



Sustainability Bond Framework

Investor presentation





Executive Summary

Rationale for establishing a Sustainability Bond Framework

- ✦ The Grand Duchy of Luxembourg is committed to **sustainability** and, as such, pursues a **clear and robust strategy for the implementation of the Paris Agreement** as well as the **achievement of the SDGs**
- ✦ With this new Framework, a **first for a AAA-rated Sovereign**, the Grand Duchy of Luxembourg aims to reinforce this commitment and considers sustainable bonds as key financing instruments to support its efforts and ambitions
- ✦ This Framework follows best market practices:
 - **Fully aligned with the ICMA Principles and Guidelines**
 - And **designed to comply with the TEG's EU Green Bond Standard (EU GBS)** when relevant and feasible
- ✦ Sustainalytics has issued a **positive Second Party Opinion (SPO) on the alignment** of this Framework **with the ICMA principles** and has assessed the alignment with the **EU Taxonomy** for 23 green activities, a 1st for the SPO provider, highlighting the **ambitious and pioneering approach** of the Grand Duchy of Luxembourg

Focus on contemplated transactions

- ✦ The transactions will (re)finance **Green and Social expenditures** and are a **testimony of the Grand Duchy's commitment to sustainable finance**
- ✦ Key Features of contemplated transactions:

Issuer	Grand Duchy of Luxembourg
Type	Sustainability Bonds RegS Bearer, Senior, Unsecured
Ratings	Aaa/AAA/AAA (all stable) (Moody's/S&P/Fitch)
Use of Proceeds	It is the Issuer's intention to apply an amount equal to the net proceeds of the Issue to finance and/or refinance eligible expenditures falling within Eligible Green and Social Categories , as described under the Sustainability Bond Framework of the Issuer
Expected Size	EUR Benchmark
Maturity	Medium to long term
Documentation	Standalone LGB



1. Luxembourg's Sustainability Approach
2. Sustainability Bond Framework
3. Identified Eligible Expenditures

Appendix

- Luxembourg as a diversified economy and public finances
- Sound public finances of Luxembourg
- Focus on Luxembourg credit rating and debt management



THE GOVERNMENT
OF THE GRAND-DUCHY OF LUXEMBOURG
Ministry of Finance



1. Luxembourg's Sustainability Approach



Luxembourg's sustainability approach

A Coalition Government with sustainability as a priority

- The **Coalition Agreement published in 2018** has set important targets for the Grand Duchy of Luxembourg
- Key messages and goals: the social cohesion and the **promotion of an inclusive and welcoming society supporting equity, individual freedom and mutual respect**

The Grand Duchy of Luxembourg's ambition is to :

- Pursue the **development of a responsible, sustainable and innovative financial sector** in order to meet the challenges of a **dynamic economic development** while **respecting for ecological limits and social equity**
- Continuous work on **implementing an ambitious social policy** in order to reduce the widening income gap, strengthening the fight against poverty and exclusion and paying particular attention to the structure of wages and a fair fiscal policy





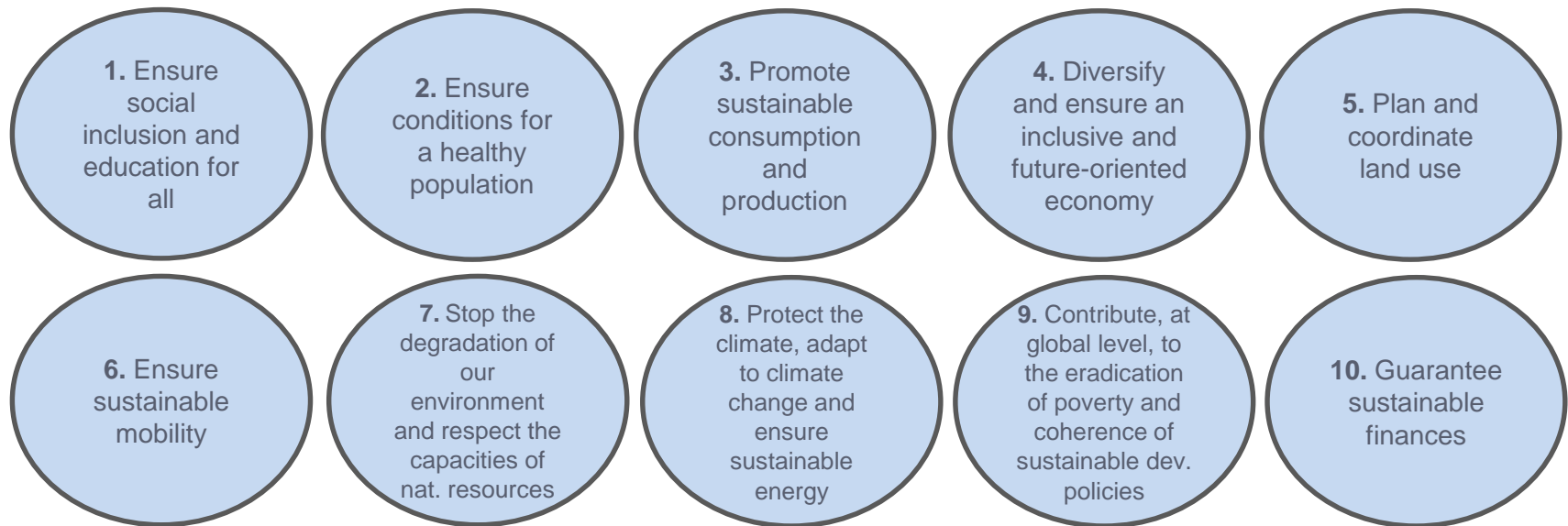
Luxembourg's sustainability approach

National Plan for Sustainable Development

- In December 2019, the Grand Duchy of Luxembourg launched its “**Luxembourg 2030: 3rd National Plan for Sustainable Development**” as a tool to implement the 17 Sustainable Development Goals (SDGs) of the UN Agenda 2030



The National Plan for Sustainable Development 10 priority fields of action



This last priority field has been included in this plan as sustainable finance is critical to its implementation as well as to achieving the SDGs. The Grand Duchy of Luxembourg's intention as a financial center is to respond to its role in the global transition towards more sustainability as well as climate resilience



Luxembourg's sustainability approach

Climate law

- At the end of 2019, the Grand Duchy of Luxembourg proposed its new draft **Climate law**, based on the principles of climate justice and social equity. Through the draft Climate law, the Grand Duchy of Luxembourg acknowledges that a greater effort is required in order to protect the environment and aims to:
 - ✦ **reduce greenhouse gas emissions by 55% by 2030**, as well as to
 - ✦ **reach net zero emissions by 2050 at the latest**
- The draft Climate law is implemented through the “**Integrated National Energy and Climate Plan**” for the period 2021-2030 and includes compulsory sectoral climate change objectives for five sectors, giving them greater responsibility to help reduce emissions. The sectors concerned are:



A strong example embodying Luxembourg's approach: Free public transport across the country

