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European Commission

European Construction Sector Observatory

Country profile Bulgaria

June 2018

In a nutshell

The Bulgarian construction sector is still suffering from the effects of the crisis, particularly with regard to employment and production. The workforce in the broad construction sector experienced a 15.1% decline between 2010 and 2015. This was accompanied by a 21.2% drop in production in construction of buildings over 2010-2016 and a 12.4% decline in production in civil engineering. Similarly, despite a 29.1% increase in turnover, the gross operating surplus decreased by 9.1% over 2010-2014, signalling profitability issues.

↓ 15.1%

Workforce decline 2010-2015

↓ 21.2%

Construction of buildings production 2010-2016

↓ 4.5%

Construction of new dwellings 2015-2016

The low and declining interest rates on mortgages since 2009 are supporting the gradual revival of the housing market. Construction of new dwellings is still being negative, with the number of dwellings constructed dropping by 4.5% between 2015 and 2016, however in 2017 construction of residential and non-residential buildings picked up again, showing a slow recovery.

> In November 2017 a New Housing Strategy will be introduced, focusing mostly on poor building management and overcrowding conditions, with the aim to improve public and state funding for housing by 2050.

However, the outlook for the sector is promising, primarily due to increased investments in infrastructure, with EU funds constituting the main source of financing in Bulgaria. Notably, by the end of 2016, Bulgaria signed agreements for EUR 294 million under the Connecting Europe Facility with a primary focus to renovate and modernise new highways, railway and metro lines. Moreover, the European Structural Investment Funds (ESIF) will provide Bulgaria with a total of EUR 9.9 billion for 2014-2020. The two largest allocations are for Environment Protection and Resource Efficiency and for Network Infrastructures in Transport and Energy. Thus, the infrastructure market is expected to be the driving force behind the growth of the construction sector in the coming years.

> The government has also introduced measures to mobilise investments in the energy efficient renovation of buildings, with the support of international financial institutions and EU funds.

Notably, the National Green Investment Scheme mobilised a total of BGN 32 million (EUR 16.4 million), whereas the National Programme for Energy Efficiency of Residential Buildings, with a budget of BGN 1 billion (EUR 511 million), seeks to renovate up to 70,000 apartment blocks with the support of the EIB, CEB and World Bank. An additional BGN 661 million (EUR 339 million) for energy efficiency measures in the building stock will be provided under the Operational Programme 'Regional Development' 2014-2020.

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> Nevertheless, the Bulgarian construction sector faces various challenges related to late payments, the lack of high-skilled professionals, a large budget deficit as well as the unstable business and investment environment, which limit competition on the market.

Moreover, the high dependence on EU funds and the limited financial resources of the public sector constitute a threat to the long-term prospects of the national construction sector. Growth in the Bulgarian construction sector is predicted at 3.4% in 2018 and 4.3% in 2019.

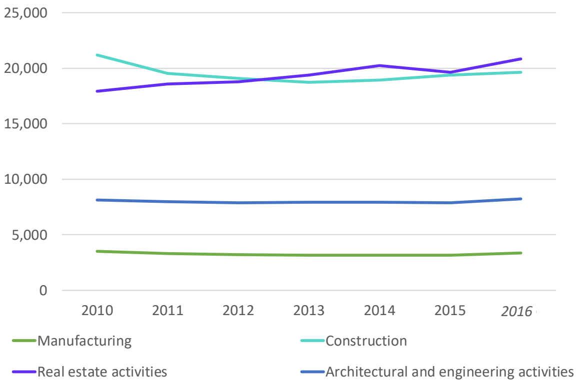
1
Key Figures

In 2016[1], there were 52,057 **enterprises** operating in the broad construction sector in Bulgaria, with the construction and the real estate sub-sectors accounting for 37.7% and 40.0% of the total, respectively (Figure 1). The number of firms in the broad construction sector increased by 2.6% since 2010 (50,714), with real estate activities experiencing the greatest increase of 16.4%. Conversely, the number of enterprises in a narrow construction sector decreased by 7.2%. **Production** in construction dropped by 17.3% over 2010-2016, with a peak in 2015 due to the rapid consumption of EU funds and a drop in 2016 as these were exhausted[2] (Figure 2).

↓ 17.3%

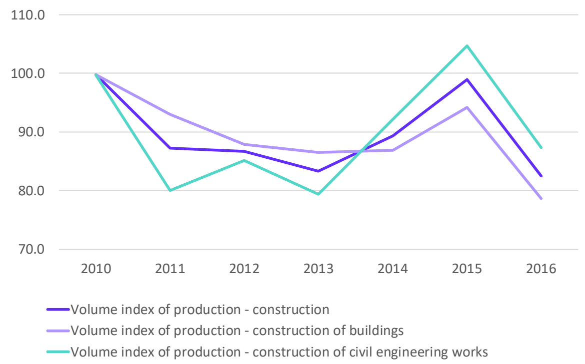
Production in construction 2010-2016

Figure 1: Number of enterprises in the Bulgarian construction sector between 2010-2016



Source: Eurostat, 2017.

Figure 2: Volume index of production in the Bulgarian construction sector over 2010-2016 (2010=100)

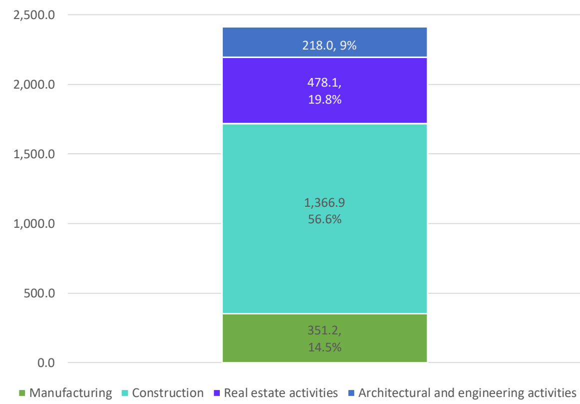


Source: Eurostat, 2017.

