



Study on State asset management in the EU

Final study report for Pillar 2 – Bulgaria

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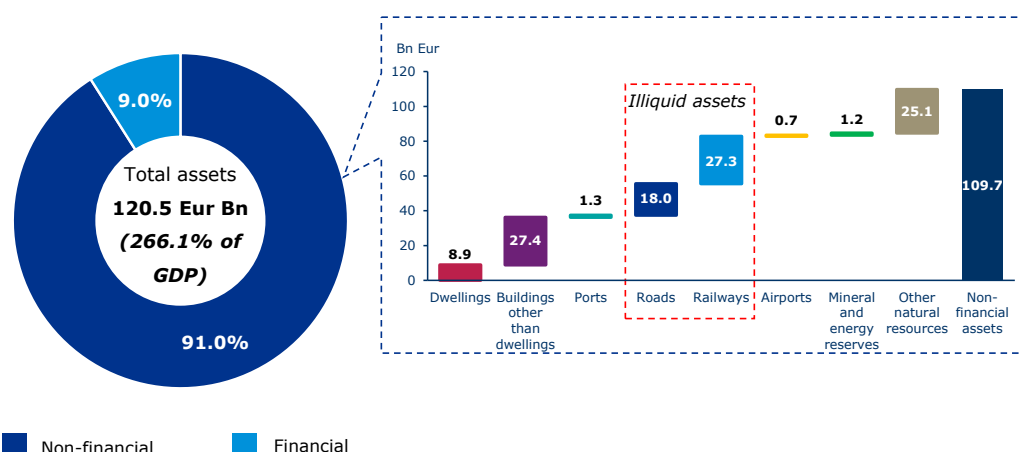
This Country fiche presents a quantitative overview of the mix of non-financial assets owned by the Bulgarian General government.

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 Bulgarian 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 Bulgarian General government was equal to 109.7 Eur Bn, accounting for about 91.0% of the estimated value of all assets (including Financial assets) owned by the General government. In this valuation the relative estimated value of Non-financial assets when compared to the General government's portfolio is high. This is mainly due to the fact that all the Non-financial assets are owned by the General government¹.

Figure 1 General government's Financial and Non-financial assets (Eur Bn), Bulgaria, 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) In this chart, the values of Dwellings, Buildings other than dwellings and Other natural resources have been estimated as they were not included in Eurostat or in other sources.
- (4) In this chart the estimated value of Other natural resources only includes the estimated value of lands.
- (5) Values of Non-financial assets are estimated according to the valuation approaches explained in the Methodological Notes for Pillar 2.
- (6) 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.
- (7) 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.

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.

2. DWELLINGS

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

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 Bulgarian residential buildings is equal to 9 Eur Bn in 2015.

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

Data in Eur Mn	2010 (E)	2011 (E)	2012 (E)	2013 (E)	2014 (E)	2015 (E)
General government	6,783	6,529	7,076	7,722	7,784	8,867
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 Bulgaria, as Bulgaria 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 the Methodological Notes. As Table 2 shows, the estimated value of Bulgarian non-residential buildings is equal to 27 Eur Bn in 2015.

Table 2 Estimated values of General government's Buildings other than dwellings (Eur Mn), Bulgaria, 2010-2015

Data in Eur Mn	2010 (E)	2011 (E)	2012 (E)	2013 (E)	2014 (E)	2015 (E)
General government	30,125	31,218	28,801	29,493	27,037	27,370
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*

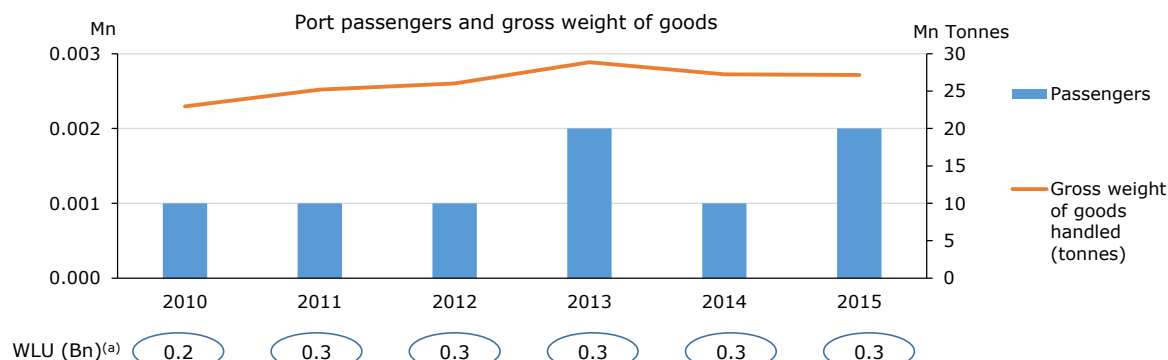
In compliance to the Art. 107 (1) of the *Law on Maritime Spaces*³, the property of port facilities, the land on which they are situated, as well as the land under open and closed warehouses belong to the State.

