



GREEN BOND FRAMEWORK

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1 Presentation

1.1 EUROFIMA Overview

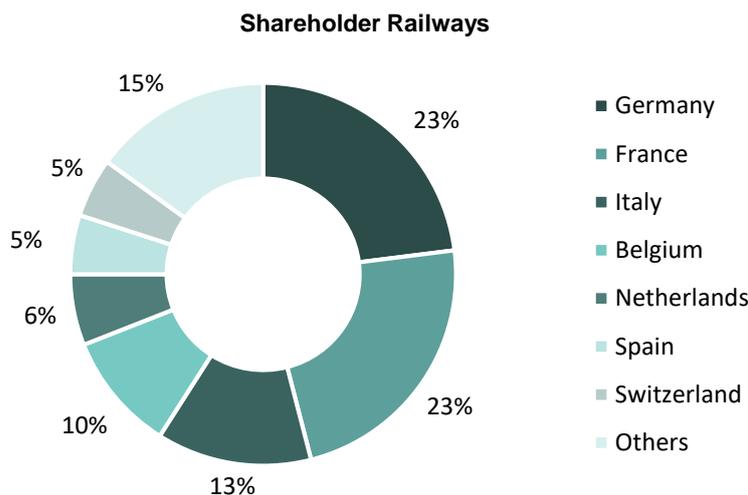
EUROFIMA is a supranational organization whose public mission is to support the development of rail transportation in Europe and to support the railways operators, which are also its shareholders, in renewing and modernizing their rolling stock.

EUROFIMA was established on November 20, 1956, based on an international treaty (the “[Convention](#)”) between sovereign States. It is governed by the Convention signed by its Member States, its articles of association (“[Statutes](#)”) and in a subsidiary manner by the law of the country in which it is located. Originally founded for a period of 50 years, all Member States approved the extension of this period for additional 50 years until 2056, at the extraordinary General Assembly on February 1, 1984.

EUROFIMA’s shareholders include the railways of its European Member States that are parties to the Convention.

1.1.1 Mission and Ownership Structure

EUROFIMA’s mission is to support the development of rail transport in its 25 Member States. As such, the shareholders of EUROFIMA include 25 national railway operators of its Member States. The chart below shows the shareholder distribution of its largest shareholders.



The three largest shareholders (Deutsche Bahn AG, SNCF Mobilités, and Ferrovie dello Stato Italiane S.p.A.) are also the three largest national railway operators in Europe.

1.1.2 Activity

EUROFIMA finances railway equipment through borrowings or equity capital. EUROFIMA secures title to or obtains security interests deemed equivalent (in particular pledges) on or in respect of rolling stock. The general principles of EUROFIMA’s activity are defined in an agreement (the “[Basic Agreement](#)”) between the shareholder railways and EUROFIMA. The Basic Agreement remains valid for the entire duration of EUROFIMA’s existence and can only be altered with the consent of all the railways and EUROFIMA. EUROFIMA’s equity is primarily used for investments in liquid assets and, to a limited extent, for equipment financing contracts.

1.1.3 EUROFIMA Asset Portfolio

EUROFIMA supports its shareholder railways by providing low-cost financing for rolling stock investments. The chart below indicates the equipment to which EUROFIMA holds title or in which it has direct or indirect security interest deemed equivalent, in particular pledges, as of December 31, 2017:

Member State	Railway Company	Locomotives			Multiple-unit trains			Pas-senger cars	Freight cars	Other equip-ment
		main-line		shunting	motor units		trailer cars			
		diesel	electric		diesel	electric				
Germany	DB AG					50				
France	SNCF		18			70	336			
Italy	FS	15	413		73	429	336	1702		
Belgium	SNCB	60	114		112	445	311	354	27	
Netherlands	NS					6	6			
Spain	RENFE	60	100			398	434			
Switzerland	SBB		54	49		469	485	46		
Luxembourg	CFL					66		46		
Portugal	CP				22	159	163			
Austria	ÖBB	6	173	48	40	308	337	395	2316	
Greece	OSE		12		15		14			
Serbia	ŽS		2		24					
Hungary	MÁV	14	27	10	8			13		
Slovakia	ŽSSK							28		
Slovenia	SŽ		32							
Montenegro	ŽPCG	4	1			2	2			
Denmark	DSB					20	10			
Total		159	946	107	294	2422	2434	2584	2316	27

Additional information is available on EUROFIMA's website (www.eurofima.org).