> Additionally, production in construction of buildings and production in civil engineering dropped by 21.2% and 12.4% respectively over the same period.

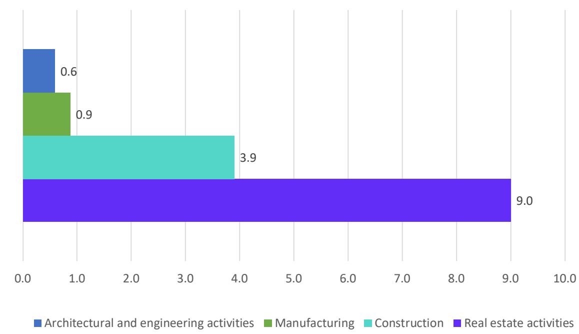
The total **added value** of the broad construction sector[3] amounted to EUR 2.6 billion in 2016[4], with the construction sub-sector accounting for 55.0% of the total (EUR 1.4 billion), followed by real estate activities (19.5%), manufacturing (15.5%) and architectural and engineering activities (10.1%) (Figure 3). The share of gross value added of the broad construction sector in the GDP reached 14.4% in 2014, which is slightly lower than the EU-28 average of 16.9%. The real estate sub-sector constitutes the largest contribution (Figure 4).

Figure 3: Value added in the Bulgarian construction sector in 2016 (EUR m)



Source: Eurostat, 2017.

Figure 4: Gross value added as a share of GDP in the Bulgarian construction sector in 2014[5] (%)



Source: Eurostat, 2017.

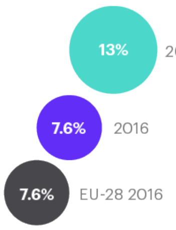
2
Macroeconomic Indicators

Bulgaria's economy has been constantly growing since 2009. Its **GDP** amounted to BGN 83.5 billion (EUR 42.7 billion) in 2016, a 13.1% increase compared to 2009 and +3.5% since 2015, mainly fuelled by private consumption. The same year, the potential GDP was BGN 83.7 billion (EUR 42.8 billion). The minor negative output gap suggests a slightly suboptimal use of resources in the national economy. Nevertheless, the negative output gap is forecasted to shrink in 2018 and become positive in 2019[6]. The **inflation rate** in Bulgaria has been dropping continuously since 2011 and displaying a deflationary trend since 2014 (-1.3% in 2016) due to declining import prices and subdued domestic demand. However, it is expected to pick up and reach 0.8% in 2017, primarily driven by buoyant domestic demand and recovering energy prices[7].

GDP increase 2009-2016]

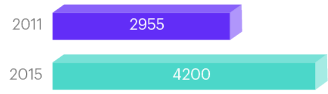
Employment has been growing over the past few years. The overall **unemployment rate** in Bulgaria reached 7.6% in 2016, which is equal to the EU-28 average[8], and is expected to fall further to 7.1% in 2017[9]. It has been decreasing since its peak in 2013 (13.0%), but is still higher than in 2008 (5.6%). The youth unemployment rate (below the age of 25) was 17.0% in 2016, below the EU-28 average of 18.6%[10].

Unemployment Rate in Bulgaria



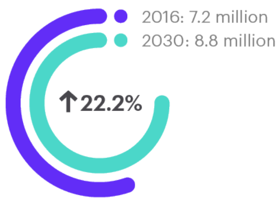
In terms of demographics, the **total population** in Bulgaria amounted to 7.2 million in 2016. It is projected to decrease by 10.4% by 2030 and by 22.2% until 2050, falling to 5.6 million. **Net migration** has been negative in Bulgaria since the 2000s. In 2010 a number of 17,683 people left Bulgaria, which is the highest number record since then with a slight slowdown in following years. From 2011 to 2015, an average of 2,955 people has yearly left the country, whilst an increased number of 4,200 left in 2015 alone.

Average people leaving Bulgaria yearly

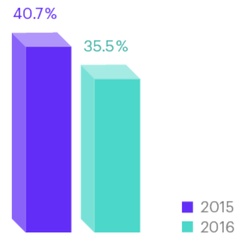


In 2016, Bulgaria's **working age population** accounted for 66% of the total. However, demographic projections foresee a substantial ageing. By 2050, the share of those aged 65 or more will rise to 31.5%[11].

In 2016, the **general government expenditure** in Bulgaria accounted for 35.5% of GDP, slightly lower than in 2015 (40.7%). The same year, **general government deficit** reached 0% of GDP and will continue to decline in 2017 and 2018, while **general government gross debt** accounted for 29.5% of GDP. The structural deficit will remain below 0.5% of GDP until 2018[12]. The deficit target of 2.8% was slightly exceeded and further deficit reduction to 1.9% is aimed, while public debt is foreseen to decrease again from 2017 onwards after a temporary increase in 2016[13].



Total Population



General government expenditure (% of GDP)

Regarding monetary policy, the Bulgarian Central Bank has been cutting the **official interest rate** over the last years, which fell from a peak of 5.1% in 2008 to a record low of 0% in 2016, as a response to counteract deflation[14].

In 2016, the EIB and EIF launched the SME Initiative in Bulgaria to improve the access to finance for SMEs through a budget of EUR 102 million from the European Regional Development Fund[15].