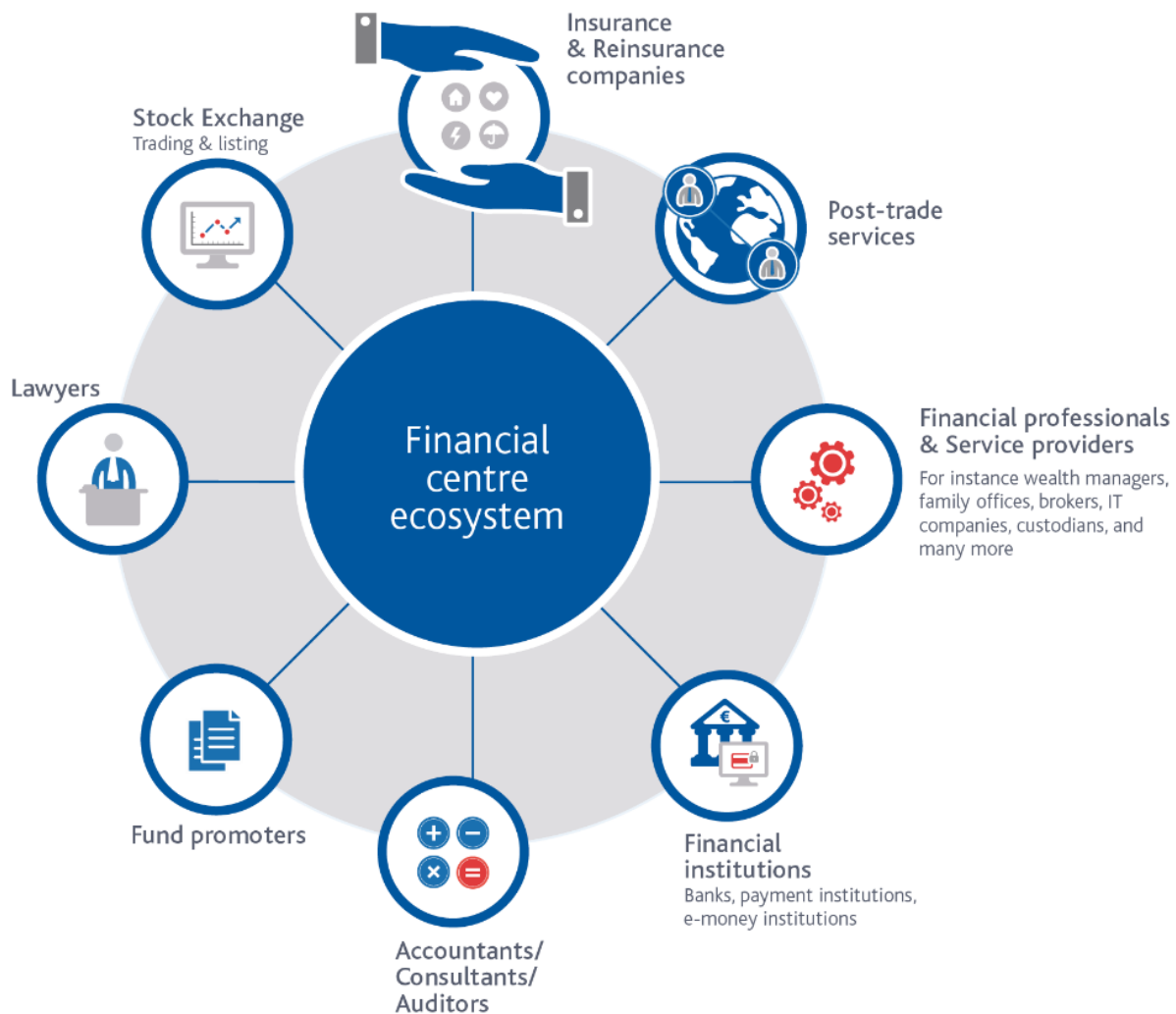
- Since the end of February 2020, **all public transport in Luxembourg is free**
- This **social measure** also has a **positive impact on the environment** by attracting new users to public transport while minimizing carbon emissions by reducing the number of cars on the road



Luxembourg's sustainability approach

An international financial center

- ✦ A functioning and expanding **green, social and sustainability capital market** plays a **central role** in order to mobilize the substantial investments needed
- ✦ Luxembourg is a Hub and cross-border center of excellence facilitating multi-jurisdictional and cross border financial services. It is the **world's 2nd largest investment fund center**, after the US, with currently more than EUR 4 600bn in AUM





Luxembourg's sustainability approach

At the forefront of Sustainable Finance development (1/2)

SUSTAINABLE FINANCE

Home to the first and only exchange platform in the world dedicated to sustainable, green and social securities, the **Luxembourg Green Exchange (LGX)**

1ST LARGEST MARKET
share of listed Green bonds
in the world

39%

LUXEMBOURG
has the leading European market
share of responsible investment funds



61%

OF ALL GLOBAL MICROFINANCE FUND ASSETS

ARE DOMICILED IN LUXEMBOURG





Luxembourg's sustainability approach

At the forefront of Sustainable Finance development (2/2)

A leading center for sustainable finance with multiple innovative and strategic initiatives implemented as early as 2006



Luxembourg Green Exchange
In September 2016, the Luxembourg Stock Exchange launched the Luxembourg Green Exchange (LGX), the world's first dedicated platform for green, social and sustainable securities. The Luxembourg Green Exchange now lists more than half the world's green bonds



Amundi Planet Emerging Green One Fund – Technical Assistance Programme
In 2018, as a strategic partner with the International Finance Corporation (IFC), the Grand Duchy of Luxembourg contributed to the technical assistance programme of the Amundi Planet Emerging Green One Fund, the world's largest green bond fund focused on emerging markets



Sustainable Finance Education and Research
In early 2020, the Luxembourg government entered a strategic partnership with the University of Luxembourg in order to create a Master Track on Sustainable Finance, as well as professional certificates and fundamental and applied research in sustainable finance



2006

LuxFLAG

In 2006, this independent and international non-profit responsible fund labeling agency was created. As of December 2019, LuxFLAG had awarded labels to 196 investment products domiciled in 7 jurisdictions (Belgium, Germany, France, Ireland, Italy, Luxembourg and the Netherlands) and managed by 84 asset managers located in 16 countries; representing approximately EUR 106.2 billion in assets under management by labelled products

2016

2017

Luxembourg-EIB Climate Finance Platform

In 2017, the Luxembourg-EIB Climate Finance Platform was created between the European Investment Bank and the Grand Duchy of Luxembourg. It aims to mobilize investments for investment funds with a strong impact in the fight against climate change by providing a first loss guarantee for 60 million euros until 2024 to mitigate the risk for the private sector when co-investing in funds dedicated to climate change mitigation and adaptation

2018

International Climate Finance Accelerator

In 2018, the International Climate Finance Accelerator (ICFA) was launched, an innovative accelerator supporting first or second time fund managers specializing in climate finance. As of July 2020 the Accelerator supports 15 fund managers

2020

Luxembourg Sustainable Finance Initiative

In early 2020, the Luxembourg government together with civil society launched the Luxembourg Sustainable Finance Initiative, an entity which shall coordinate the sustainable finance initiatives in Luxembourg while further implementing the Luxembourg Sustainable Finance Roadmap, which was published in 2018





Luxembourg's sustainability approach

Rationale for the establishment of the Framework

- ✦ The Grand Duchy of Luxembourg aims to **reinforce its commitment to sustainability** and **considers green, social and / or sustainability bond(s) as key financing instruments** to support its efforts and ambitions while providing national and international investors with the opportunity to diversify their investments with more sustainable assets
- ✦ In that sense, the **Sustainability Bond Framework, the first for a AAA-rated Sovereign Issuer, supports the Grand Duchy of Luxembourg's continued effort in financing green and social activities and contributes to the achievement of the UN SDGs**
- ✦ The Grand Duchy of Luxembourg also aims to **lead by example in order to support the development of the green, social and / or sustainability capital market** with the issuance of **safe and liquid sovereign green, social and / or sustainability bond(s)**
- ✦ The proceeds raised from such bond issuance will enable the Grand Duchy of Luxembourg to **fund government expenditures that contribute positively to the Grand Duchy's environmental and social goals** and further promote and develop the domestic and international green, social and sustainability bond market



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Ministry of Finance



2. Sustainability Bond Framework



Sustainability Bond Framework

Overview of Luxembourg's Sustainability Bond Framework

A Framework following best market practices...

