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INVESTORS SERVICE

ASSESSMENT
5 July 2018

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Government of Lithuania

Green Bond Assessment - May 2018 issuance

Summary analysis

GB1	GB2	GB3	GB4	GB5
Excellent	Very Good	Good	Fair	Poor

Summary opinion

A GB1 (Excellent) Green Bond Assessment (GBA) assigned to the Government of Lithuania's (A3 stable) €20 million debut green bond issued in May 2018 is based on the following considerations:

» Proceeds to be fully allocated to new energy efficiency improvements in multi-apartment buildings, consistent with the Green Bond Principles and supporting the country's goals under the Paris climate agreement

» Broad, but complex, organizational structure whereby multiple government agencies and groups provide collective oversight of use of proceeds and reporting on environmental benefits

» Strong disclosure on expected use of proceeds including a detailed identified list of projects to be financed, with environmental benefits derived from independent building certifications

» Proceeds on-lended to a government agency responsible for opening a separate green bond account and allocating proceeds to eligible projects

» Post-issuance reporting expected to continue over the life of the bond and contain annual updates on the use of proceeds and environmental benefits achieved

Factor	Factor Weights	Score	Weighted Score
Organization	15%	2	0.30
Use of Proceeds	40%	1	0.40
Disclosure on the Use of Proceeds	10%	1	0.10
Management of Proceeds	15%	1	0.15
Ongoing Reporting and Disclosure	20%	1	0.20
Weighted Score			1.15

The transaction's weighted score, based on our GBA scorecard, is 1.15. This, in turn, corresponds to a composite grade of GB1.

Profile

Located in northeastern Europe on the Baltic Sea, Lithuania has a population of approximately 2.8 million people. Nominal GDP totaled $47.2 billion in 2017.

As discussed in our latest credit opinion for the country, Lithuania's credit profile reflects a flexible and diversified economy, as well as a very high level of institutional strength that has supported the implementation of structural reforms balanced against structural challenges stemming from a rapidly aging population and large emigration. Public finances are robust, and the commitment to a prudent fiscal policy has resulted in a sustained track record of fiscal consolidation, culminating in the first fiscal surplus in the country's history in 2016. Despite the demonstrated resiliency, Lithuania remains, as a small and open economy, exposed to external shocks, particularly developments in the regional geopolitical environment.

Transaction summary

The Government of Lithuania issued its debut €20 million fixed-rate, senior unsecured and unsubordinated green bond on May 3, 2018. The 10-year green bond matures on May 3, 2028 and was listed on Nasdaq Vilnius.

The offering is likely the first of three green bond tranches that will ultimately total €68 million, with all proceeds being used to finance new energy efficiency upgrades to multi-apartment buildings throughout Lithuania.

Strengths and weaknesses

Strengths	Weaknesses
Proceeds will be 100% allocated to energy efficiency upgrades in multi-apartment buildings, consistent with the energy efficiency and green buildings categories of the Green Bond Principles	Some complexity inherent in the organizational structure, with multiple entities responsible for selecting green bond projects and verifying various aspects of the transaction
Good disclosure on how proceeds will be spent, and how the environmental benefits of the projects will be measured	
Strong proceeds managements practices including the separation of green bond proceeds in a separate account and auditing of the use of proceeds by independent bodies	
Post-issuance reporting expected to be provided annually over the life of the bond, and expected to include granular detail on how the green bond proceeds were allocated and what environmental benefits the financed projects are achieving	

Organization

To support the issuance of its debut green bond, Lithuania created a robust green bond framework that outlines how the country's green bond is aligned with the best practices articulated under the Green Bond Principles published by the International Capital Market Association.[1] The framework outlines the country's approach to organization and governance, project evaluation and selection process, use of proceeds, management of proceeds, as well as reporting and disclosure. Additionally, the framework describes how the investments in multi-apartment building energy efficiency, to be financed in part by green bond proceeds, support the country's goals under the Paris climate agreement and the EU climate framework.

Lithuania has committed to decrease energy consumption intensity 1.5 times by 2030 compared to 2017. Following an analysis of potential energy savings in the country, researchers identified that nearly 50% of the energy savings potential lies in the residential sector. With this is mind, the National Energy Independence Strategy of Lithuania has set the long-term priority of the country to increase the efficiency of energy consumption in households and public buildings.