Little progress was made in 2016 to strengthen key policy indicators in the field of entrepreneurship, skills and innovation, internationalisation, responsive public administration, and public procurement. According to the 2017 Doing Business Report, Bulgaria ranked 82nd out of 189 in terms of starting a business, requiring six procedures which take 25 days to complete[18]. Corruption and insufficient government bureaucracy are seen as the most problematic factors for doing business in Bulgaria[19].

Access to finance continues to be a challenge for SMEs and start-ups are still financially dependent on public support. Bulgaria ranks 49th out of 137 economies in terms of financial market development with the lowest private equity investments as a percentage of GDP in the EU, according to the 2017-2018 Global Competitiveness Report[16]. In 2016, the EIB and EIF launched the SME Initiative in Bulgaria to improve the access to finance for SMEs through a budget of EUR 102 million from the European Regional Development Fund[17]. Moreover, lending to non-financial corporations has improved slightly since 2010, with **outstanding loans** growing from EUR 15,124 million to EUR 15,721 million in 2016 (+3.9%).

3

Key economic drivers of the construction sector

Productivity

Overall, **labour productivity** in the Bulgarian broad construction sector experienced a 16.5% increase between 2010 and 2014[20], from EUR 8,900 to EUR 10,300 (Figure 5). Productivity in the real estate activities saw the greatest increase of 52.9%, growing from EUR 14,300 to EUR 21,900 over 2010-2016[21]. This was followed by the construction sub-sector, which increased by 51.1% from EUR 7,300 to EUR 11,030 over the same period. Productivity in manufacturing rose by 30.6% form EUR 8,500 to EUR 11,100, while productivity in architectural and engineering activity grew only by 3.4% from EUR 13,700 to EUR 14,200, though being the lowest. According to Professional Register of the Builders operating under the Bulgarian Construction Chamber, there is an increase every year. This is justified by the introduction of new technologies and machinery in the implementation of large construction projects in the country.

Labour productivity in real estate in Euros

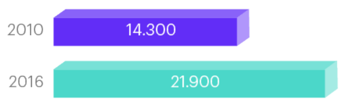
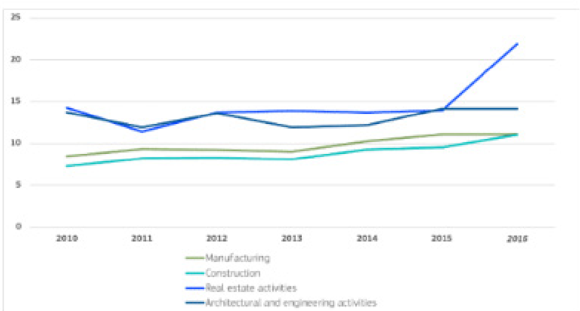


Figure 5: Labour productivity in the construction sector in Bulgaria over 2010-2016 (EUR k)



Source: Eurostat, 2017.

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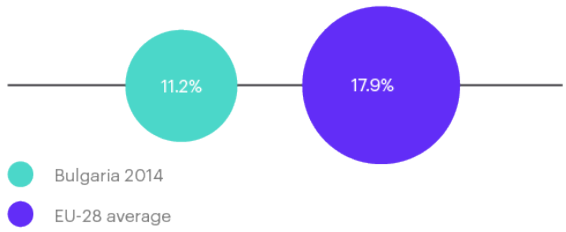
gross operating rate of the broad construction sector

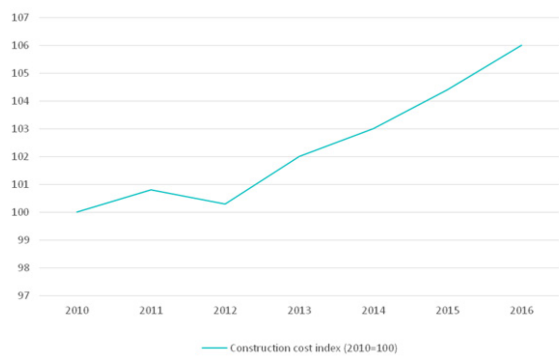


Turnover of the broad construction sector 2010-2016

Profitability

The total **turnover** of the Bulgarian broad construction sector in 2016[22] amounted to EUR 12.8 billion, 29.1% higher than 2010 (EUR 9.9 billion). 71.9% of the total turnover was generated by the construction sub-sector, followed by manufacturing (12.4%), real estate (9.6%) and architectural and engineering activities (6.0%). The **gross operating surplus** of the broad construction sector amounted to EUR 1.2 billion in 2014[23], a 9.1% decrease since 2010. As a consequence, and coupled with the rising construction costs (Figure 6), the gross operating rate of the broad construction sector[24], which gives an indication of the sector's profitability, dropped to 11.2% in 2014, from 13.8% in 2010, and is lower than the EU-28 average of 17.9% .

Figure 6: Construction cost index over 2010-2016 (2010=100)



Source: Eurostat, 2017.

Employment

In 2016[25], 241,764 people were **employed** in the Bulgarian broad construction sector. The number of people employed in the Bulgarian broad construction sector has dropped by 12.4% compared to 275,890 in 2010. The narrow construction sub-sector employs 62.0% of the total workforce of the broad sector, followed by manufacturing (15.2%), real estate activities (15.1%) and architectural and engineering activities (7.7%) (Figure 7). In line with the trend for the broad construction sector, narrow construction has experienced a steady decline since 2010 (-18.0%).

As for employment by specific occupation, the number of managers in the construction sub-sector faced the largest decline, from 18,900 in 2010 to 11,000 in 2016 (-41.8%), followed by clerical support workers, from 7,300 to 4,400 (-39.7%).