...with a structure adhering to the following key pillars

✦ Luxembourg's Sustainability Framework:

- Is in line with the **ICMA Green Bond Principles 2018, Social Bond Principles 2020 and Sustainability Bond Guidelines 2018**
- Has been designed to comply with the draft **EU Green Bond Standard (EU GBS)**, when relevant and feasible
- Complies with the recommendation of the Technical Expert Group (TEG) final report on the **EU Taxonomy** for the eligibility criteria of green categories on a best effort basis



1

Use of Proceeds

(Re)Financing eligible expenditures falling within the Green and Social Eligible categories

2

Evaluation and selection process

Carried out by the Luxembourg's Sustainability Bond Committee, who will meet at least once a year, in accordance with the eligibility criteria

3

Management of Proceeds

Bond by bond approach, with proceeds fully allocated at the earliest convenience (within two years in any case)

4

Reporting

Allocation and impact reports to be produced at least annually until full allocation

5

External Review

Second Party Opinion (SPO) from Sustainability Analytics on the Framework
Verification by an external reviewer of the proceeds allocation



Sustainability Bond Framework

Use of Proceeds

Issuance types

- ✦ Luxembourg may issue **Green, Social and Sustainability Bonds** where an amount equal to the net proceeds will be exclusively used to (re)finance eligible expenditures falling within, respectively, the Eligible Green categories, the Eligible Social categories, and both the Eligible Green and Social categories

Exclusions criteria








- ✦ **Funding Exclusions:**
 - Expenditures from budgets **older than 3 calendar years** from the year of issuance of the Bond
 - Expenditures already financed via a **dedicated funding source**, in order to avoid any “double counting”
 - Expenditures that would contravene the law of June 8 1999 on the Budget, Accounting and Treasury*
- ✦ **Environmental and social Exclusions:**
 - Expenditures falling within the following sectors: nuclear power generation, fossil fuel production and fossil fuel power generation, rail infrastructure dedicated for transportation of fossil fuels, production or trade in weapons and munitions, production or trade in alcoholic beverages (excluding beer and wine), production or trade in tobacco, gambling, production or trade in any product or activity deemed illegal under international conventions and agreements, or subject to international bans

(* This law ([link](#)) states in Article 5 that the proceeds of a bond issuance can only be used to (re)finance Grand Duchy of Luxembourg's investment projects



Sustainability Bond Framework





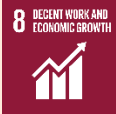

Use of Proceeds: Focus on Eligible Green categories

Categories and main SDG Contribution	Description
Green Buildings 	 Construction and acquisition of energy efficient buildings  Renovation of existing buildings
Energy Transition  	 Renewable energy: Construction and operation of electricity generation facilities supporting a transition to a net-zero emissions economy  Energy efficient appliance and lighting
Low Carbon Transportation 	 Low carbon transportation including: <ul style="list-style-type: none">• Public transport• Infrastructure for low carbon transport
Protection of the Environment  	 Waste management  Protection and restoration of healthy ecosystems and their services
Water and Wastewater management 	 Support the development of water and wastewater management systems allowing to significantly improve energy efficiency and/or water quality
Climate Finance and R&D 	 Mobilise and support investment in international climate finance  Support research, development and innovation focusing on climate change mitigation and adaptation



Sustainability Bond Framework

Use of Proceeds: Focus on Eligible Social categories

Categories and main SDG Contribution	Description
<p>Access to Essential Services: Education</p> 	<p>Providing access to essential educational infrastructure and services for all by:</p> <ul style="list-style-type: none"> • Extending educational capacities • Improving the quality of the existing educational infrastructure and equipment
<p>Access to Essential Services: Healthcare</p> 	<p>Provide access to essential healthcare infrastructure and services for all by:</p> <ul style="list-style-type: none"> • Extending healthcare capacities • Improving the quality of the existing healthcare facilities
<p>Access to Essential Services: Social Inclusion</p> 	<p>Provide access to essential services for population groups at risk of social exclusion by:</p> <ul style="list-style-type: none"> • Providing access to essential infrastructure and services to vulnerable population • Providing financial assistance to vulnerable population
<p>Affordable Housing</p> 	<p>Provide access to affordable housing to vulnerable population by:</p> <ul style="list-style-type: none"> • Extending the social and affordable housing supply • Improving the quality of the existing social and affordable housing facilities • Providing financial assistance to facilitate access to housing and ownership
<p>Employment generation and socio-economic advancement and empowerment</p>  	<p>Support employment generation and socio-economic advancement and empowerment, including but not limited to:</p> <ul style="list-style-type: none"> • Employment generation and retention initiatives • Support to Social and Solidarity Economy • Support to the SMEs in the event of extreme events (e.g. natural disaster, extreme weather events, public health disaster...)



Sustainability Bond Framework

Process for Evaluation and Selection

- ✦ To oversee the implementation of the Framework, a dedicated **Sustainability Bond Committee** has been established, under the coordination of the State Treasury
- ✦ The State Treasury, supported by the other relevant Ministries, coordinates the project evaluation and selection process and prepares an initial list of potential eligible expenditures to be evaluated by the Committee
- ✦ The Committee meets at least once a year and on a case by case basis as deemed necessary

Committee composition

The State Treasury (chair)

The Ministry of Finance

The Inspectorate of Finance

Committee responsibilities

Verification that the expenditures meet the criteria and objectives described in the Use of Proceeds

The selection of eligible expenditures to be included in the Green, Social and / or Sustainability Bond

The approval of the eligible expenditures to be included in the Bond

The review of the allocation of the proceeds of the issued Bond

The validation of the Bond reports

The maintenance and update of the Framework if necessary

- ✦ The programmes and projects financed by the eligible expenditures under the Grand Duchy of Luxembourg's Green, Social and / or Sustainability Bond(s) are strictly regulated by government policies and procedures



Sustainability Bond Framework

Management of Proceeds

In case of temporary shortfall, proceeds managed by the State Treasury in cash

In accordance with the described evaluation and selection process, an amount **at least equivalent to the Green, Social and / or Sustainability Bond's net proceeds will be allocated to Eligible Expenditures and managed and tracked by the State Treasury.**

Pending full allocation, the net proceeds of the bond issuances will be managed by the State Treasury in accordance with Luxembourg's regulatory framework and treasury policies

Bond by bond approach with proceeds fully allocated at the earliest convenience

The Grand Duchy of Luxembourg intends to **allocate the proceeds of the Green, Social and / or Sustainability Bond at the earliest convenience** and in any case commits on a best effort basis to reach **full allocation within 2 years** of the bond issuance

Full allocation maintained during the life of the bonds

In the event where some expenditures would be withdrawn from the portfolio of eligible expenditures, **Luxembourg will reallocate on a best effort basis the proceeds to other eligible expenditures** which are compliant with the Eligibility Criteria, as soon as reasonably practicable.