1.2 Market Overview of Rail Passenger Transportation

The European railway market represents the largest and the most developed in the world. The extensive network of urban, suburban, regional and international railway infrastructure has played a key role in promoting greater trade, both domestic and international, and social mobility. Despite the advances already made in this sector throughout Europe, rail transport in Western and Eastern Europe is still expected to grow 3.1% and 2.8% respectively by 2021¹. This expected growth trend is larger than in any other region in the world. The average expected growth in the global rail transport sector is 2.6% over the same period.

These growth figures are further reinforced by the continued increase in passenger rail transport volumes. The resilience of the rail transport sector is seen most evidently during the sovereign debt crisis in the European Union. This difficult economic period only marginally affected passenger growth in 2009 before returning to its growth trend in 2010. More recently, Eurostat reported that passenger-kilometers totalled 439 billion in 2015, representing an 8.9% increase between 2011 and 2015².

In response to the continued growth of the rail transport sector in Europe, extensive efforts have been made by the countries to improve the overall competitiveness and efficiency of the sector. Throughout much of the 20th century, rail transport in Europe was dominated by national monopolies, which at times resulted in large government subsidies being allocated to the sector and to inefficiencies in performance. In an effort to address these issues, the European Parliament has passed a series of "Railway Package"³ reforms. These regulatory reforms lay the framework that will allow for technical standardization and

¹ UNIFE: World Rail Market Study – Forecast 2016 to 2021

² [Passenger transport statistics](#)

³ [The fourth railway package: Another step towards a Single European Railway Area](#)

open access to the European rail transport sector, resulting in competition that will encourage cost reduction and promote greater efficiency throughout the sector.

1.3 Role of EUROFIMA in Promoting Sustainable and Green Transportation

Establishing a low-carbon future has become an increasing point of geopolitical focus. The COP21 conference in Paris in 2015 marked a milestone of international cooperation in which 196 representatives in attendance reached an agreement on the reduction of climate change. The centre of the agreement focused on reducing global warming to less than two degrees Celsius compared to pre-industrial levels and for zero net greenhouse gas emissions to be reached during the second half of the 21st century. On 22 April 2016, 174 countries signed this agreement and began to take steps to implement these measures into their own legal systems.

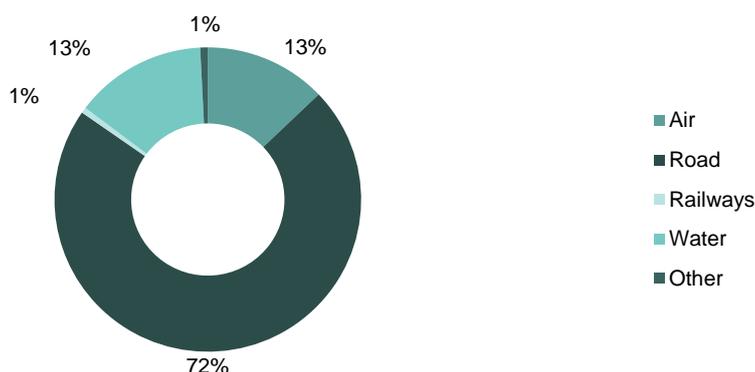
The goal of promoting sustainability is at the core of EUROFIMA’s public mission. Supporting the growth and development of passenger rail transport is key to addressing the problem of CO₂ emissions attributable to the transportation sector and to reducing overall energy consumption. As countries across Europe work to meet the sustainability targets outlined by Europe 2020 and by the COP21 agreement, EUROFIMA is determined to serve as partner to its Member States in fulfilling their objectives.

1.3.1 Rail Transport Greenhouse Emissions

The transportation sector accounts for nearly 23% of energy-based CO₂ emissions according to the International Energy Agency⁴, of which road, maritime and air transport are the leading contributors. Despite efforts to make airplanes more energy efficient, the increasing use of air travel has offset the benefits realized per aircraft according to the European Environment Agency. In the automobile sector, the use of hybrid and electric vehicles has continued to increase, but automobiles still account for 72% of the total EU CO₂ emissions⁵.