Furthermore, according to Art. 109 of the above mentioned law, a concession might be granted for the entire port or for parts of it only (e.g. terminals).

³ Maritime Space, Inland Waterways and Ports Act of the Republic of Bulgaria of 28 January 2000. Available at: http://www.un.org/depts/los/LEGISLATIONANDTREATIES/PDFFILES/BGR_2000_Act-.PDF [Accessed 17th May 2017].

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

Figure 2 Port passengers and gross weight of goods, Bulgaria, 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.

On the basis of the market value (per workload unit) for ports, retrieved from recent transactions⁵, the estimated value of maritime ports in Bulgaria was estimated (as shown in Table 3) over the period 2010-2015. In 2015, this was equal to about 1.3 Eur Bn.

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

Data in Mn Eur	2010	2011	2012	2013	2014	2015
Ports	1,056	1,160	1,198	1,328	1,254	1,251

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

- **Roads**

Bulgaria make a distinction between national and local roads. According to Art. 18 (1) of the *Constitution* of the Republic of Bulgaria⁶, national roads are exclusive property of the State.

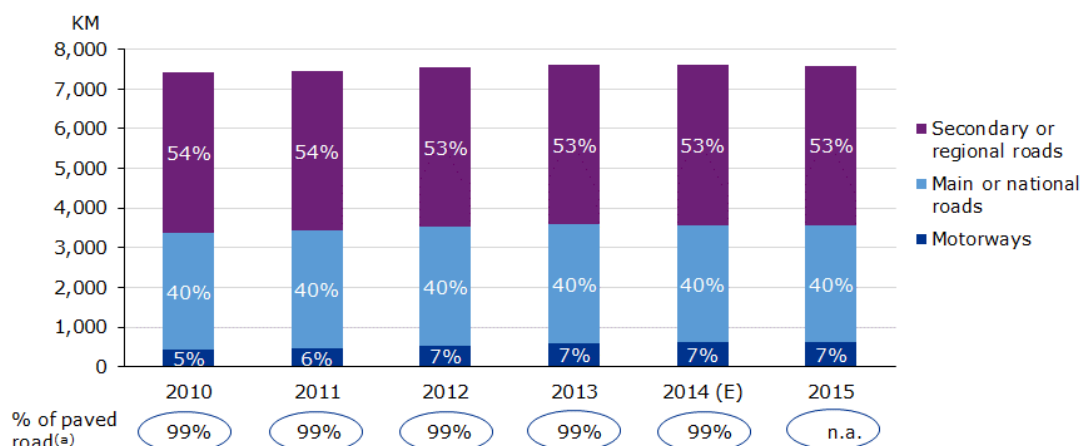
By contrast, according to Art. 2 of the *Municipal Property Act*, local roads (i.e. streets which are not part of the national road network) belong to the municipality where the roads are located.

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

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.

⁶ Constitution of the Republic of Bulgaria. Available at: <http://www.parliament.bg/en/const> [Accessed 17th May 2017].

Figure 3 Length (in km) of Motorways, Main or national roads and Secondary or regional roads, Bulgaria, 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 Bulgarian road network is equal to 19,853 Km (including the length of Motorways, Main or national roads, Secondary or regional roads and Other roads) in 2015.
- (4) Eurostat does not report the length of paved road network for year 2015.
- (a) The percentage of paved road has been calculated 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 Bulgaria, overall, in 2015, the estimated value of roads ranged between 18 Eur Bn to 21 Eur Bn. Main or national roads take the lion's share with a estimated value between 9 Eur Bn and 11 Eur Bn.