Such withdrawal can occur in case of budgetary adjustments, delayed disbursements, or in the event where identified expenditure would cease to fulfil the eligibility criteria



Sustainability Bond Framework

Allocation and Impact Reporting

- ❖ For all issuances under this Framework, Luxembourg intends to produce an **allocation and an impact report** at least annually until full allocation of the Green, Social and/or Sustainability Bond proceeds

Allocation report

- ❖ Published in order to provide transparent information on the allocation of proceeds towards Eligible Expenditures, including:
 - An overview of the allocated proceeds
 - The breakdown of allocated proceeds by eligible categories
 - The amount of unallocated proceeds at the reporting end-period (if any)

Impact report

- ❖ Published in order to provide transparent information on the environmental and/or social impacts of the allocated proceeds
- ❖ Luxembourg will endeavor to report on relevant impact metrics. Examples of impact metrics have been listed in the Framework for each of the eligible Green and Social categories

- ❖ When relevant, Luxembourg will strive to collaborate with partners to establish methodology / analysis for the reporting



Sustainability Bond Framework

External Review

Pre-issuance verification: Second Party Opinion

 SUSTAINALYTICS
SECOND-PARTY
OPINION



Use of Proceeds
Project Evaluation /
Selection
Management of
Proceeds
Reporting



Post-issuance verification: annual report review

- ✦ Luxembourg aims to adhere to the highest standards in terms of external reviews. Consequently, an **external reviewer** will provide an **annual report review, until all the proceeds of the Green, Social and / or Sustainability Bond have been allocated**, confirming that an amount equal to the net proceeds of the Bond have been allocated in compliance with the criteria and objectives set out in the issuer Framework under the Use of Proceeds section

- ✦ Sustainalytics is confident that the Grand Duchy of Luxembourg Sustainability Bond Framework is **robust, transparent, and in alignment with the Sustainability Bond Guidelines 2018 and the four core components of the Green Bond Principles 2018 and Social Bond Principles 2020**



Sustainability Bond Framework

External Review: EU Taxonomy alignment review by Sustainalytics



In addition to the confirmation of the alignment with the ICMA principles and guidelines, **Sustainalytics has assessed** the Grand Duchy of Luxembourg's Sustainability Bond Framework and **its 23 green use of proceeds categories for alignment with the EU Taxonomy**

Technical Screening Criteria (“TSC”)

- all 19 eligible green activities assessed are aligned with the applicable TSC *

Do No Significant Harm Criteria (“DNSH”)

- 20 categories are aligned or partially aligned with the DNSH criteria **

Minimum Safeguards

- based on policies and management systems applicable, Sustainalytics is of the opinion that the activities and projects to be financed under the Framework will be carried out in alignment with the EU Taxonomy’s Minimum Safeguards

The extensive and ambitious documentation process undertaken by the Grand Duchy of Luxembourg to demonstrate the alignment with the EU Taxonomy, a 1st for Sustainalytics, highlights Luxembourg’s commitment to act as a pioneer in Sustainable Finance and its contribution to shape best market practices.

(*) While 4 have not been assessed for TSC alignment, as they either cannot be mapped to NACE activities in the Taxonomy and/or they are designed primarily to advance an environmental objective for which TSC do not yet exist in the Taxonomy
(**) While 3 could not be assessed as they cannot be mapped to activities in the EU Taxonomy

Framework Criterion	Alignment with Taxonomy Criteria		Alignment per EU Environmental Objective					
	TSC	DNSH	Mitigation	Adaptation	Water	Circular Economy	Pollution	Eco-systems
Construction of new buildings	■	□	■	■	■	□	■	□
Acquisition of buildings	■	■	■	■	-	-	■	■
Renovation of existing buildings	■	□	■	■	■	□	■	□
Construction and operation of electricity generation from Solar PV	■	□	■	■	-	■	-	□
Construction and operation of electricity generation from concentrated solar power	■	□	■	■	■	□	-	□
Construction and operation of electricity generation from wind power	■	■	■	■	■	■	-	■
Construction and operation of electricity generation from hydropower	■	■	■	■	■	-	■	■
Construction and operation of electricity generation from geo-thermal	■	□	■	■	■	-	□	■
Gas Combustion projects	■	□	■	■	■	-	■	□
Bio-energy projects	■	□	■	■	■	■	■	□
Installation of energy efficient appliance and lighting	■	■	■	■	-	-	■	-
Public Transport (Financing of zero emission land transport - light rail transit, metro, tram, trolleybus, bus and rail)	■	□	■	■	-	■	□	-
Public Transport (Passenger Rail Transport)	■	■	■	■	-	■	■	-
Infrastructure for low carbon transport	■	□	■	■	■	□	■	■
Collection and transport of non-hazardous waste	■	■	■	■	-	■	■	-
Composting of Bio-waste	■	□	■	■	-	-	□	-
Material recovery	■	■	■	■	-	-	-	-
Protection and restoration of terrestrial and inland freshwater ecosystems, biodiversity, habitats and soil								
Development of energy efficient water and wastewater management systems	■	■	■	■	■	-	-	■
Construction or extension of centralized wastewater treatment systems	■	■	■	■	-	-	■	■
Support the development of water and wastewater management systems	*	■	-	■	-	-	■	■
Mobilise and support investment in international climate finance								
Support research, development and innovation focusing on climate change mitigation and adaptation								

Legend	
Aligned	■
Partially aligned	□
Not aligned	☒
No applicable DNSH criteria for this Objective	-
Criterion does not map to an EU activity and has not been assessed	
Grey shading indicates the primary EU Environmental Objective	



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3. Identified eligible expenditures



Focus on the identified eligible expenditures

Identified eligible expenditures

✦ The Grand Duchy of Luxembourg has already identified a total of EUR 1.8bn of eligible expenditures from its 2018 to 2022 budgets across the following categories:

- **Low carbon transportation**
- **Protection of the Environment**
- **Water and Wastewater Management**
- **Climate Finance and R&D**
- **Access to Essential Services – Education**
- **Access to Essential Services – Healthcare**
- **Access to Essential Services – Social Inclusion**
- **Affordable Housing**

Key Features of a contemplated transaction

Issuer	Grand Duchy of Luxembourg
Type	Sustainability Bonds, RegS Bearer, Senior, Unsecured
Ratings	Aaa/AAA/AAA (all stable) (Moody's/S&P/Fitch)
Use of Proceeds	It is the Issuer's intention to apply an amount equal to the net proceeds of the Issue to finance and/or refinance eligible expenditures falling within Eligible Green and Social Categories , as described under the Sustainability Bond Framework of the Issuer
Expected Size	EUR Benchmark
Maturity	Medium to long term
Documentation	Standalone LGB
Denoms / Law	EUR 1k+1k / Luxembourg Law
Listing	Luxembourg Stock Exchange and application made to the Luxembourg Green Exchange platform
Joint Bookrunners	BCEE, BIL, BGL BNP Paribas, Deutsche Bank, Societe Generale
Sole Sustainability Structuring Advisor	Societe Generale
Advertisement	The Information Memorandum, when published, will be available on the website of the Luxembourg Stock Exchange (link)