Rail passenger transportation offers a viable solution to counteract these high levels of CO₂ emissions. The International Union of Railways indicates that greenhouse gas emissions from rail transport is 85% lower than the average emission from road and air transport. In terms of land usage per passenger-km, rail is 3.5 times lower than for automobiles. In assessing the external costs of transport (i.e. the costs of the negative effects from transport not borne by the company but by society), rail usage has four times less the cost than roads for passenger transport and six times less for freight services⁶.

European CO₂ Emissions per Mode of Transport



Source: European Commission

⁴ [Transport, Energy and CO₂ International Energy Agency IEA](#)

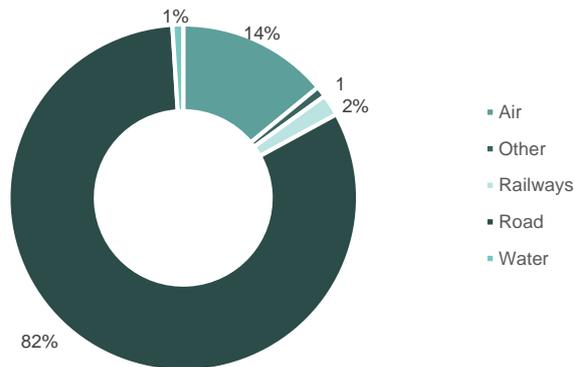
⁵ [European Commission: Reducing CO₂ emissions from passenger cars](#)

⁶ [Community of European Railway and Infrastructure Companies: Rail Transport and Environment Facts & Figures 2015](#)

1.3.2 Rail Transport Energy Efficiency

In addition to concerns regarding CO₂ emissions, consideration must also be given to the efficiency with which energy is consumed. According to Eurostat, the rail transport sector accounts for only 2% of the energy consumed by the transport sector whereas road transportation accounts for 82%⁷. This sharp contrast is due to the significant efforts made within the rail transport sector in Europe to electrify power lines and construct more energy efficient trains. Modern electric train consumes 85% less energy than an airplane and 70% less energy than a hybrid car per passenger/km.

European Energy Consumption per Mode of Transport

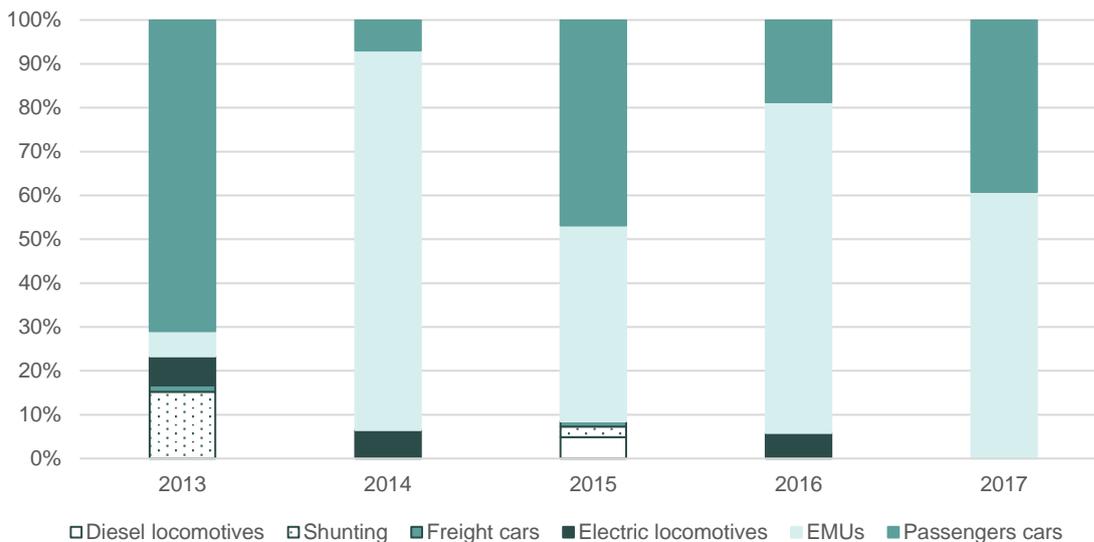


Source: Eurostat

1.3.3 EUROFIMA Sustainable Projects

EUROFIMA’s public mission to support the development of passenger rail transport within its Member States is well aligned with its commitment to support a low-carbon future. As of year-end 2017, EUROFIMA had CHF 13.7 billion in development related loans outstanding, which are distributed among 17 Member States.