Conversely, in the real estate sub-sector, technicians and associate professionals experienced a slight increase, from 5,800 in 2010 to 6,000 in 2016 (+3.5%).

People employed in the Bulgarian broad construction sector

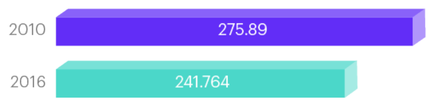
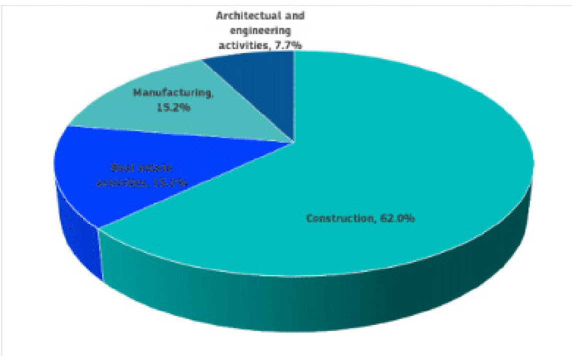


Figure 7: Percentage of people employed by construction sub-sector in Bulgaria in 2016



Source: Eurostat, 2017.

The number of **self-employed** workers in the construction sub-sector increased by 6.3% from 25,500 in 2010 to 27,100 in 2016, representing 8.5% of the self-employed in the general economy, which well above the EU-28 average of 1%. Furthermore, SMEs play a fundamental role in construction-related employment, employing 86.6% of the construction workforce in 2014[26].

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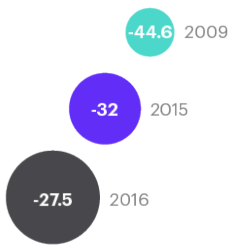
Business confidence

Business confidence in the overall economy has generally been negative, although it has shown some improvements over the last few years. The **consumer confidence indicator** was -27.5 in 2016, slightly better compared to -32 in 2015 and to its lowest point of -44.6 in 2009, however is still highly below the EU-28 average of -6.3. Similarly, the **industry confidence indicator** dropped to 0 in 2016, a slight worsening compared to 2015 (0.7) but still a considerable improvement from the lowest in 2009 (-11.5) being above the EU-28 average of -2.5. Conversely, the **construction confidence indicator** has been negative since 2000, except in 2007 and 2008, where it touched 8.5 and 12.1, falling to -20.7 in 2016 and remaining below the EU-28 average of -13.9. However, this constitutes a continuous improvement since the lowest in 2012 (-42.2).

Consumer confidence indicator in Bulgaria



According to the Bulgarian Construction Chamber (Камарата на строителите в Българи), there was a temporary revival of the sector in 2015 due to the need to exhaust EU funds under the previous programming period. However, 2016 and the beginning of 2017 have seen the return to a negative trend, due to the delays in the start of large infrastructural projects. Therefore, the Chamber believes that recovery will start only in 2018, once the major projects pick up pace, while construction companies will have to rely on smaller rehabilitation works until then[27].

Domestic sales

The ranking of the **most domestically sold** construction products in Bulgaria in 2015 has not changed since 2009. The top 5 most domestically sold construction products are presented in Table 1, including a comparison with the top sellers in the EU-28. These represented 58% of total domestic construction product sales in 2015.

Table 1: 5 most domestically sold construction products in Bulgaria and in the EU in 2015

Bulgaria			EU-28
Product	Value (EUR m)	Share in construction product domestic sales (%)	Product
Ready-mixed concrete (group 236310)	158.9	16.9	Other structures (group 251123)
Portland cement, aluminous cement, etc. (group 235112)	132.9	14.2	Doors, windows, etc. (group 251210)
Other structures (group 251123)	118.1	12.6	Ready-mixed concrete (group 236310)
Doors, windows, etc. (group 251210)	68.7	7.3	Prefabricated buildings of metal (group 25111)
Prefabricated buildings of metal (group 251110)	64.9	6.9	Prefabricated structural components for building, etc. (group 236112)

Source: PRODCOM, 2017.

Export of construction-related products and services

The ranking of the most exported products has remained relatively stable since 2010, with the exception of "Other structures and parts of structures, etc.", which was replaced by "Other plywood, veneered panels, etc." in the ranking. The **top 5 most exported** construction products in Bulgaria and in the EU-28 are summarised in Table 2. Together, these made up 61.1% of all construction products exports in 2015.

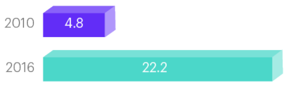
Table 2: 5 most exported construction products in Bulgaria and in the EU in 2015

Bulgaria			EU-28
Product	Value (EUR m)	Share in construction product domestic sales (%)	Product
Particle boards and similar (group 162113)	68.2	20.0	Ceramic tiles and flags (group 233110)
Ceramic tiles and flag (group 233110)	68.0	19.9	Other structures (group 251123)
Plaster products for construction purposes (group 236210)	29.4	8.6	Fibreboard of wood or other ligneous materials (group 162114)
Other plywood, veneered panels (group 162112)	24.7	7.2	Marble, etc. (group 237011)
Fibreboard of wood or other ligneous materials (group 162114)	18.3	5.4	Doors, windows and their frames and thresholds for doors, of metal (group 251210)

Source: PRODCOM, 2017.

