



Study on State asset management in the EU

Final study report for Pillar 2 – Romania

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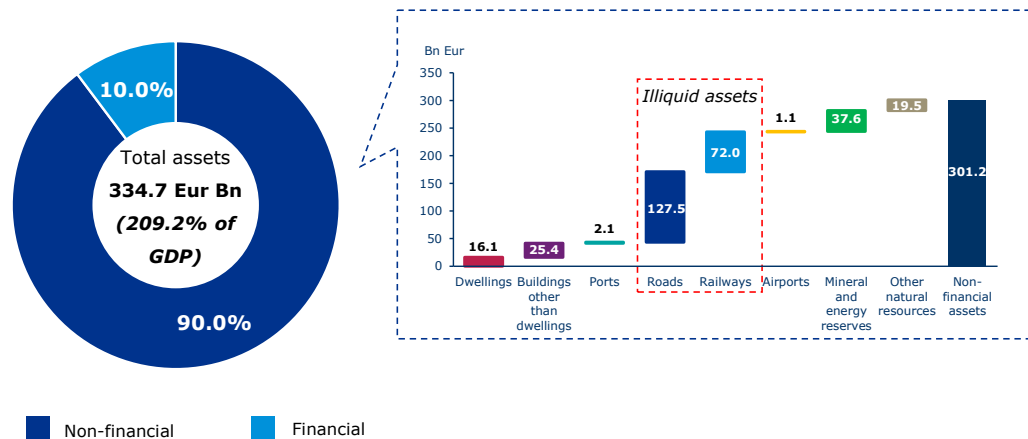
This Country fiche presents a quantitative overview of the mix of non-financial assets owned by the Romanian General government.

A recap and a summary table on sources of data and valuation methods used to map and assess (as far as possible) non-financial assets owned by the Romanian General government is reported in the Appendix (Table C).

1. OVERVIEW OF NON-FINANCIAL ASSETS

In 2015, the estimated value of Non-financial assets owned by the Romanian General government was equal to 293.8 Eur Bn, accounting for about 90% of the estimated value of all assets (including financial assets) owned by the General government¹.

Figure 1 General government's Financial and Non-financial assets (Eur Bn), Romania, 2015



Source: KPMG elaboration. Data on Gross Domestic Product were directly retrieved from Eurostat on 19th September 2017.

- (1) Estimated values refer to 2015 as the latest available year for both financial assets and all clusters of non-financial assets.
- (2) In this chart, the "estimated value" of financial assets is reported in terms of Total Assets of the country's PSHs as weighted by the stake(s) owned by the Public sector into the PSHs themselves².
- (3) Values of Non-financial assets were estimated according to the valuation approaches explained in the Methodological Notes for Pillar 2. In this chart the estimated value of Other natural resources only includes the estimated value of lands.
- (4) Since roads and railways are an illiquid asset we applied a Perpetual Inventory Method (PIM). However, this valuation method tends to slightly overestimate the value of the asset. Therefore the chart shows the lower bound figure of the range of road and railways valuation estimates only.
- (5) The estimated value for Mineral and Energy reserves refers to the estimate computed on 2015 average prices. Since the prices of Oil and Natural Gas can present many fluctuations over the year, the average of all price points was used as an accurate representation of the annual value of this assets, in order to better account for possible outliers.

2. DWELLINGS

Eurostat and other sources do not provide the value of Dwellings for Romania, as Romania was granted a derogation to start transmitting relevant data in 2020.

¹ As explained in the Methodological Notes for Pillar 2, Non-financial assets that are owned by PSHs are evaluated through the equity method. Therefore their value is not represented in this Pillar as it has already been accounted for in Pillar 1. The allocation of Non-financial assets between Pillar 1 and 2 is listed in Table A in the Appendix to the EU Fiche.

² For more details on how Total Assets for Financial Assets are calculated, please see Pillar 1.

The value of residential buildings has been estimated through a market approach, as outlined in Methodological Notes. As Table 1 shows, the estimated value of Romanian residential buildings is equal to 16 Eur Bn in 2015.