Share of annual financing volume per type of rolling stock



Source: EUROFIMA

⁷ [EUROSTAT: Sustainable development - transport](#)

In the year 2017 Eurofima disbursed CHF 348 mio to the rail transport sector. These funds were used to finance 124 motor cars, 120 trailer cars and 80 passenger coaches, a testament to EUROFIMA's commitment to fulfilling its public mission. However, in addition to providing additional funds for rail transport projects, EUROFIMA has begun to assess the implementation of new environmental impact aspects to its credit review process. The overall aim in implementing such measures would be to encourage the increasing focus on optimizing sustainable aspects of future projects pursued by our shareholder railways.

1.3.4 Social Mobility

The rail transportation sector plays a key role in furthering social cohesion, which in turn contributes to the overall betterment of people's lives. Further development of international and regional rail lines aides in promoting increased cross-border and domestic trade and in a more sustainable manner. Rail development, particularly regional and suburban, also aides in furthering labor mobility and social integration in an increasingly interconnected and diverse Europe. Lastly, according the European Union Agency for Railways, rail transport represents one of the safest modes of transport with only 0.13 fatalities per billion passenger/km as compared to 3.14 for automobiles and 48.94 for motorcycles.

1.3.5 Sustainability at EUROFIMA

EUROFIMA views its approach to sustainability with an inward-outward mentality. While it fulfils its public mission in supporting the development of a sustainable form of transport, EUROFIMA also aims to enact internal measures that ensure its business practices are in-line with its mission to support a low-carbon future and social integration.

More information on this topic are available in the section "Sustainability" of EUROFIMA's website (www.eurofima.org/en/lending/sustainability).

2 Green Bond Framework

EUROFIMA's Green Bond Framework has been created in alignment with the Green Bond Principles 2018 ("GBP") defined by the International Capital Market Association (ICMA)⁸. As such, it follows the four core components as described by the GBP:

- 1) Use of Proceeds
- 2) Process for Project Evaluation and Selection
- 3) Management of Proceeds
- 4) Reporting

2.1 Use of Proceeds

2.1.1 Eligible Green Assets

Proceeds raised through Green Bond issuances will be exclusively used to finance or refinance investments purchases, modernisation and refurbishments of Eligible Green Assets used by EUROFIMA's shareholder railways and/or their affiliates.

The following matrix outlines the types of rolling stock equipment that qualify as Eligible Green Assets (photos for illustrative purpose only):

	Electric Locomotive	Electric Multiple Unit	Coaches
Passenger transport			

- 1) Electric Locomotive: Railroad vehicle, which has no payload capacity on its own and where the energy to power it comes from an overhead electrical line. Utilized to pull/push passenger coaches.
- 2) Electric Multiple Unit: Self-propelled passengers trainset, which consists of two or more carriages coupled in a permanent configuration. At least one of the carriage is motorized and takes the energy from an overhead electrical line.
- 3) Coaches: Railroad passenger carriages, not motorized, which are pulled/pushed by an electrical locomotive.

2.1.2 Types of Investments

Furthermore, Green Bond proceeds can only be used to fund three types of investments:

- 1) Financing of purchase of newly manufactured rolling stock (rolling stock age ≤ two years)
- 2) Financing of existing rolling stock (two years < rolling stock age ≤ fifteen years)
- 3) Financing of modernization / refurbishment of existing rolling stock (rolling stock age > two years)⁹

EUROFIMA is committed to disclose the relevant Eligible Green Asset to be utilized for the respective Green Bond to be issued. The portion of the respective issuance that is not yet allocated to Eligible Assets at such time will be disclosed separately. EUROFIMA will provide the origination timeframe and maturity profile of the loans per Use of Proceeds on an annual basis.

⁸ More information on <http://www.icmagroup.org/Regulatory-Policy-and-Market-Practice/green-bonds/green-bond-principles/>.