Similarly, under the operational programme for the European Union funds investment in 2014-2020 of the Republic of Lithuania, the country has identified broad environmental goals such as reducing energy consumption in public infrastructure and multi-apartment houses and enhancing energy efficiency in the heat supply sector and households. To achieve these broad goals, the country has identified a number of specific initiatives, including:

» Renovation and modernization of multi-apartment buildings through energy efficiency enhancement measures

» Renovation and modernization of buildings used by state, municipal authorities and institutions

» Promotion and supervision of renovation of public buildings and multi-apartment buildings

» Modernization of urban street lighting

» Improvement of energy production efficiency and use of renewable energy sources in households

» Modernization and development of district heating networks

In 2014, the Lithuanian government commissioned an energy efficiency sector assessment which discovered a greater than €1 billion financing gap in the modernization of multi-apartment buildings throughout the country until 2023. Green bonds will serve as one of a variety of financing sources to implement the operational programme for the European Union funds investment in 2014-2020 of the Republic of Lithuania, cover the financing gap for multi-apartment building upgrades and achieve broad national objectives for energy efficiency.

Green bond issuance and oversight is supported by a multi-layered organizational framework that involved various divisions and agencies throughout the Lithuanian government. These groups include the following:

» **Public Investment Development Agency (VIPA)**, which is a Lithuanian state financial institution with the goals of financing and promoting sustainable development. VIPA will receive the green bond proceeds through an on-lending process authorized by government Resolution No. 341 that was adopted on April 9, 2018. VIPA is responsible for project selection and oversight and will subsequently on-lend the borrowed funds to multi-apartment buildings' owners for building modernizations that will to help improve energy efficiency and reduce heating costs. VIPA carries out financial, reputational and management capacity risk assessments of project administrators, and on a selective basis performs administrative audits on sites.

» **Housing Energy Efficiency Agency (BETA)**, which is an independent agency under the Ministry of Environment, is responsible for implementation and administration of the eligible green bond projects. BETA performs technical project evaluation, including energy efficiency savings. BETA is also responsible for monitoring of the eligible projects and will prepare annual reports that will form the basis of annual green bond performance reports to be published by VIPA.

» **State Territorial Planning and Construction Inspectorate**, which is an independent agency under the Ministry of Environment, performs planned and unplanned site inspections to check the compliance of performed activities with the requirements of technical regulations and other national legislation.

» **State Labour Inspectorate**, which is an independent agency under the Ministry of Social Security and Labour, conducts planned and unplanned site inspections to evaluate the compliance with occupational health and safety requirements.

» **Ministry of Environment**, which is responsible for general supervision, coordination and strategic planning related to the green bond projects.

» **Ministry of Finance**, which initially received the green bond proceeds and subsequently on-lent them to VIPA.

These multiple government agencies and groups provide collective oversight of the green bond offering process from issuance to maturity. Although there are clearly defined roles for project selection, proceeds management and reporting, the complexity inherent in having a large number of agencies involved in various oversight mechanisms may lead to some organizational challenges over the long run. Furthermore, essentially all of these agencies are internal parties to the green bond process with limited reliance on external experts advising how to identify the eligibility criteria for green bond investments.

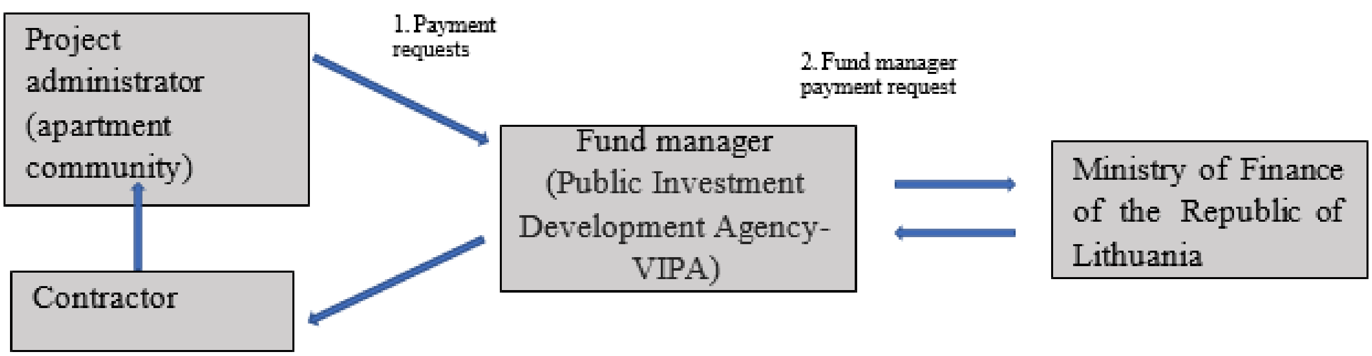
Factor 1: Organization (15%)	Yes	No
Environmental governance and organization structure appear to be effective	●	
Policies and procedures enable rigorous review and decision making process	●	
Qualified and experienced personnel and/or reliance on qualified third parties	●	
Explicit and comprehensive criteria for investment selection, including measurable impact results	●	
External evaluations for decision making in line with project characteristics		●
Factor Score	2	