In terms of **cross-border provision of construction services**, Bulgaria exported EUR 22.2 million worldwide in 2016, considerably above the 2010 value (EUR 4.8 million) but well below the 2012 peak (EUR 158.4 million). Specifically, in the same year, 78.4% of exports (EUR 17.4 million) were made to the EU-28 countries, compared to 52% (EUR 2.5 million) in 2010. In parallel, Bulgaria imported a total of EUR 16.8 million in construction services in 2016, a 72.4% decrease since 2010 (EUR 60.9 million), with EUR 15.1 million from EU-28 countries and EUR 1.7 million from outside the EU-28. Bulgaria therefore achieved a **trade surplus** of EUR 5.4 million in 2016.

Cross-border provision of construction services worldwide in million EUR



Access to finance in the construction sector

The credit extended to the construction sector has decreased between 2013 and 2016[28]. In 2016, **outstanding loans** to construction companies amounted to BGN 3.2 billion (EUR 1.6 billion), a 19.2% drop compared to 2013 (BGN 3.9 billion – EUR 2 billion). However, this is 5.6% higher than the 2015 level of BGN 3 billion (EUR 1.5 billion). The construction sector will experience limited credit supply because of the high-risk domestic economy and the tight lending requirements of banks, which have been further constrained following the banking sector difficulties of 2014[29].

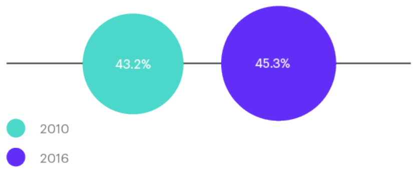
> Nevertheless, in the line of the EU SME initiative and the Investment Plan for Europe operating since 2016, Bulgarian SMEs is expected to receive about EUR 600 million through commercial banks, which is managed by the European Investment Fund and co-financed by the European Structural and Investment Funds (through its Horizon 2020 funds), and the European Investment Bank Group[30].

Through this initiative, Bulgarian SMEs including those operating in the construction sector will be able to receive financing with lower interest, fees and collateral. Business loans are provided under European conditions for dynamic and sustainable development and growth[31].

Access to housing

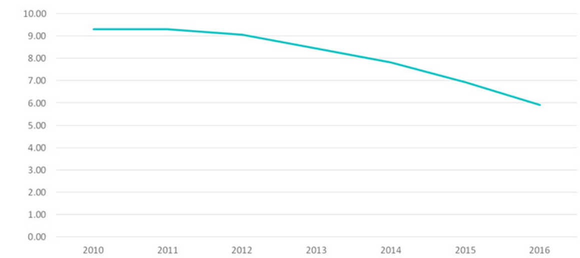
The number of **households** in Bulgaria reached 2.7 million in 2016, a 0.4% decrease since 2010. Furthermore, the country has a high **urbanisation rate**, with 45.3% of the population living in cities and greater cities, compared to 43.2% in 2010. In parallel, the **mean equivalised net income** experienced a 17% growth since 2010, amounting to EUR 4,093 in 2015. These factors, together with the lowest interest rates on mortgages since 2010 (Figure 8), are driving the gradual revival of the housing market, as shown by the slowly recovering house prices since 2014 (Figure 9). The house price index for total dwelling was in fact only 1.2% above the 2010 level in 2016, with the index for existing dwellings being still slight below. Conversely, the house price index for new dwellings fully recovered and was 8.7% above the 2010 level in 2016.

% of population living in cities and greater cities



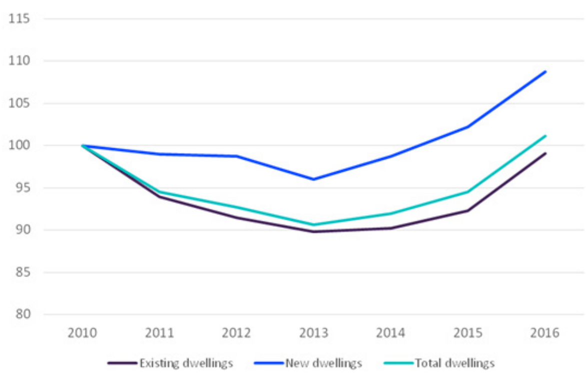
> However, bank lending for house purchases is not increasing. Outstanding residential loans to households still have not recovered. In 2015[32], these amounted to EUR 3.52 billion, compared to EUR 3.8 billion in 2009. In Bulgaria, only 2.6% of the population are owners with a mortgage in 2016 (whereas 79.7% are owners without outstanding mortgage), and outstanding mortgage debt represents only 17.6% of GDP.

Figure 8: Mortgage rates for loans for over 5 years original maturity (%)



Source: ECB MFI Interest Rate Statistics, 2017.

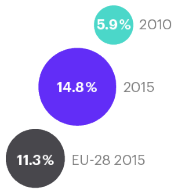
Figure 9: House price index in Bulgaria over 2010-2016 (2010=100)



Source: Eurostat, 2017.

The number of newly built dwellings decreased by 8.0%, reaching a total number of 2,161 in 2016, compared to 2,350 in 2010. The trend of construction of new dwellings has still not improved over the past year, with the number of dwellings constructed dropping by 4.5% between 2015 and 2016[33], however from mid-2017 construction of residential and non-residential buildings has slowly picked up again, especially in Sofia, Plovdiv and Stara Zagora[34]. Moreover, the number of building permits for residential buildings also decreased by 7.7% since 2010, reaching 4,514 in 2016 compared to 4,891 in 2010[35].

Housing cost overburden rate



Moreover, the **housing cost overburden rate**[36] was at 14.8% in 2015, above the EU-28 average of 11.3% and higher than the value of 5.9% recorded in 2010, showing a generally worse housing affordability situation[37]. A potential boost to demand for housing can originate from the fact that, despite the high level of **home ownership** (82.3% of the population owned their dwelling in 2016), the share of the population living in **overcrowded households**[38] is very high, at 44.2%, compared to the average of 17.3% at EU level. Furthermore, the **severe housing deprivation rate**[39] was at 11.4% in Bulgaria in 2015 while the EU average was 4.9%[40].