⁹ E.g. modernization of propulsion system, installation of energy recovery systems or of energy meters that support energy efficient driving style

2.1.3 United Nations Sustainable Development Goals (SDG)¹⁰

While backing all of the 17 SDGs, as defined by the United Nations in September 2015 for the period 2015-2030, EUROFIMA can mainly contribute to Goal 9 and Goal 11 according to its areas of competence. EUROFIMA's use of proceeds for Electric rolling stock equipment actually shows its commitment to the two following SDG:

- Goal 9: Industry, Innovation and Infrastructure
- Goal 11: Sustainable Cities and Communities



EUROFIMA strives to foster adequate rolling stock equipment for passenger transport to improve safety, air pollution and inclusive mobility, given the challenges of urbanisation. EUROFIMA considers itself as particularly well positioned to facilitate innovation in and efficient use of resources of sustainable passenger railway transportation.

2.2 Process for Project Evaluation and Selection

EUROFIMA will conduct a thorough assessment of both the railway(s) and the rolling stock that will be financed with the proceeds raised from a Green Bond issuance. The aim of this assessment process is to evaluate, among other things, the use of the rolling stock (i.e., passenger transport only) and the source of power (i.e., electric only). The evaluation and selection process will consist of three steps:

- 1) **Evaluation Phase:** the Capital Markets Department, supported by the Rolling Stock Manager, will carry out the identification, selection, and allocation of Eligible Green Assets for each financing project.
- 2) **Management Approval:** in a second step, the Capital Markets Department presents the identified project(s) (meeting the eligibility criteria described below) to the Management Committee¹¹ of EUROFIMA for their approval of the proposed financing rolling stock selection.
- 3) **Board of Directors Notification:** in case the Management Committee approves the respective project, it sends the notification to EUROFIMA's Board of Directors.

EUROFIMA will assess the financing eligibility for proposed rolling stock based on the following criteria in line with EUROFIMA's Equipment Financing Policy:

- **Identification:** the financed rolling stock must be identified without any ambiguity (i.e. UIC number, manufacturer, vehicle name/type, technical specifications, etc.).
- **Use:** the purpose of the financed rolling stock must be passenger transport.
- **Age:** the age of rolling stock must not exceed 15 years at the time of financing in case of existing rolling stock.
- **Type of power:** the source of power of the financed rolling stock (and/or the rolling stock for which the modernization/refurbishment is financed) must be electric.

EUROFIMA's investments support the railway operators in complying with the UIC (International Union of Railways)¹² Declaration on Sustainable Mobility and Transport and achieving the 2050 Target and Vision developed by CER (Community of European Railways)¹³ to reduce the environmental impact. EUROFIMA considers environmental impact aspects in its credit review process, which speaks to environmental risk mitigation. Also EUROFIMA will verify every year the status of the financed Green Assets, to check that the eligibility criteria continue to apply. If the assets are considered eligible, they will be specifically identified in EUROFIMA's systems and tracked for the time of allocation to the Green Bond.

2.3 Management of Proceeds

¹⁰ [Sustainable Development Goals](#)

¹¹ CEO, COO and CFO

¹² [Union Internationale des Chemins de Fer](#)

¹³ [Community of European Railway and Infrastructure Companies](#)

At any time an amount equal to the net proceeds of the issue of the Green Bonds will be separately earmarked within EUROFIMA's Treasury system and will be part of the regular Asset-Liability Management (ALM) and Treasury activities. Additionally, Green Bond proceeds will be mapped to and reported along two categories of investments as per Use of Proceeds under 2.1.