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

Data in Eur Mn		2010	2011	2012	2013	2014	2015
Motorways	Min	2,210	2,413	2,617	2,755	2,787	2,832
	Max	2,537	2,746	2,952	3,087	3,108	3,144
Main or national roads	Min	9,295	9,535	9,693	9,652	9,396	9,199
	Max	11,352	11,628	11,802	11,735	11,412	11,160
Secondary or regional roads	Min	5,795	6,001	6,163	6,194	6,070	5,982
	Max	6,085	6,295	6,460	6,487	6,354	6,259
Total	Min	17,300	17,949	18,473	18,601	18,254	18,013
	Max	19,974	20,670	21,214	21,309	20,873	20,563

Source: KPMG calculations on Directorate-General for Mobility and Transport (DG MOVE) and data [downloaded in July 2017].

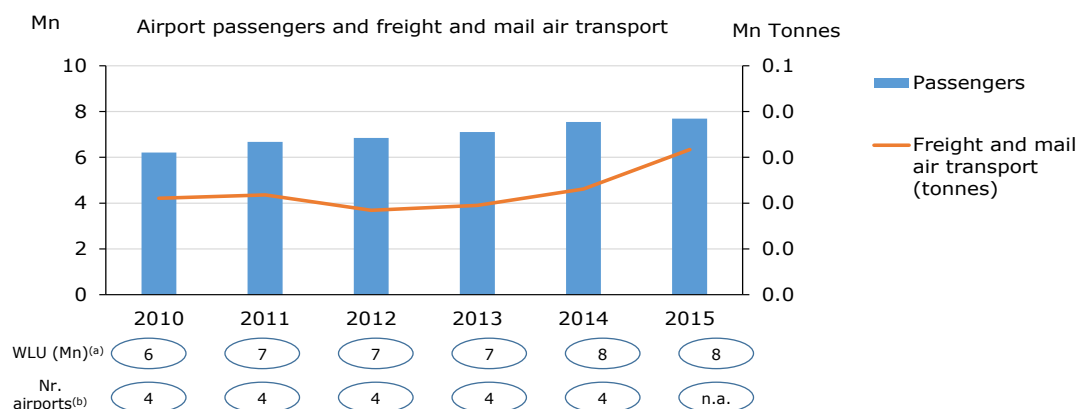
- Airports

In Bulgaria, airport infrastructures are publicly owned. The *Ministry of Transport, Information Technology and Communications (MTITC)* of the Republic of Bulgaria is the public body that has the duty to grant the airport infrastructures in concession for

managing them. For instance, at the moment of writing (May 2017), there is an public tender open for the concession of the airport of *Plovdiv*⁷.

As shown in Figure 4 below, the airport traffic in Bulgaria has been increasing over the 2010–2015 time period⁸.

Figure 4 Airports passengers, freight and mail air transport, Bulgaria, 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_qooa&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 0.7 Eur Bn, with an increase of about 23.6% since 2010.

Table 5 Estimated value for airports, Bulgaria, 2010-2015

Data in Mn Eur	2010	2011	2012	2013	2014	2015
Airports	557	598	610	631	670	688

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

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

⁷ Ministry of transport, Information Technology and Communications (MTITC) of the Republic of Bulgaria website. Available at: <https://www.mtitc.government.bg/en/za-ministerstvoto/koncesii/opened-procedures-granting-concession> [Accessed 17th May 2017].

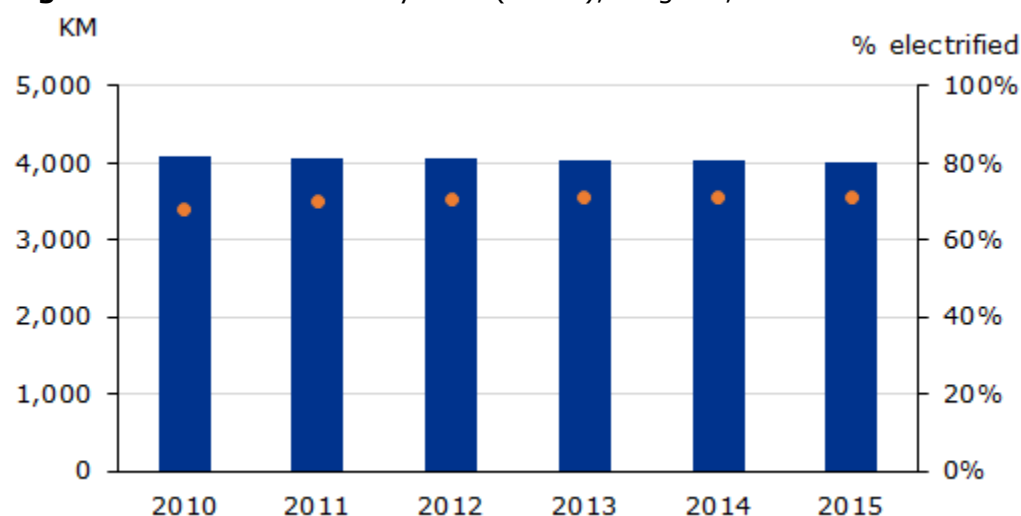
⁸ For the list of Airports included in this Study, please see Table A at the Appendix.