Table 1 Estimated values of General government's Dwellings (Eur Mn), Romania, 2010-2015

Data in Eur Mn	2010 (E)	2011 (E)	2012 (E)	2013 (E)	2014 (E)	2015 (E)
General government	16,238	14,644	15,389	15,278	14,682	16,054
Share of the total economy	2.1%	2.1%	2.3%	2.3%	2.2%	2.4%

Source: KPMG calculations on EU Building Stock Observatory and Eurostat data [downloaded in July 2017]. The country-specific capital value of the asset was directly retrieved from a global specific real estate database: MSCI Real Estate Analytics Portal.

(1) The share of Dwellings in the economy refers to the estimated value of Dwellings (rather than the number of Dwellings).

3. OTHER BUILDINGS AND STRUCTURES

- *Buildings other than dwellings*

Eurostat and other sources do not provide the value of Buildings other dwellings for Romania, as Romania was granted a derogation to start transmitting relevant data in 2020.

The value of non-residential buildings has been estimated through a market approach, as outlined in Methodological Notes. As Table 2 shows, the estimated value of Romanian non-residential buildings is equal to 25 Eur Bn in 2015.

Table 1 Estimated values of General government's Buildings other than dwellings (Eur Mn), Romania, 2010-2015

Data in Eur Mn	2010 (E)	2011 (E)	2012 (E)	2013 (E)	2014 (E)	2015 (E)
General government	28,000	29,016	26,769	27,412	25,129	25,439
Share of the total economy	29.5%	29.5%	27.9%	27.9%	26.7%	26.6%

Source: KPMG calculations on ENTRANZE and Eurostat data [downloaded in July 2017].

(1) The share of Buildings other than dwellings in the economy refers to the estimated value of Buildings other than dwellings (rather than the number of Buildings other than dwellings).

- *Ports*

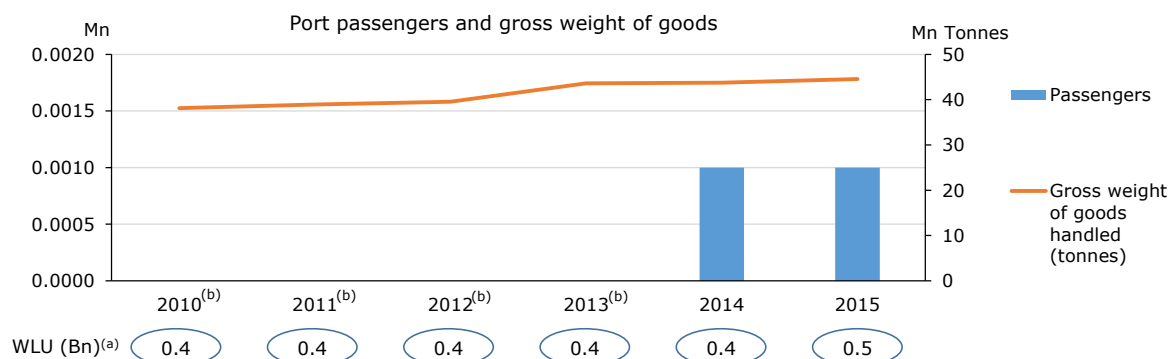
In Romania, port infrastructures are state-owned. The Government awards the concession of the naval transport infrastructures to the port administrations through the Ministry of Transport and Infrastructure³.

Figure 2 shows the overall maritime port traffic (for both passengers and goods) in Romania over the 2010–2015 time period⁴.

³ Organisation for Economic Co-operation and Development (OECD) (2011). Competition in Ports and Port Services. Available at: <http://www.oecd.org/regreform/sectors/48837794.pdf> [Accessed 21th May 2017].

⁴ For the list of Maritime Ports included in this Study, please see Table B in the Appendix.

Figure 2 Port passengers and gross weight of goods, Romania, 2010-2015



Source: Eurostat database, 2010-2015 [downloaded in March 2017]. Country level - passengers embarked and disembarked in all ports by direction (available at: http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=mar_mp_aa_cphd&lang=en) and Gross weight of goods handled in all ports by direction (available at: http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=mar_go_aa&lang=en).

(1) With regard to passengers, all passengers embarked from and disembarked to all maritime ports within the country have been considered.

(2) With regard to the gross weight of goods handled, the Gross weight of goods handled in all maritime ports within the country have been considered.