Infrastructure

Bulgaria ranks 76th out of 137 in terms of its overall infrastructure quality, according to the 2017-2018 Global Competitiveness Report[41]. It scores best with respect to the quality of its railroad infrastructure (54th), whereas the quality of roads ranks 94th. The intense investments recorded in 2015, particularly in road and energy infrastructure, were supported by EU funds under the previous programming period. Indeed, close to 90% of public procurement expenditure in the country comes from EU funds, which constitute 80% of construction investment (see TO 1 - Investment conditions and volumes)[42].

> Bulgaria scores best with respect to the quality of its railroad infrastructure (54th), according to the 2017-2017 Global Competitiveness Report, whereas the quality of roads ranks 94th.

4

Key issues and barriers in the construction sector

Company failure

The Bulgarian broad construction sector has seen a growing number of bankruptcies since the crisis, with traders of construction materials and real estate agents being particularly affected. The number of **company deaths** in the construction sub-sector grew by 35.9% between 2010 and 2014, from 2,068 to 2,810. However, during the same period, the number of **company births** increased by 37.1%, from 2,018 to 2,766. In real estate, a 2.8% decline in company births and a 125% increase in company deaths were recorded. Similarly, in the architectural and engineering sub-sector, company deaths increased by 79.4% and company births went up only by 14.4% over 2010-2014.

↑ **35.9%**

Company deaths in the construction sub-sector 2010-2014

Trade credit

Trade credit is not a wide-used practice in Bulgaria and remained unchanged in terms of usage, with an average of 66% of enterprises over the past 6 months, according to the survey. An average of 54% business partners was willing to provide trade credit, which remains unchanged compared to previous years and is below the EU-28 average of 62% in 2016. In terms of availability, 25% of respondents believe that trade credit availability improved since 2016, while 68% others mentioned that availability remained unchanged and will most likely stay the same in the near future.

> In Bulgaria, trade credit is a relevant source of financing for only 25% of SMEs, according to the Survey on the Access to Finance of Enterprises (SAFE), which is below the EU-28 average of 35% in 2016[43].

Late payment

Late payments are a concern for businesses in Bulgaria, as the country presents 'limited payment stability', according to European Payment Risk Index[44]. The main reasons are financial difficulties, administrative inefficiency of clients and their intentional negligence of payments.

> The public sector is also often late in settling invoices, as it pays on average after 50 days instead of the 34 days usually stipulated in the payment terms. In the construction sector specifically, only 21.0% of payments were carried out by due date in 2016. The majority (62.3%) was carried out with a delay of up to 30 days. 12.2% of payments took between 30 and 90 days, the highest in comparison with other sectors, and 2.8% of payments after 120 days, the second highest after the Transport sector (4.9%)[45].

According to the Bulgarian Construction Chamber, the construction companies have enough liquid funds and the public authorities managed to eliminate the problem with late payments. The current situation is within the acceptable range. However, there are serious intercompany debts, which is due to the serious competitiveness in the sector, as well as the low tenders. This often leads to decapitalization of the firms and even to bankruptcy of SMEs in the construction sector. Out of 4,800 firms registered in the Professional Register, around 500-600 cancel the corresponding registration every year, but meanwhile 500 new firms are registered annually.

> Late payments are a concern for businesses in Bulgaria, as the country presents 'limited payment stability', according to European Payment Risk Index[46]. The main reasons are financial difficulties, administrative inefficiency of clients and their intentional negligence of payments.

Time and cost of obtaining building permits and licenses

According to the World Bank's Doing Business 2017, Bulgaria ranked 48th in terms of **'dealing with construction permits',** falling one position from 2016's ranking[47]. Notably, 18 procedures are required to obtain a construction permit in Bulgaria, compared to 12.1 in the OECD high-income countries (Table 3). The costs associated with getting a building permit in Bulgaria are also higher than the OECD average, as they amount to 4.6% of the value of the warehouse, as opposed to 1.6% in the OECD. Conversely, Bulgaria performs better than the

OECD high-income average in terms of the time necessary to obtain a construction permit. Indeed, building a warehouse takes 97 days compared to 152.1 in OECD high-income countries.

Bulgaria performs better than the OECD high-income average in terms of the time necessary to obtain a construction permit (97 days compared to 152.1 days)

Table 3: Construction procedures timing and costs in Bulgaria

Procedure	Time to complete	Associated costs
1. Obtain current cadastral extract from the Agency for Geodesy, Cartography and Cadastre	1 day	BGN 90 (EUR 46)
2. Apply for VISA from the Chief Architect of the Municipality	3 days	BGN 80 (EUR 41)
3. Obtain decision from the Director of the Regional Inspectorate of Environment and Water	14 days	no charge
4. Sign preliminary contracts with the water authorities	7 days	BGN 600 (EUR 306.58)
5. Request and obtain preliminary assessment of the building for its compliance with energy efficiency requirements from licensed company	5 days	BGN 2,601 (EUR 1,329)
6. Hire a construction supervision company for evaluation of the project and supervision during construction	7 days	BGN 9,150 (EUR 4675)
7. Obtain final construction approval from the Chief Architect of the Municipality	35 days	BGN 10,405 (EUR 5,319)
8. Obtain approval for opening a construction site and determining construction line and construction level	2 days	BGN 20 (EUR 10)
9. Obtain approval from Municipality once the superstructure is complete	4 days	BGN 1,500 (EUR 766)
10. Sign contract with water provider and receive connection	7 days	BGN 600 (EUR 307)
11. Obtain geodetic measurement from a licensed company	7 days	BGN 350 (EUR 179)
12. Map the building in the cadastral map and receive registration certificate	3 days	BGN 124 (EUR 63)
13. Request and obtain certificate for energy efficiency	7 days	BGN 350 (EUR 255)
14. Have the Construction Surveillance file a report on the completed construction	1 day	no charge
15. A technical passport is registered with the Chief Architect of the Municipality	3 days	no charge
16. File a copy of the registered technical passport with the Cadastre	1 day	no charge
17. Receive final inspection by the Municipality	1 day	no charge
18. Obtain approval of the building and occupancy permit from the municipality	7 days	BGN 750 (EUR 383)