- 1) The allocation of Green Bonds proceeds to Eligible Green Assets is done according to the following principles:
 - a. "Look-back period": EUROFIMA commits on a best effort basis to allocate the Green Bond Proceeds to Eligible Assets pre-financed during the 24 months prior to the bond issue.
 - b. "Look-forward period": EUROFIMA expects to allocate at least 50% of the Green Bond proceeds within the 12 months after the bond issue and to reach a full (i.e., 100%) allocation within a maximum of 24 months from the bond issue.
 - c. Rolling stock register: EUROFIMA will establish a Register for Eligible Green Assets recording each specific facility ID assigned as Use of Proceeds for an equivalent Green Bond issuance proceeds by a unique position identifier.
 - d. EUROFIMA intends to accrue over time a Register for Eligible Green Assets subject to internal selection (as per the section 'Eligible Green Assets'). This Register for Eligible Green Assets will represent all Green Bond issues under the Green Bond Framework.
 - e. EUROFIMA will track the use of the net proceeds of its Green Bonds via its internal information systems. Each EUROFIMA Green Bond will be booked under an earmarked position, which is specifically set up for each Green Bond.
 - f. Until the maturity of the Green Bonds, if an asset ceases to fulfil the eligibility criteria, or is part of a loan being early repaid or redeemed, EUROFIMA commits on a best effort basis, to replace it by another Eligible Green Asset.

- 2) Any balance of Green Bond proceeds not allocated to Eligible Green Assets as previously described (either as the result of changes in the composition of Eligible Green Assets or due to the issuance of additional Green Bonds) will be held in accordance with EUROFIMA's liquidity management policy and highlighted in the Reporting.

The Risk Management Department will verify the resulting financing structure based on the principles defined in this document. Management will attest the allocation of the Green Bond proceeds on a yearly basis and until the maturity of the Green Bond.

2.4 Reporting

Within one year of the issuance and until the maturity of the Green Bonds issued, EUROFIMA will make information available to the public on the use of proceeds on a project-by-project basis and keep it up-to-date. This will include a summary of the projects to which Green Bond proceeds have been allocated, as well as a brief description of the projects and the amounts allocated.

The overall environmental impact of rail passenger transportation will be reported on a portfolio basis subject to data availability.

2.4.1 Green Bond Reporting

EUROFIMA will issue a Green Bond report and will update it until full allocation of Green Bond proceeds. The report will provide an overview of the assets financed through the proceeds of each Green Bond issuance. The report will provide the following information on the Eligible Green Assets financed:

- Summary of assets financed per type of equipment as defined under the Use of Proceeds.

- Summary of the allocation of proceeds raised via a Green Bond issuance.
- Allocation of Green Bond funds as defined under Use of Proceeds (see chapter 2.1) into:
 - Purchase of newly manufactured rolling stock,
 - Financing of existing rolling stock, and
 - Modernization / refurbishment of existing rolling stock.
- Specific data to identify the rolling stock:
 - Manufacturer,
 - Vehicle name,
 - Vehicle type,
 - UIC number.
- Current book value of assets financed.
- Age of rolling stock on the date of financing disbursement and at maturity.
- Estimated CO₂ emissions per passenger/km for each type of rolling stock.
- Estimated energy consumption per passenger/km for each type of rolling stock.

All reporting will be publicly available on the section of EUROFIMA's website dedicated to its Green Bond issuance (www.eurofima.org/en/investors/green-bonds/reporting).

2.4.2 Environmental Impact Reporting

In addition to its project-specific reporting related to the Green Bond use of proceeds, EUROFIMA will report a qualitative summary of the specific measures, planned and carried out by the financing recipient, to reduce energy consumption and pollutant emissions, promote the use of renewable energy and have overall a positive impact on the environment.

When available, EUROFIMA will report the following quantitative performance measures for the Green Bond:

- Railway overall reduction of CO₂ emissions;
- Railway overall increase in the use of renewable energy;
- Railway overall reduction of energy consumption.

3 Second Opinion

EUROFIMA engaged Sustainalytics GmbH (“Sustainalytics”), a provider of environmental, social and governance (ESG) research and analysis, to provide an independent Second Opinion on this Green Bond Framework. Sustainalytics evaluated the alignment of EUROFIMA’s Green Bond Framework with relevant industry standards within the meaning of the Green Bond Principles 2018. Furthermore, Sustainalytics assessed EUROFIMA’s sustainability strategy and the impact of the Use of Proceeds.

Sustainalytics concluded that *“EUROFIMA is well positioned to issue Green Bonds and that the EUROFIMA Green Bond Framework is transparent and robust, and in alignment with the four pillars of ICMA’s Green Bond Principles 2018.”*

The Second Opinion is publicly available on the section of EUROFIMA’s website dedicated to its Green Bond issuance (www.eurofima.org/en/investors/green-bonds/second-opinion).