(a) A Workload Unit (WLU) is defined as one passenger or 100 kg of cargo.

(b) Data on Ports that Romanian Government provided Eurostat with are generally not reliable before 2014. Moreover, as detailed by Eurostat, "due to geographical characteristics, national maritime transport is not significant. The data reported by Romania contain a significant share of declarations to and from unknown ports: 6% in 2010, 2011 and 2012, 7% in 2009, 13% in 2008, 27% in 2007, 21% in 2006, 15% in 2005 and 10% in 2004". For more details, please see http://ec.europa.eu/eurostat/cache/metadata/en/mar_esms.htm [Accessed 30th May 2017].

On the basis of the market value (per workload unit) for ports, retrieved from recent transactions⁵, the estimated value of maritime ports in the country was estimated (as shown in Table 3) over the period 2010-2015. In 2015, this was equal to about 2 Eur Bn.

Table 3 Estimated value for Maritime Ports (Eur Mn), Romania, 2010-2015

Data in Mn Eur	2010	2011	2012	2013	2014	2015
Ports	1,755	1,792	1,819	2,006	2,014	2,050

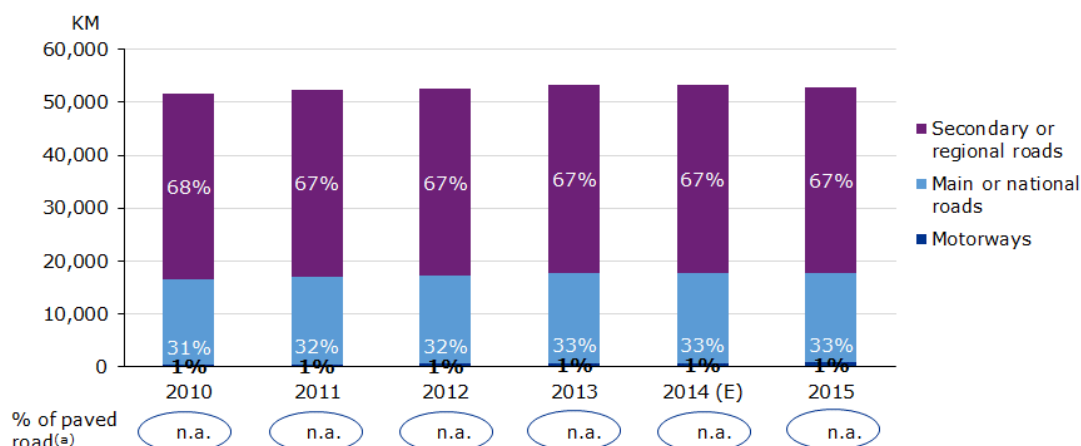
Source: KPMG calculations based on Eurostat and the Mergermarket database, 2010-2015 [downloaded in March 2017].

- **Roads**

In Romania, the *National Company of Motorways and National Roads SA (N.C.M.N.R.R.)* is in charge of the management of the road network; it operates under the authority of the *Ministry of Transport, Construction and Tourism*. However, the infrastructures belong to the General government.

⁵ For the list of the so-called "comparable" transactions included in our "peer group", please see the list of Table 8 in the Annex.

Figure 3 Length (in km) of Motorways, Main or national roads and Secondary or regional roads, Romania, 2010-2015



Source: Directorate-General for Mobility and Transport (DG MOVE) database, 2010-2015 [downloaded in September 2017]. Values for percentage of paved road were calculated using Eurostat data on length of other roads by type of surface.

- (1) DG MOVE's data does not report the length of Main or national roads and Secondary or regional roads for year 2014. Therefore, the values for the year 2014 have been estimated as average between 2013 and 2015 values.
- (2) For the sake of accuracy and comparability among the EU28 Member States, the valuation includes Motorways, Main or national roads and Secondary or regional roads only.
- (3) According to DG MOVE's data, the extension of the Portuguese road network is equal to 86,080 Km (including the length of Motorways, Main or national roads, Secondary or regional roads) in 2015.
- (4) Eurostat does not report the length of paved road network for years taken into account.
- (a) The percentage of paved road has been calculated based on the total extension of the road network (including other roads). It represents the length of paved road network over the total length of road network.