Source: Doing Business overview for Bulgaria, Word Bank, 2017.

Skills shortage

The number of job vacancies in the construction sector reached 404 in 2015[48], increasing by 199% from 135 positions in 2010.

In the real estate sector there were 84 vacancies in the same year, a 13.4% decline from 97 since 2010 and well below the 2011 peak of 348.

Bottleneck vacancies affect particularly high-skilled positions, such as construction engineers. In fact, Bulgaria presents one of the highest numbers of bottlenecks among science and engineering professionals, due to the lack of specific skills in the national economy[49]. However, interest in construction and engineering appears to be increasing among university students, as **tertiary students** in Engineering, manufacturing and construction, and specifically in architecture and building, amounted to 1,401 in 2015, a 18.9% increase since 2010.

In fact, Bulgaria presents one of the highest numbers of bottlenecks among science and engineering professionals, due to the lack of specific skills in the national economy.

Even though there have not been shortages in the traditional construction professions, e.g. concrete-workers, masons, carpenters, plumbers, electricians, roofers, etc., specialised skills in installation and maintenance of renewable energy systems is limited. It is considered that going towards the end of the decade there will be a greater need for skilled craftsmen in the area of energy efficiency[50]. Another shortage that will affect the construction sector is the lack of qualified trainers and teachers in civil engineering professions and other practical construction-related occupations, ranging from electricians, welders to carpenters. This is linked to the low image of teachers for young graduates and the expected number of retirements among current trainers[51]. According to the Bulgarian Construction Chamber, due to shortages of qualified labour there is a high risk of postponing the implementation of construction projects under the EU and national programmes in the coming years.

↑ 18.9%

Tertiary students in architecture and building 2015-2010

> Overall there is a lack of workforce in construction all across Europe therefore in order to mitigate the issue, there is necessity to employ skilled workers from non-EU member states and increase wages in the sector[52].

Countries like Ukraine and Moldova have a good reputation of workers' performance in the construction sector. In addition, according to the Bulgarian Construction Chamber, there is a strong need for a full review of the whole legal framework in the construction sector. The migration of labour, especially in the construction sector, is a result of the seasonal and overloaded schedule works, but also it is due to the disproportional level of payments in the construction sector in the EU.

Sector & sub-sector specific issues

Material efficiency and waste management

In 2013, **construction and demolition (C&D) waste**, including soils, in Bulgaria amounted to 1,543,900 tonnes, of which 8.9% was recycled. However, the data on C&D waste reported by the National Statistics Institute has been fluctuating over the past years, with very significant decreases in 2010 and 2011.

Consequently, Bulgaria's Ministry of Environment and Water released the National Strategic Plan for the Management of Construction and Demolition Waste for the period 2014-2020, in line with the European Commission's policy on waste management. In terms of C&D waste, the Bulgarian government aims at recycling and re-using over 70% of construction and demolition waste of the total weight of the generated waste by 2020[55].

> Prior to 2012, Bulgaria had no reporting system for the monitoring of C&D waste and as a result, inconsistencies in the data and incompleteness of data series have been identified[53]. Similarly, illegal dumping of C&D waste is common, and sanctions for non-compliance are often too low to be a deterrent factor[54].

Climate and energy

Emissions of greenhouse gases (carbon monoxide and dioxide, methane, nitrous oxides and particulate matter) from activities in the construction and real estate sub-sectors amounted to 664,275.2 tonnes and 26,154.5 tonnes in 2014, respectively. In 2014, greenhouse gas emissions from construction and manufacturing represented 6.6% of total emissions, down from 19.6% compared to the 1988 levels[56]. Nevertheless, the construction sector is considered key for addressing climate change due to the energy savings potentials of the building stock. Newly built buildings (residential and non-residential) use less energy than old buildings, have better standards of insulation and air tightness, as discussed in TO 3 - Resource efficiency / Sustainable construction.

5

Innovation in the construction sector

Innovation performance

Bulgaria is a **Modest Innovator**, with its overall performance in terms of innovation and R&D being well below the EU average and overall stable since 2010, according to the Innovation Union Scoreboard 2017[57]. In particular, Intellectual assets, Employment impacts and Human Resources constitute the key strengths of the innovation system in Bulgaria, whereas Innovators, Finance and support, and Attractive research systems were its relative weaknesses.

> Business enterprise R&D expenditure (BERD) in the broad construction sector displayed a negative trend across all sub-sectors. Namely, BERD in the construction sub-sector dropped from EUR 683,000 in 2009 to EUR 123,000 in 2013, although it picked up again in 2014 reaching EUR 497,000.

Similarly, BERD in the professional, scientific and technical activities sub-sector experienced a 42.2% decrease between 2012 and 2013, from EUR 6.8 million to EUR 3.9 million, although it recovered back to the 2012 level in 2014[58]. BERD in real estate activities has been negligible over the same period.