Use of proceeds

Subsequent to the definition of eligible green projects outlined in the green bond framework, 100% of Lithuania's green bond proceeds will be used to finance energy efficiency improvements in multi-apartment buildings throughout the country. The Ministry of Finance issued a loan to VIPA, which will subsequently use the proceeds to on-lend multiple small sub-loans to finance various eligible energy efficiency improvements (see Exhibit 1). These improvements are consistent with the broader Multi-Apartment Building Modernisation Programme, approved by the Lithuanian government, which utilizes multiple financing sources (including green bonds) to finance energy efficiency improvements consistent with the governments broader environmental goals, as discussed above.

Exhibit 1

Interconnection between institutions as to payment requests and funds



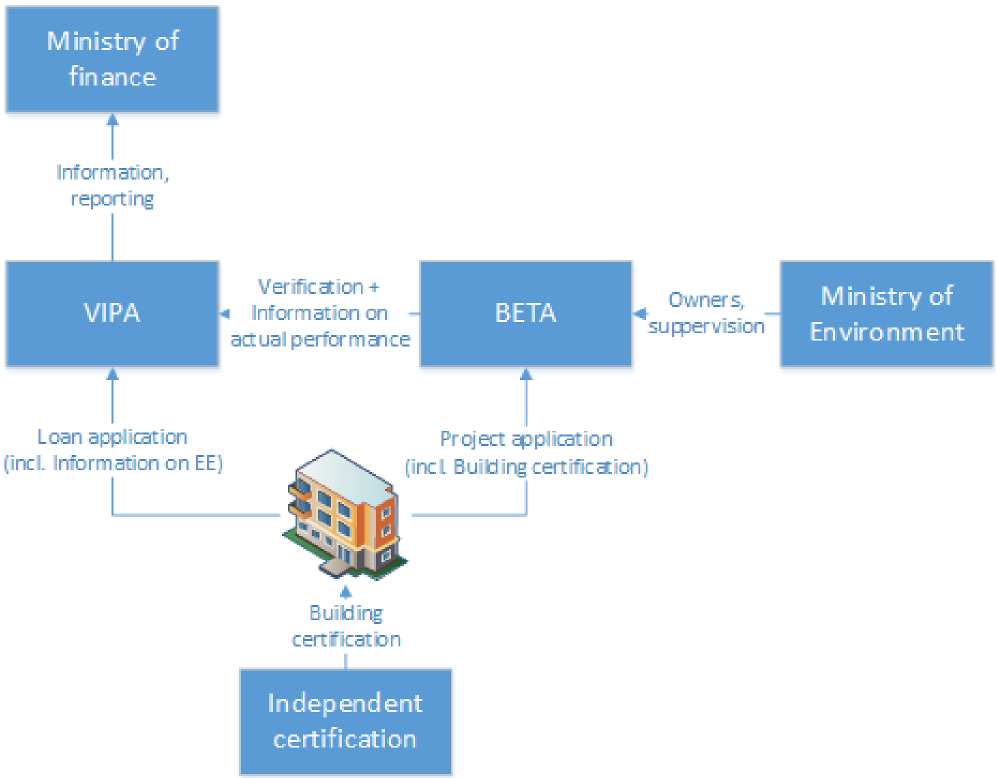
Source: Government of Lithuania

The government has decided to allocate the green bond proceeds to the selected eligible projects with the intention of addressing increasing fuel consumption, energy demand and greenhouse gas emissions by modernizing multi-apartment buildings and raising public awareness of the energy performance of buildings and energy savings. These upgrades primarily align with the energy efficiency and green buildings categories of the Green Bond Principles.

Lithuania's Building Energy Performance Certificate regulations require that all new and existing buildings be certified beginning in 2007. This program evaluates the performance of each building in Lithuania based on its energy consumption. After the evaluation, the building is grouped according to one of nine classes, from A++ (most efficient) to G (inefficient). The certificates are valid for 10 years and are available to the public in an online database.