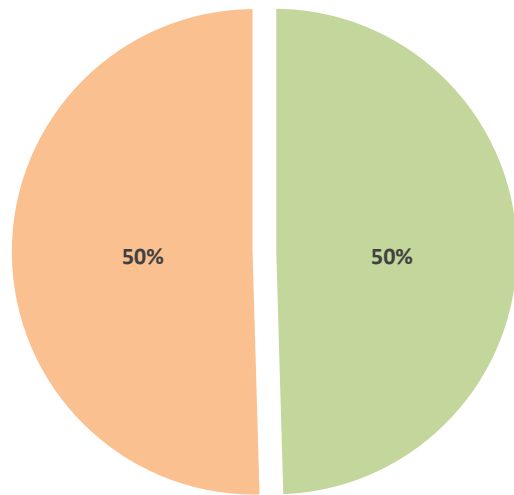


Overview of the eligible expenditures

Expenditures to be (re)financed

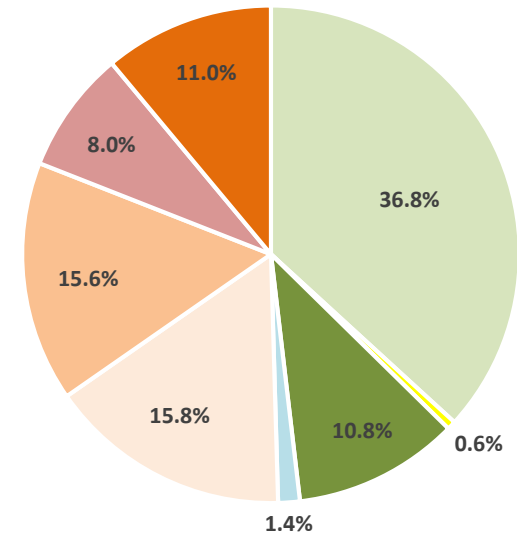
✦ The EUR 1.8bn of identified eligible expenditures are well balanced between 8 Green and Social categories

Expenditures breakdown by social/green categories



- Percentage of total green expenditures in amount
- Percentage of total social expenditures in amount

Expenditures breakdown by categories








- Low carbon transport
- Water and wastewater management
- Access to essential services - Education
- Access to essential services - Healthcare
- Access to essential services - Social Inclusion
- Affordable housing
- Climate finance & RD
- Protection of the environment



Overview of the eligible expenditures





Overview of the identified green expenditures

Category and main SDG contribution	Description	Total expenditures identified	Number of projects	Examples of impact metrics
Low carbon transportation 	<ul style="list-style-type: none"> Public transport Infrastructure for low carbon transport 	EUR 653,6m	7	<ul style="list-style-type: none"> Number of low carbon vehicles deployed by type of transport (e.g number of trains/trams) Number of users served Other relevant indicators depending on the considered projects
Protection of the Environment  	<ul style="list-style-type: none"> Waste management Protection and restoration of healthy ecosystems and their services 	EUR 10m	1	<ul style="list-style-type: none"> Volume of waste collected and disposed or treated (tons) Surface of protected or restored areas Other relevant indicators depending on the considered projects
Water and Wastewater Management 	<ul style="list-style-type: none"> Support the development of water and wastewater management systems allowing to significantly improve energy efficiency and/or water quality 	EUR 191,4m	8	<ul style="list-style-type: none"> Volume of water collected and disposed or treated (m3) Number of users served Other relevant indicators depending on the considered projects
Climate Finance and R&D 	<ul style="list-style-type: none"> Mobilise and support investment in international climate finance Support research, development and innovation focusing on climate change mitigation and adaptation 	EUR 25m	1	<ul style="list-style-type: none"> Number of investment funds launched with the support of Climate Finance expenditures Total Net Asset Value of the investments funds Estimated annual CO2 emissions avoided (in tons of CO2 equivalent) Details of eligible R&D projects will be disclosed, where possible and taking into consideration intellectual property protection measures and know-how aspects
		EUR 880m	17	



Overview of the eligible expenditures

Overview of the identified social expenditures

Category and main SDG contribution	Description	Total expenditures identified	Number of projects	Examples of impact metrics
Access to Essential Services – Education 	Provide access to essential educational infrastructure and services for all by: <ul style="list-style-type: none"> • Extending educational capacities • Improving the quality of the existing educational infrastructure and equipment 	EUR 280,4m	7	<ul style="list-style-type: none"> • Number of education infrastructures benefiting from the eligible expenditures, including a breakdown by type of infrastructures (schools, universities...) • Capacity / additional capacity (in number of students)
Access to Essential Services – Healthcare 	Provide access to essential healthcare infrastructure and services for all by: <ul style="list-style-type: none"> • Extending healthcare capacities • Improving the quality of the existing healthcare facilities 	EUR 277,6m	11	<ul style="list-style-type: none"> • Number of healthcare infrastructures benefiting from the eligible expenditures, including a breakdown by location • Capacity / additional capacity (in number of beds and /or patients)
Access to Essential Services – Social Inclusion 	Provide access to essential services for population groups at risk of social exclusion by: <ul style="list-style-type: none"> • Providing access to essential infrastructure and services to vulnerable population • Providing financial assistance to vulnerable population 	EUR 141,6m	6	<ul style="list-style-type: none"> • Number of social inclusion infrastructures benefiting from the eligible expenditures, including a breakdown by type of infrastructures • Capacity / additional capacity (in number of beneficiaries)
Affordable Housing 	Provide access to affordable housing to vulnerable population by: <ul style="list-style-type: none"> • Extending the social and affordable housing supply • Improving the quality of the existing social and affordable housing facilities • Providing financial assistance to facilitate access to housing and ownership 	EUR 196,4m	15	<ul style="list-style-type: none"> • Number of dwellings • When available, additional information may be provided regarding the energy performance of eligible buildings
		EUR 896m	39	



Example of eligible green expenditures

Focus on a Low Carbon Transportation project: Luxtram

Luxtram, a 100% electrical public transportation's project

- 10 000 Passengers per hour and direction

Expenses 2018	Expenses 2019	Budget 2020	Budget 2021	Budget 2022
47,00	29,82	66,83	69,18	39,00

Total expenditures:
EUR 251,82m



- Construction work began in 2015 and will finish in 2021/2022.
- The Tramline will link the Luxembourg Airport to the new business district in Cloche d'Or, by passing through the European district with its many European institutions, the historical Ville Haute quarter and the Luxembourg railway station for interchanges between national and international heavy rail services.
- The tramline, when fully operational, will have 24 stations connected by 16 km of tracks and have a capacity of 10,000 passengers per hour in each direction.
- Since the end of February 2020 all public transport in Luxembourg is free. This measure is above all social, but it is also meant to have a positive impact on the environment by attracting new users to public transport while minimizing carbon emissions by reducing the number of cars on the road.





Example of eligible social expenditures

Focus on a Healthcare Infrastructure project: Südspidol

❖ Südspidol, an essential healthcare infrastructure project:

- 590 beds & 16 OP rooms
- 140.000 new patients per year
- 1.900 employees
- 260 doctors
- 17.350 surgical operations

Total expenditures:
EUR 95m



Budget 2020	Budget 2021	Budget 2022
25,00	25,00	45,00

- ❖ The Südspidol ("south hospital") will, in addition to core hospital activities with outpatient clinics and nursing stations, add departments of psychiatry, geriatrics as well as a cancer center.
- ❖ It is a merger of three hospitals in the south of Luxembourg, which will result in annual savings of around 15% compared to current operating costs.
- ❖ As a consequence, it will be the second largest hospital in the country and is meant to supply the south of Luxembourg.
- ❖ The Südspidol project received the Design & Health International Academy Award in the category "Future Healthy Built Environment Project" in Vienna



- ❖ 81% of the new rooms will be single patient rooms, compared to currently 20%. This increase aims at improving hospital conditions and reducing the risk of infection and allows a higher rate of bed occupancy.
- ❖ The work began in 2020 and the construction work will finish in 2025/2026.