- *Railways*

In Bulgaria, the reference law for the railway industry is the *Railway Transport Act* published in the state gazette in 2000 and entered into force in 2002⁹. According to Art. 3, railway infrastructure facilities and the land on which they are built are property of the state, and are used by the *National Railway Infrastructure Company (NRIC)* or by concessionaires (i.e. commercial entities), subject to the procedure and provisions as per the *Concessions Act*.

As shown in Figure 5, the extension of the railway network in Bulgaria was equal to about 4,000 km in 2015.

Figure 5 Extension of railway lines (in Km), Bulgaria, 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.
- (2) Eurostat does not report the value of electrified network for 2015, because data transmission from Member Countries to Eurostat for this type of assets is still on a voluntary basis. In addition, no other official national sources provide us with information on the electrified network for 2015. Therefore, the values for 2014 are held to be constant for 2015.

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 Bulgaria, in 2015, the estimated value of the railway network ranged between 27 Eur Bn to 29 Eur Bn.

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

Data in Mn Eur		2010	2011	2012	2013	2014	2015
Railways	Min	28,410	28,881	29,094	28,733	27,852	27,285
	Max	30,446	30,946	31,166	30,770	29,815	29,187

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

⁹ Railway Transport Act 2000. Available at: [http://nweb90.worldbank.org/ECA/Transport.nsf/3b8b3d27260832ec852569fa0059675f/a1a9ce6d7912c7f185256b09005606a2/\\$FILE/Railway%20Transport%20Act.PDF](http://nweb90.worldbank.org/ECA/Transport.nsf/3b8b3d27260832ec852569fa0059675f/a1a9ce6d7912c7f185256b09005606a2/$FILE/Railway%20Transport%20Act.PDF) [Accessed 17th May 2017].

4. NATURAL RESOURCES

- *Mineral and Energy reserves*

In compliance with the *Constitution* of the Republic of Bulgaria¹⁰, the underground resources within the territory of Bulgaria are of exclusive property of the state, and their development can be granted to private companies only through a concession, as regulated by the *Concessions Act* of 2006.

In Bulgaria, the public authorities in charge of the regulation of oil and natural gas developments include the *Ministry of Energy*, the *Ministry of Environment and Waters*, and the *Energy and Water Regulatory Commission*.

Table 7 reports capacity of the Bulgaria proven reserves for Oil and Natural gas in 2015.

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

Data	Oil (Barrels)	Natural gas (cubic meters)
Proven reserves	15,000,000	5,663,000,000

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 Bulgaria in 2015 was equal, on average, to 0.7 Eur Bn. With regard to Natural Gas, the estimated value was instead equal to an average of about 0.5 Eur Bn.

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

Data in Mn Eur	Min	Max	Average
Oil	489	917	725
Natural gas	307	602	459
Total	795	1,519	1,184

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 Bulgaria.

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 25 Eur Bn in 2015.

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

Data in Eur Mn		2010 (E)	2011 (E)	2012 (E)	2013 (E)	2014 (E)	2015 (E)
Land (net)	General government	26,002	26,696	25,458	24,123	24,089	25,062
	Share of the total economy	13.0%	13.0%	13.2%	13.1%	12.7%	12.4%

Source: KPMG calculations on Eurostat data [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).

¹⁰ Constitution of the Republic of Bulgaria. Available at: <http://www.parliament.bg/en/const> [Accessed 17th May 2017].

Appendix I Bulgaria

Table A List of airports, Bulgaria, 2015 (Number of airports: 3)

List of airports
Non-financial (Pillar 2) ^(a)
BURGAS airport
SOFIA airport
VARNA 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, Bulgaria, 2015 (Number of ports: 2)

List of ports
Non-financial (Pillar 2) ^(a)
Burgas
Varna

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, Bulgaria

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, Table 4, and Table 5 at the Annex.

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