Table 4 reports the results of the valuation exercise carried out according to the valuation procedure described in the Methodological Notes for Pillar 2. In this respect, please be reminded that, to ensure accuracy and comparability, the valuation includes motorways, Main or national roads, and Secondary or regional roads only.

In Romania, overall, in 2015 the estimated value of roads ranged between 127 Eur Bn to 140 Eur Bn. Secondary or regional roads take the lion's share with a estimated value between 70 Eur Bn and 73 Eur Bn.

Table 4 Estimated road value for Motorways, Main or national roads and Secondary or regional roads only (Eur Mn), Romania, 2010-2015

Data in Eur Mn		2010	2011	2012	2013	2014	2015
Motorways	Min	2,178	2,454	3,041	3,532	3,745	3,909
	Max	2,284	2,564	3,153	3,646	3,859	4,021
Main or national roads	Min	46,691	49,642	51,328	52,869	53,473	53,107
	Max	56,187	59,537	61,396	63,094	63,673	63,099
Secondary or regional roads	Min	59,009	63,590	66,435	69,012	70,377	70,460
	Max	61,583	66,272	69,163	71,783	73,141	73,168
Total	Min	107,878	115,686	120,803	125,413	127,595	127,476
	Max	120,055	128,373	133,713	138,524	140,673	140,287

Source: KPMG calculations on Eurostat data, 2010-2015 [downloaded in July 2017].

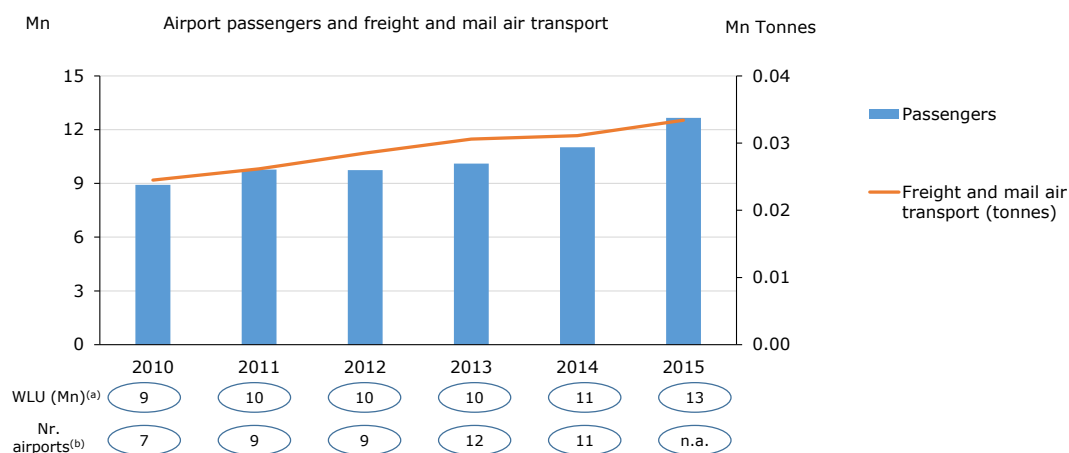
- **Airports**

Most airports in Romania operate under the authority of the Ministry of Transportation or local county councils. Therefore, airports are state-owned while managed by state-owned enterprises (e.g. Bucharest Banaesa International Airport and Bucharest "Henri

Coanda" International Airport are administered by the Bucharest National Airport Company, in which the Romanian state owns 80% of the shares).

As shown in Figure 4 below, airport traffic in Romania has been increasing over the 2010–2015 time period⁶.

Figure 4 Airports passengers, freight and mail air transport, Romania, 2010-2015



Source: Eurostat database, 2010-2015, [downloaded in March 2017]. Air passenger transport by main airports in each reporting country (available at: http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=avia_paoa&lang=en), Freight and mail air transport by main airports in each reporting country (available at: http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=avia_gooa&lang=en) and Number of commercial airports with more than 15,000 passenger units per year (available at: http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=avia_if_arp&lang=en).

(1) The number of passengers refers to all on board passengers.

(2) All freight and mail air transport is included.

(3) Eurostat does not report the number of commercial airports for 2015.

(a) A Workload Unit (WLU) is defined as one passenger or 100 kg of cargo.