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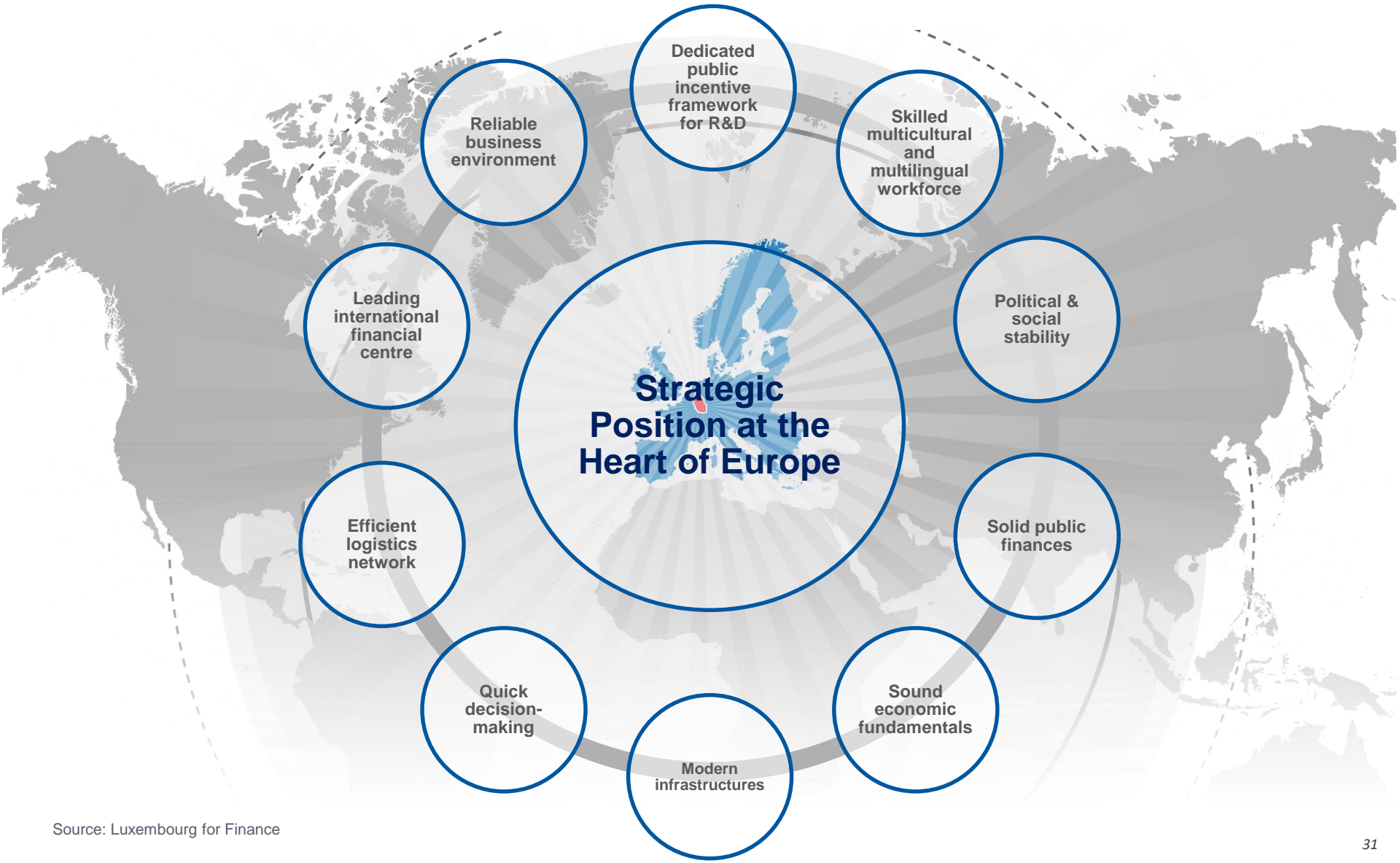


Appendix

- **Luxembourg as a diversified economy**
 - *Sound public finances of Luxembourg*
- *Focus on Luxembourg credit rating and debt management*



Luxembourg in a nutshell



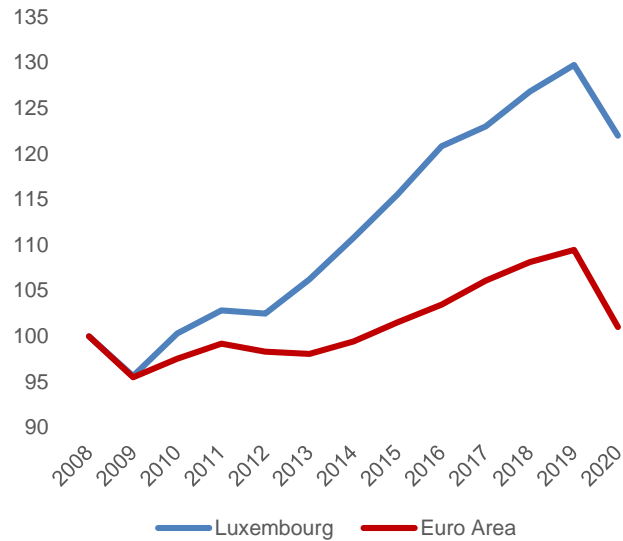


Key Data

Real GDP and Unemployment

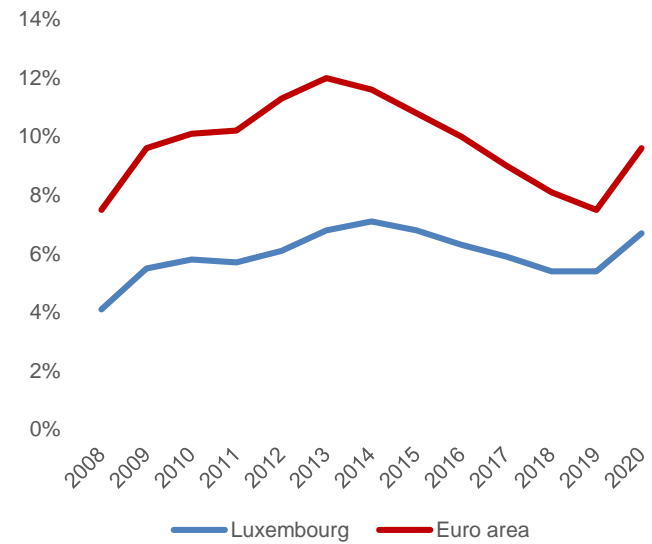
Real GDP (index 100 = 2008)

Sustained growth momentum preceding the COVID-19 crisis



Unemployment Rate

Unemployment consistently below the Euro Area





Key Data

Forecasts and key indicators

In % of GDP (unless indicated otherwise)	LUXEMBOURG				EURO AREA			
	2018	2019	2020 (F)	2021 (F)	2018	2019	2020 (F)	2021 (F)
Real GDP (annual change, in %)	3.1	2.3	-6.0	7.0	1.9	1.2	-7.7	6.3
Inflation (annual change, in %)	1.5	1.7	0.6	1.6	1.8	1.2	0.2	1.1
Unemployment Rate (% of active pop.)	5.4	5.4	6.7	7.3	8.1	7.5	9.6	8.6
Current Account Balance	4.8	4.5	4.5	4.5	3.1	2.7	2.7	3.0
Budget Balance	+3.1	+2.2	-8.5	-3.0	-0.5	-0.6	-8.5	-3.5
Public Debt	21.0	22.1	28.7	29.6	87.8	86.0	102.7	98.8

Sources:

Luxembourg: STATEC, 2020 Stability Programme (April 2020); Euro area: EU Commission Spring Forecast 2020 (May 2020).
(F)=Forecast (LU: 2020 Stability Programme; Euro area: EU Commission Spring Forecast 2020).