Certification of the buildings is provided before and after the modernization upgrades are completed. The certificates are assigned by the Construction Products Certification Center (SPSC), an independent state-owned company established by the Ministry of Construction and Urban Development (now the Ministry of the Environment), which has been operating since 1996. The independent company provides a before and after look at the energy consumption of buildings, allowing for the calculation of energy savings for each financed building. The flow of information related to the building certification and energy efficiency achievement is highlighted in Exhibit 2.

Exhibit 2
Information flow on energy efficiency obtained



Source: Government of Lithuania

For projects financed with proceeds from the green bond, buildings must have an energy efficiency ranking of at least C after the modernization improvements are installed. This certificate level contributes to the country's goal of achieving energy savings of at least 40% for the buildings compared to the pre-modernization level. Actual energy savings will vary based on the original certificate level of the building before the improvements are made.

Factor 2: Use of Proceeds	Yes	No
>95% - 100% of proceeds allocated to eligible project categories that are determined based on the issuer's adopted policies and the categories established under the Green Bond Principles that will be further informed by one or more robust and widely recognized green bond frameworks or taxonomies that qualify eligible projects, including any applicable regulatory guidelines.	●	
Factor Score	1	

Disclosure on the use of proceeds

Lithuania has provided very strong disclosures around the use of green bond proceeds, with clarity provided around eligible projects for financing and the expected qualitative and quantitative environmental benefits of the projects. The government has shared with

Moody's granular detail down to the individual project level, and relies on independent companies to provide certifications attesting to the environmental credentials of the financed projects.

BETA has assessed and prioritized a list of projects to receive funding from the green bond proceeds. This list has over 500 new projects identified, with details provided as to their location, amount of project upgrade and expected energy class achieved or to be achieved. Of these projects eligible for potential financing, approximately 56% are expected to achieve an energy certificate of C and 44% are expected to achieve an energy certificate of B, with one project expected to achieve an A++ certificate. Green bond proceeds will be allocated to these projects on a first-come, first-served basis. Over time as the specific projects are identified and selected, green bond funds will be drawn to finance the improvements, effectively tying the green bond proceeds to a specific set of projects.

Based on the average size of a project improvement, the government estimates that it will ultimately be able to finance 156 projects with the total anticipated €68 million of green bonds to be issued. Identified projects are based in 50 municipalities, and average project implementation duration is approximately 18 months.

Factor 3: Disclosure on the Use of Proceeds	Yes	No
Description of green projects, including portfolio level descriptions, actual or intended	●	
Adequacy of funding and/or strategies to complete projects	●	
Quantitative and/or qualitative descriptions for targeted environmental results	●	
Methods and criteria, both quantitative and qualitative, for calculating performance against targeted environmental results	●	
Issuer relies on external assurances: Second Party reviews, audits and/or third party certfications	●	
Factor Score	1	

Management of proceeds

Net proceeds from the green bond were on-lent to VIPA, which subsequently opened a separate account to manage the proceeds. The separate green bond account is used to receive the net proceeds, disburse payments to the contractors implementing the eligible projects, issue other payments related to the eligible projects and receive loan payments from the end borrowers.

Proceeds held in the dedicated green bond account will be managed in accordance with VIPA's normal accounting policies which govern all aspects of the proceeds management and accounting processes. VIPA will maintain an accounting system with an accounting code for all transactions relating to the distribution of green bond proceeds, allowing it to track green bond proceeds on a project-by-project basis. VIPA accounting policies also govern the list of eligible investments for green bond cash balances that have not yet been allocated to eligible projects, with eligible investments including:

» Government securities of the Republic of Lithuania

» Debt securities issued or guaranteed by foreign governments

» Term deposits with the Bank of Lithuania and commercial banks established in accordance with the procedure established by laws of the Republic of Lithuania or branches established by foreign banks in Lithuania

» Time deposits with foreign commercial banks

» Debt securities issued by Lithuanian or foreign commercial banks

» Lithuanian and foreign investment funds, the portfolio of which does not include shares

» Debt securities issued by international organizations

Auditing of the green bond account is primarily derived from auditing of the Apartment Building Modernization Fund (ABRF), which has the sole purpose of financing multi-apartment building renovations. An independent external auditor performs an annual audit on the ABRF. Separate records are kept for all financing sources for the ABRF, including the green bond account, which effectively allows for an audit of the green bond account and the flows of funds related to that account. Additionally, the national audit office of Lithuania can perform audits in select circumstances, and the Ministry of Finance performs select site checks to ensure that VIPA has all required procedures implemented correctly.

