildings may open for some relatively weak projects.

We note that district heating is the predominant heating method in Sweden. Also, most of the district heating companies seek to minimize the use of oil or other fossil fuels. However, when waste-to-energy is utilized it is sometimes difficult to know the fossil fraction of the waste stream, e.g. the amount of plastics. Again, many Swedish district heating companies have strong policies to minimize these types of fractions, but without specific information of suppliers of district heating, it is difficult to guarantee totally against the use of some fossil fractions. This is even more so for properties outside Sweden, e.g. in Denmark and USA where both district heating and electricity has sizeable fossil fuel components. Klöverm has stated that they intend to climate compensate for any fossil fuel emissions in Denmark, and this leaves US investments as a potential pitfall as natural gas is used for heating and cooking in New York.

In calculating emission reductions, Klöverm will use the grid factor of the Nordic residual mix provided by Energimarknadsinspektionen (Svensk Energi "Ursprungmärkning av el") for all buildings. For the Climate report 2019 (based on grid factor 2018) the CO_{2e} was 251 kg/MWh. In places, this grid factor may be higher than the actual local grid factor, leading to an overestimation of CO_{2e} emissions avoided.

Efficiency improvements may lead to rebound effects. When the cost of an activity is reduced there will be incentives to do more of the same activity. From the project categories in table 1, an example is energy efficiency investments in buildings which in part may lead to more energy use or a failing to reach the potential reductions. Klöverm's work with its property users can actively mitigate the risk of rebound effects related to energy efficiency.



Appendix 1: Referenced Documents List

| Document Number | Document Name | Description |
|------------------------|---|--|
| 1 | Klövern Green Bond Framework October 2020 v.4_clean | Klövern's Green Bond Framework dated October 2020 |
| 2 | klovern_arsredovisning__2019 | Klövern's Annual Report 2019 |
| 3 | klovern_hallbarhetsredovisning_2019-3 | Klövern's Sustainability Report 2019 |
| 4 | uppforandekod-for-leverantorer-20170628 | Code of conduct for suppliers dated 28 June 2017 |
| 5 | klovern final 21.03.18 | CICERO's second opinion on Klöverns Green Bond Framework from March 2018 |



Appendix 2: About CICERO Shades of Green

CICERO Green is a subsidiary of the climate research institute CICERO. CICERO is Norway's foremost institute for interdisciplinary climate research. We deliver new insight that helps solve the climate challenge and strengthen international cooperation. CICERO has garnered attention for its work on the effects of manmade emissions on the climate and has played an active role in the UN's IPCC since 1995. CICERO staff provide quality control and methodological development for CICERO Green.

CICERO Green provides second opinions on institutions' frameworks and guidance for assessing and selecting eligible projects for green bond investments. CICERO Green is internationally recognized as a leading provider of independent reviews of green bonds, since the market's inception in 2008. CICERO Green is independent of the entity issuing the bond, its directors, senior management and advisers, and is remunerated in a way that prevents any conflicts of interests arising as a result of the fee structure. CICERO Green operates independently from the financial sector and other stakeholders to preserve the unbiased nature and high quality of second opinions.

We work with both international and domestic issuers, drawing on the global expertise of the Expert Network on Second Opinions (ENSO). Led by CICERO Green, ENSO contributes expertise to the second opinions, and is comprised of a network of trusted, independent research institutions and reputable experts on climate change and other environmental issues, including the Basque Center for Climate Change (BC3), the Stockholm Environment Institute, the Institute of Energy, Environment and Economy at Tsinghua University and the International Institute for Sustainable Development (IISD).