2019	LUXEMBOURG	EURO AREA
Nominal GDP	EUR 63 bn	EUR 11,914 bn
GDP per capita	EUR 101,446	EUR 33,699

Source: European Commission (AMECO database).



An open and diversified economy

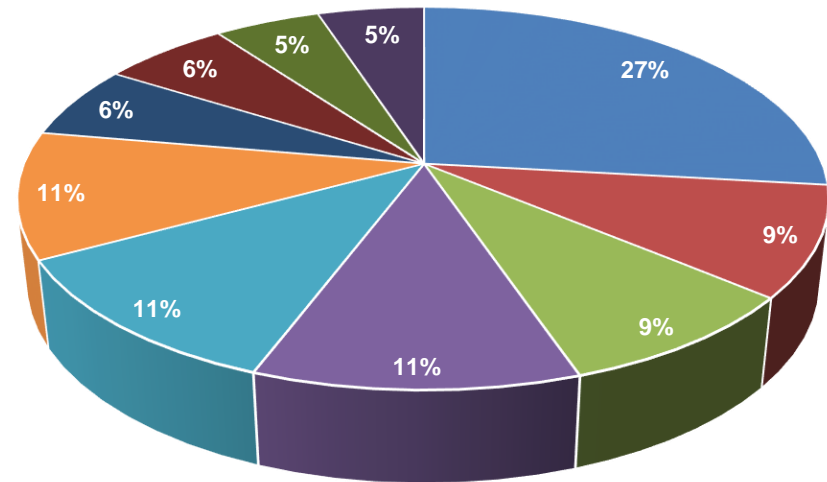
Luxembourg: snapshot of an open...

- ✦ 2/3 of goods and services produced in Luxembourg are exported
- ✦ **Total exports exceeded 200% of GDP** in 2019, of which EUR 20bn in goods and EUR 113bn in services
- ✦ Luxembourg is **ranked 3rd most open economy** in the world (2017 Open Market Index)

... and growth-oriented economy, beyond the financial sector

- ✦ **European and/or global corporate headquarters** of global companies such as Amazon, Paypal, eBay, Skype, SES, ArcelorMittal and many others
- ✦ Home **base of all-freight carrier Cargolux**, with Luxembourg Airport being the 6th largest freight airport in Europe
- ✦ **Strong focus on innovation** with the support public/private partnerships, in sectors such as FinTech, Space Resources, CleanTech, Health- & BioTech
- ✦ **Continued investment in technology and factories** in more traditional industrial sectors

Share of GVA (by sector) – 2019



- Financial Services
- Scientific and Technical Activities
- Communication, Trade and Transportation
- Public Administration
- Manufacturing
- Retail and Commerce
- Real Estate and Administrative Activities
- Health and Education
- Construction
- Other

Source : STATEC.



Appendix

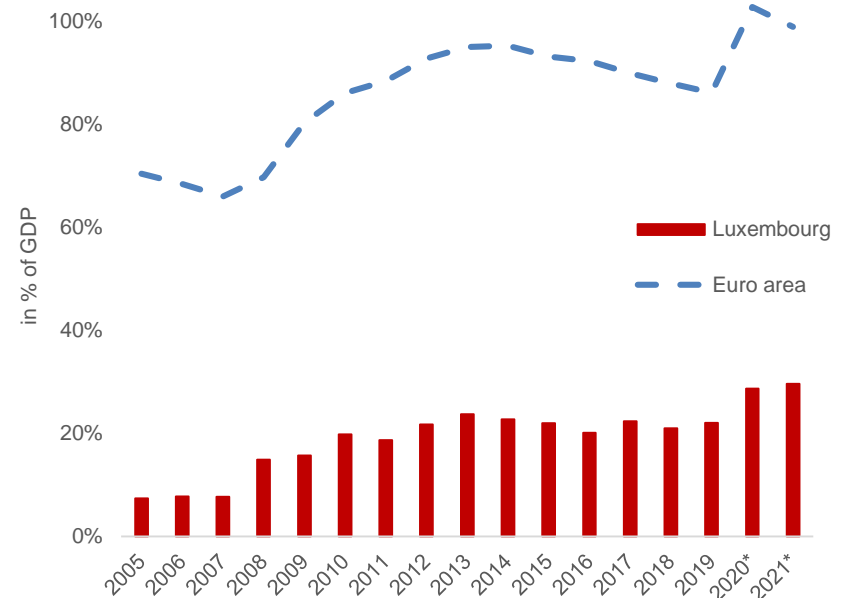
- *Luxembourg as a diversified economy*
- **Sound public finances of Luxembourg**
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Public finances (1/3)

- ✦ Luxembourg maintained a **low level of gross public debt** of 22.1% of GDP as of end-2019
- ✦ Following global financial crisis peak of 23.7% of GDP in 2013, **public debt was gradually stabilized and reduced by the current coalition government**
- ✦ Government has enshrined in its successive coalition agreements the **dual objectives to ensure adherence to Stability and Growth Pact and to keep low public debt at all times**
- ✦ **Given the COVID-19 crisis, Luxembourg's debt burden is forecast to increase to 28.7% of GDP in 2020**
- ✦ At the same time, **Luxembourg holds assets worth 45% of GDP**, of which 33% of GDP are invested in liquid assets through the Pension Reserve Fund ("Fonds de Compensation") to meet future pension obligations
- ✦ Thus, the **net financial position of the public sector is strongly positive**

Public Debt History and Outlook.



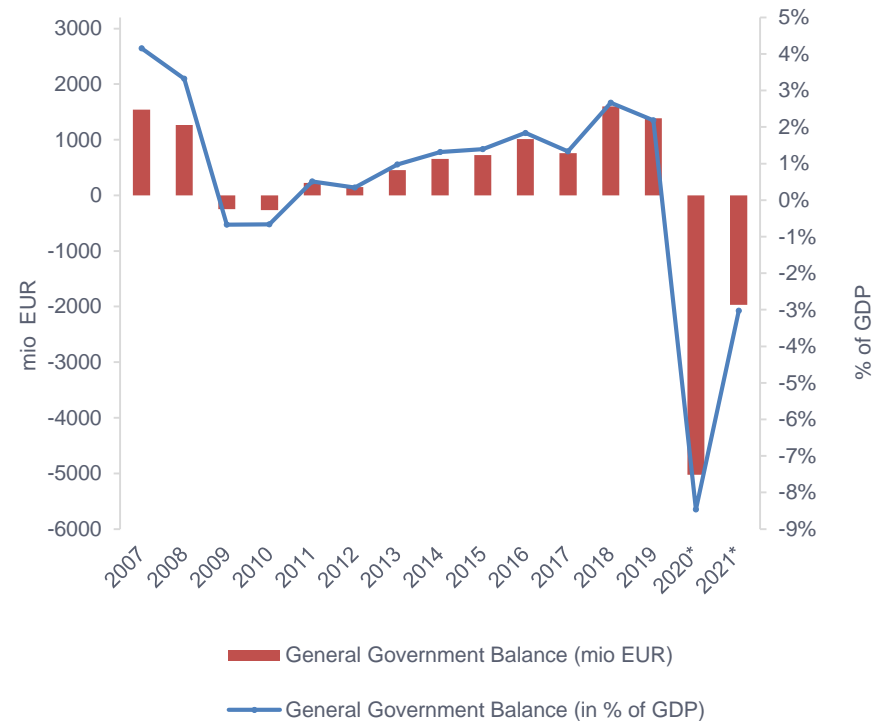
Source :
Luxembourg: 2020 Stability Programme.
Euro Area : AMECO.