(b) Total number of airports (with more than 15,000 passenger units per year).

To assess the value of airports, an income approach was applied (for more details, please see the Methodological Notes for Pillar 2).

According to the estimates reported in Table 5, in 2015, the overall estimated value of state-owned airports was equal to about 1.1 Eur Bn, with an increase of about 40.3% since 2010.

Table 5 Estimated value for airports (Eur Mn), Romania, 2010-2015

Data in Mn Eur	2010	2011	2012	2013	2014	2015
Airports	807	881	877	916	989	1,132

Source: KPMG calculations on Eurostat database, 2010-2015 [downloaded in May 2017].

(1) The WLUs used to calculate the value of airports do not match those represented in Figure 4 as they were computed by adding the WLUs of all airports considered within the scope of this Pillar (see Table A in Appendix).

- Railways

The public railway infrastructure⁷ belongs to the Romanian General government. However, the management of public railways is entrusted to the *National Company of Romanian Railways (CFR) SA* on the basis of a concession agreement with the Ministry of Transport spanning a 49-year term.⁸

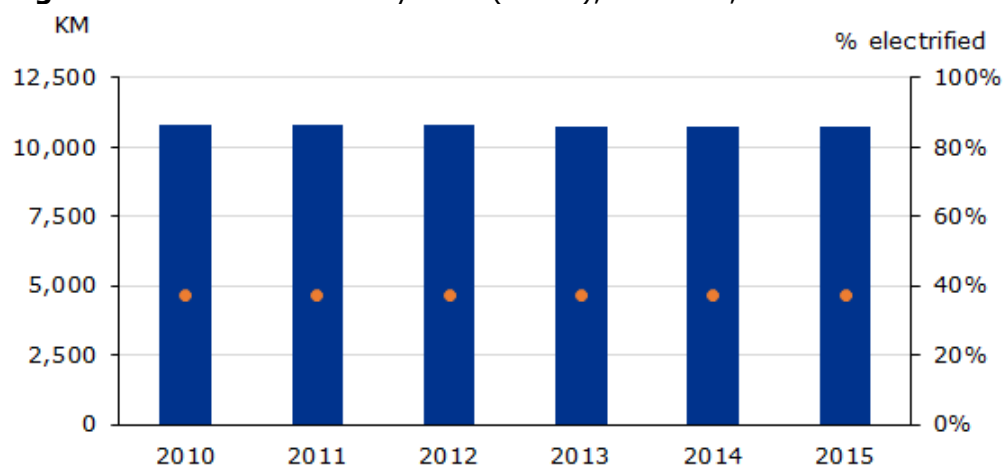
⁶ For the list of Airports included in this Study, please see Table A in Appendix.

⁷ Government Decision no 581/1998, annex 2.

⁸ Emergency Government Ordinance No. 12/1998 on freight railway transport.

As shown in Figure 7, the extension of the railway network in Romania was equal to about 10,700 km in 2015.

Figure 5 Extension of railway lines (in Km), Romania, 2010-2015



Source: Directorate-General for Mobility and Transport (DG MOVE), 2010-2015 [downloaded in October 2017]. The percentages of electrified lines were calculated using Eurostat database "Railway transport - length of tracks" available at: http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=rail_if_tracks&lang=en [downloaded in October 2017].

(1) The percentage of electrified network represents the length of electrified railway tracks over the total length of railway tracks for year.

Table 6 reports the results of the valuation exercise carried out according to the valuation procedure described in the Methodological Notes for Pillar 2.

In Romania, in 2015 the estimated value of the railway network ranged between 72 Eur Bn to 77 Eur Bn.

Table 6 Estimated value for railways (Eur Mn), Romania, 2010-2015

Data in Mn Eur		2010	2011	2012	2013	2014	2015
Railways	Min	68,855	71,616	72,688	73,725	73,512	71,983
	Max	73,776	76,723	77,863	78,959	78,711	77,054

Source: KPMG calculations on Eurostat database, 2010-2015 [downloaded in March 2017].

4. NATURAL RESOURCES

- Mineral and Energy reserves

According to the Romanian *Constitution* and the *Petroleum Law*, the General government has ownership rights on all Oil and Natural gas reserves located within Romania's territory.