Factor 4: Management of Proceeds	Yes	No
Bond proceeds are segregated and separately tracked on an accounting basis or via a method by which proceeds are earmarked	●	
Application of proceeds is tracked by environmental category and project type	●	
Robust process for reconciling planned investments against actual allocations	●	
Clear eligibility rules for investment of cash balances	●	
Audit by external organization or independent internal audit unit	●	
Factor Score	1	

Ongoing reporting and disclosure

1	2	3	4	5
Excellent	Very Good	Good	Fair	Poor

On the basis of annual reports prepared by BETA and submitted to the Ministry of Environment and Ministry of Energy, VIPA will issue annual green bond performance reports over the 10-year life of the bond. These reports will be publicly available and contain information on how the green bond proceeds were allocated and what environmental benefits the financed projects are achieving. To monitor performance of the eligible projects, certain quantitative indicators have been selected to be included in the annual green bond report, including energy performance of the financed buildings before and after modernization, the amount of greenhouse gases emitted into the atmosphere and the number of modernized buildings financed with green bond proceeds.

Favorably, the receipt of independent certifications on the energy efficiency credentials for each financed project allows for granular reporting on the environmental benefits achieved over time by each financed project. Although the exact form of the annual post-issuance green bond report has not yet been finalized by the issuer, we view favorably the possibility of the report containing information on a project-by-project basis.

Factor 5: Ongoing Reporting and Disclosure	Yes	No
Reporting and disclosure post issuance provides/to be provided detailed and timely status updates on projects	●	
Ongoing annual reporting is expected over the life of the bond	●	
Disclosures provide granular detail on the nature of the investments and their expected environmental impacts	●	
Reporting provides/to be provided a quantiative and/or qualitative assessment of the environmental impacts actually realized to-date	●	
Reporting includes/to include quantitative and/or qualitative explanation of how the realized environmental impacts compare to projections at the time the bonds were sold	●	
Factor Score	1	

Moody's Green Bond Assessment (GBA)

Moody's GBA represents a forward-looking, transaction-oriented opinion on the relative effectiveness of the issuer's approach to managing, administering, allocating proceeds to and reporting on environmental projects financed with green bond proceeds. GBAs are expressed using a five-point relative scale, ranging from GB1 (Excellent) to GB5 (Poor). A GBA does not constitute a credit rating.

Moody's related publications

Methodology:

» Green Bonds Assessment (GBA), March 30, 2016

Issuer Research:

» Country Statistics: Lithuania, Government of, May 30, 2018

» Credit Opinion: Government of Lithuania – A3 Stable: Regular update, February 20, 2018

Sector Outlook:

» Outlook: Sovereigns – Euro Area: 2018 outlook stable as cyclical recovery offsets limited reform momentum, January 15, 2018

» Outlook: Sovereigns – Global: 2018 outlook stable as healthy growth tempers high debt, geopolitical tensions, November 8, 2017

Green Bond Assessment:

» Poland, Government of: Green Bond Assessment – February 2018 issuance, June 1, 2018

» Poland, Government of: Green Bond Assessment – December 2016 issuance, June 1, 2018

» Nigeria, Government of: Green Bond Assessment - Series 1 Green Notes, December 13, 2017

Sector In-Depth:

» Sovereigns – Global: Environmental, social and governance risks influence sovereign ratings in multiple ways, June 27, 2018

» Green Bonds – Global: Modest Q1 2018 issuance a speed bump on the road to market growth, April 20, 2018

» Green Bonds - Global: Global municipal green bond issuance will continue to rise, March 19, 2018

» Green Bonds - Global: Global green bond issuance set to eclipse $250 billion in 2018, January 31, 2018

» Cross-sector - Global: FAQ: The green bond market and Moody's Green Bonds Assessment, November 29, 2017

» Green Bond Assessments - Global: Issuers exhibit strong organizational frameworks but differ on disclosure, September 19, 2017

To access any of these reports, click on the entry above. Note that these references are current as of the date of publication of this report and that more recent reports may be available. All research may not be available to all clients.

Endnotes

1 International Capital Market Association, Green Bond Principles 2018.

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