Public finances (2/3)

- ✦ Luxembourg has a **track record of budget surpluses**, being also the only Member State in the EU to have complied consistently with EU Stability and Growth Pact rules since their inception
- ✦ Prior to COVID-19, the budget surplus amounted to 3.1% of GDP in 2018 and 2.2% of GDP in 2019, with the **central government having been in surplus** in both years for the first time in over 10 years
- ✦ **Government is making use of accumulated fiscal space** to mitigate economic and social consequences of COVID-19 breakout
- ✦ The **total COVID-19 response of the Luxembourg government equals ca. 20% of GDP**, of which 5% of GDP in direct fiscal transfers, 8% of GDP in tax and social contribution payment holidays and 7% in public guarantees, including a new State guarantee system

Overall Fiscal Situation and Outlook.



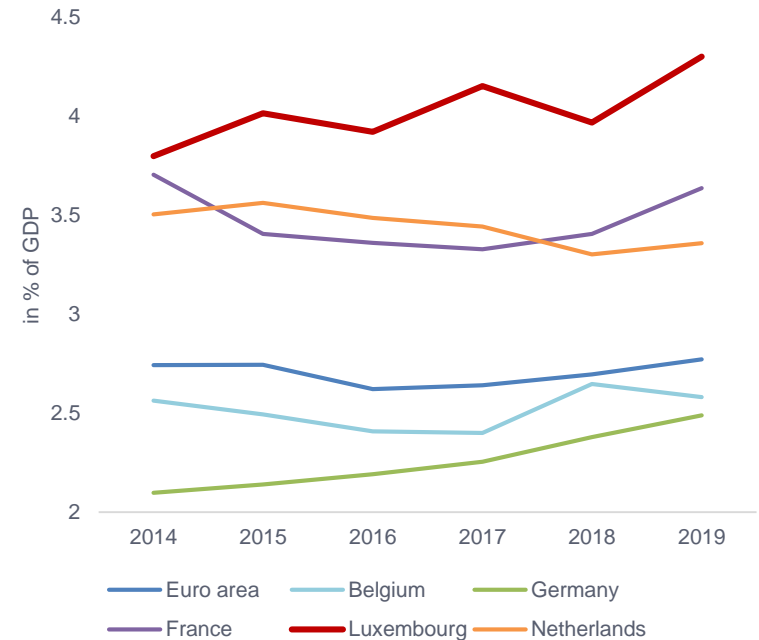
Source: 2020 Stability Programme.



Public finances (3/3)

- ✦ Beyond the COVID-19 response, the **Government has reconfirmed its strong commitment to an ambitious public investment programme**
- ✦ Since 2014, the annual public investment envelope has progressed from EUR 1.8bn to EUR 2.7bn in 2019
- ✦ **Public investment in Luxembourg has exceeded 4% of GDP** over the last years, surpassing thereby all neighbouring countries
- ✦ Primary investment focus lies on the following sectors :
 - Rail / road network, including tram
 - Digitalization
 - Climate
 - Schools
 - Hospitals
 - Sports infrastructure

Public Investment in Luxembourg & beyond



Source: Eurostat



Appendix

- *Luxembourg as a diversified economy and public finances*
 - *Sound public finances of Luxembourg*
- **Focus on Luxembourg credit rating and debt management**



Credit rating

S&P	AAA	Stable
Moody's	Aaa	Stable
Fitch	AAA	Stable
DBRS	AAA	Stable

Rationale behind the AAA rating :

- ✓ “Public finances are a key strength for Luxembourg's rating”
- ✓ “Luxembourg's prosperous economy is backed by an effective institutional framework, robust economic growth, and a large net asset position”
- ✓ “Luxembourg has a history of budget surpluses, which supports its low level of debt”
- ✓ “Flexible economic policies, very high wealth levels provide shock absorption capacity”



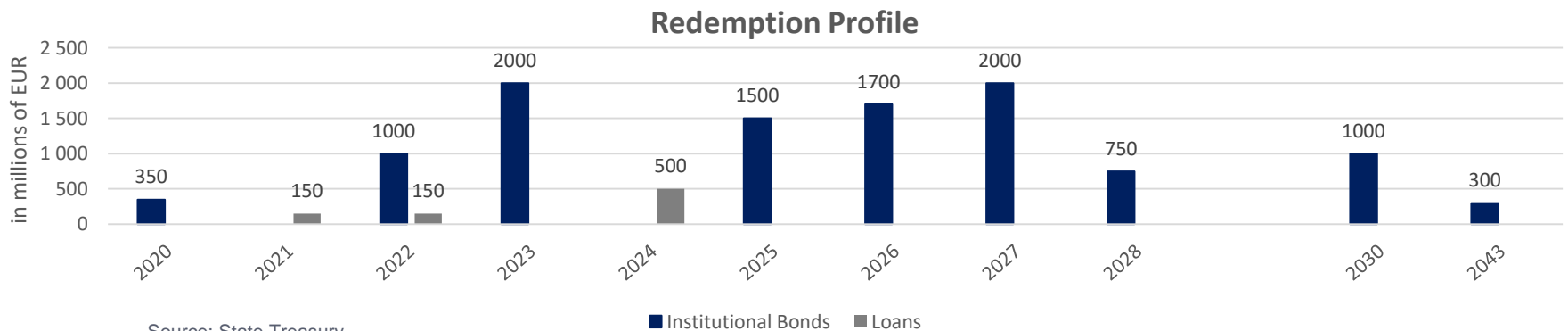
Debt management (1/2)

Syndicated Luxembourg Government Bonds (LGB) are the cornerstone of the Treasury's long-term funding strategy.

- Short-term liquidity needs are met via bank loans or Treasury Notes (Certificats de trésorerie)
- Luxembourg benefits from a well diversified international investor base with all main investor centers and typologies having participated in previous transactions
- Luxembourg has 8 LGBs outstanding for a total amount of EUR 10.25bn as well as Treasury Notes for a total amount of EUR 350m

Optimizing refinancing and interest rate risk, no FX exposure.

- Outstanding LGBs have an average maturity of 5.84 years with the next redemption in 2022
- All LGBs are fixed-rate bonds and are issued in EUR only





Outstanding Luxembourg Government Bonds (LGB)

	Issuance date	Amount issued	Maturity	Maturity date	Coupon	Currency
LGB 2.25% 2022	21/03/2012	1,000,000,000	10 years	21/03/2022	2.250%	EUR
LGB 2.125% 2023	10/07/2013	2,000,000,000	10 years	10/07/2023	2.125%	EUR
LGB 0.00% 2025	28/04/2020	1,500,000,000	5 years	28/04/2025	0.000%	EUR
LGB 0.00% 2026	13/11/2019	1,700,000,000	7 years	13/11/2026	0.000%	EUR
LGB 0,625% 2027	01/02/2017	2,000,000,000	10 years	01/02/2027	0.625%	EUR
LGB 2.25% 2028	19/03/2013	750,000,000	15 years	19/03/2028	2.250%	EUR
LGB 0.00% 2030	28/04/2020	1,000,000,000	10 years	28/04/2030	0.000%	EUR
LGB 2.75% 2043 (PP)	20/08/2013	300,000,000	30 years	20/08/2043	2.75%	EUR

In addition, the State holds a portfolio of bank loans of EUR 860m at the end of August 2020



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