In Romania, the exploration and production of oil and natural gas resources are performed by two PSHs: *Romgaz SA* – in the natural gas sector; and *OMV Petrom SA* – in the oil and gas sector.

Table 7 Proven reserves of mineral and energy reserves, Romania, 2015

Data	Oil (Barrels)	Natural gas (cubic meters)
Proven reserves	600,000,000	105,500,000,000

Source: Central Intelligence Agency (CIA). *World Factbook Database*, 2015 [downloaded in March 2017].

As shown in Table 8, the estimated value for Oil reserves in Romania in 2015 was equal, on average, to 29.0 Eur bn. With regard to Natural Gas, the estimated value was instead equal to an average of about 8.6 Eur bn.

Table 8 Estimated value of oil and natural gas proven reserves (Eur Mn), Romania, 2015

Data in Mn Eur	Min	Max	Average
Oil	19,541	36,673	29,004
Natural gas	5,714	11,211	8,552
Total	25,255	47,884	37,556

Source: KPMG calculations on World Factbook Database, 2015 [downloaded in March 2017].

(1) Proven reserves are valued using average prices for 2015.

(2) Range is calculated using the minimum and the maximum prices for 2015.

- Other natural resources

Eurostat and National Statistics do not provide figures for the cluster of "Other natural resources" in Romania.

The value of other natural resources has been estimated through a market approach, as outlined in Methodological Notes. As Table 9 shows, the estimated value of other natural resources is equal to 19 Eur Bn in 2015.

Table 9 Estimated values of General government's Other natural resources (Eur Mn), Romania, 2010-2015

Data in Eur Mn		2010 (E)	2011 (E)	2012 (E)	2013 (E)	2014 (E)	2015 (E)
Land (net)	General government	20,181	20,727	19,775	18,725	18,706	19,470
	Share of the total economy	13.0%	13.0%	13.2%	13.1%	12.7%	12.4%

Source: KPMG calculations on Eurostat database, 2010-2015 [downloaded in July 2017].

(1) The share of the economy refers to the estimated value of natural resources (rather than the volume of the natural resources).

Appendix I Romania

Table A List of airports, Romania, 2015 (Number of airports: 7)

List of airports
Non-financial (Pillar 2) ^(a)
BACAU/GEORGE ENESCU airport
BUCURESTI/HENRI COANDA airport
CLUJ NAPOCA/AVRAM IANCU airport
IASI airport
SIBIU airport
TARGU MURES/TRANSILVANIA airport
TIMISOARA/TRAIAN VUIA airport

Source: Eurostat database, 2015 [downloaded in May 2017].

(1) The list above includes the airports defined by Eurostat as "main airports", which meet the following criteria: at least 150 000 passenger movements per year.

(a) Within the scope of this Pillar.

Table B List of ports, Romania, 2015 (Number of ports: 9)

List of ports
Non-financial (Pillar 2) ^(a)
Basarabi
Braila
Constanta
Galati
Luminita
Mangalia
Medgidia
Midia
Tulcea

Source: Eurostat database, 2015 [downloaded in March 2017].

(1) The list above includes those ports defined by Eurostat as "reporting ports", for which statistics of inward and outward maritime transport flows are compiled.

(a) Within the scope of this Pillar.

Table C Overview of the valuation approaches and the sources used to value Non-Financial assets in this Study, Romania

Clusters of Non-financial assets	Valuation approach	Sources
Dwellings	Market value	- EU Building Stock Observatory - Eurostat
Buildings other than dwellings	Market value	- ENTRANZE - Eurostat
Ports	Market value	- Eurostat - Mergermarket - DG MOVE
Roads	Perpetual Inventory Method (PIM)	- Eurostat - EIB - Other sources
Airports	Market value	- Eurostat - DG MOVE
Railways	Perpetual Inventory Method (PIM)	- EIB - Other sources
Mineral and Energy reserves	Market value	- World Factbook Database
Other natural resources	Market value	- Eurostat

Sources: KPMG elaborations

(1) For more details on "other sources" used to carry out road valuations, please see Table 3, 4 and 5 in Annex.

(2) For more details on "other sources" used to carry out railways valuations, please see Table 6 in Annex.