In parallel, the **total R&D personnel** (full-time equivalents – FTE[59]) in the construction sub-sector was 20 in 2014, double compared to the previous year, but 53.4% lower than in 2009 (43 FTE). Similarly, the FTE in real estate activities fell from 18 in 2008 to 0 in 2014, in line with its BERD. As for the professional, scientific and technical activities sub-sector, it reported the highest R&D personnel, which increased by 133.34%, from 45 in 2011 to 105 in 2014.

In line with these values, the number of **construction-related patent applications** has averaged at about 1.6 between 2010 and 2016, although it registered a peak of 3 applications in both 2015 and 2016. No Bulgarian construction-related firms rank within the top 1,000 EU companies by R&D (industrial sector ICB-3D), according to the 2016 EU R&D Scoreboard[60].

Eco-innovation and digitalisation

Innovation has been identified by the Bulgarian government as a key to the development of the country. To this end, an allocation of about EUR 600 million is foreseen for education and innovation support[61]. Moreover, in order to stimulate innovation activities in companies and boost economic growth, the Ministry of Economy, Energy and Tourism established the **National Innovation Fund (NIF)**, aiming to support the entry to market of new products and services based on scientific research and R&D[62]. An instance of a construction-related project to be funded under the seventh round of the NIF is the 'Development of systems for passive fire protection in construction', supported by an approved subsidy of BGN 249,481 (EUR 127,578)[63].

Similarly, the Bulgarian government has taken several concrete reforms to improve and stimulate its innovation system by developing the "Innovation Strategy for Smart Specialisation", implementing Operational Programme "Science and Education for Smart Growth 2014-2020" and the strategy "Better Science for a Better Bulgaria 2025". Based on goals set out in the latter strategy, the Bulgarian government aims to reach an R&D intensity target of 1.5% by 2020 and expand the public investment in research from 0.25% in 2016 to 0.45% of GDP by 2020[64].

> Similarly, The Bulgarian Green Building Council (BGBC), a non-profit organisation aiming to provide comprehensive expertise in sustainable construction, has committed to involve over 500 stakeholders in green building workshops and trainings, as well as build capacity in sustainable development and green building in Bulgaria over the period 2015-2017, in line with COP21 Paris[65].

In addition to government support, private companies are also playing a role in the dissemination of innovative construction practices in Bulgaria. For instance, coBuilder and Nemetschek have started educating the Bulgarian construction industry about the advantages of using **Building Information Modelling (BIM)** by organising events, such as the 'Second Scientific-Applied Conference with International Participation - Project management in Construction'[66] and 'The different faces of BIM', which attracted over 150 construction and architecture professionals[67].

> CoBuilder and Nemetschek have started educating the Bulgarian construction industry about the advantages of using Building Information Modelling (BIM).

In line with the BG10-Green Industry Innovation Programme, Sofia Investment Agency organised a matchmaking event named "Sofia meets Oslo" in January 2017 between Norwegian and Bulgarian companies, aiming at promoting bilateral inter-state and commercial relations, most notably sharing knowledge within sustainable development and green innovation, ICT, tech and other areas[68].

Overall, according to the Bulgarian Construction Chamber, the digitalization and different e-platforms in the construction are mainly used by the big companies in the sector. Around 10-15% of the companies use 3D printing, BIM, etc., especially in terms of design and control.

6

National & Regional Policy & Regulatory Framework

Policy schemes

The key priorities in housing policy in Bulgaria were outlined in the **National Housing Strategy** of 2004, adopted by the Ministry of Regional Development and Public Administration[69].

> The strategy is based on two main strategic objectives, tackling the deterioration of the existing housing stock, and creating a mechanism to provide new affordable housing, both for rent and purchase.

These objectives are implemented in three operational areas, notably the 'establishment of an appropriate framework for the national housing system', the 'resolution of priority issues in the housing sector' and 'information/educational campaigns'. Since 2004, housing policy has focused on energy efficiency with the launch of a number of policy measures, such as the **National Programme for Energy Efficiency of Residential Buildings**, among others (see TO 3 - Resource efficiency / Sustainable construction).

However, despite set goals, Bulgaria has hardly been able to implement the proposed policies of the 2004 National Housing Strategy, due to a lack of institutional enforcement and of robust government' support[70]. Indeed, expenditure on housing benefits in Bulgaria has been accounting for 0.0% of GDP since 2010[71]. However, by November 2017, a New Housing Strategy will be introduced by the Ministry of Regional Development and Public Administration. This strategy targets mostly poor building management and overcrowding conditions, with the aim of improving public and state funding for housing by 2050, i.e. improving conditions for social housing (the term is not yet clearly defined in Bulgaria)[72]. According to the Bulgarian Construction Chamber, for 2017 and 2018 there are 1400 buildings that are expected to be renovated and retrofitted. There is an expert working group at the Ministry of Regional Development and Public Works, which will review the whole process in the construction field as well as the principles that have been taking place so far.

Under the operational programme 'Regions in Growth' 2014-2020, the government introduced the policy measure **'Improving housing conditions for vulnerable groups and regional health infrastructure',** started in 2015 and ending in 2023. It entails the construction, reconstruction, repair and expansion of social housing, as well as the construction, and renovation §of health infrastructure. The budget available for social housing is BGN 27 million (EUR 13.8 million), and for social infrastructure BGN 163 million (EUR 83.3 million)[73].

> Bulgaria has hardly been able to implement the proposed policies of the 2004 National Housing Strategy, due to a lack of institutional enforcement and of robust govern-

> The National Programme to improve housing conditions for Roma for the period 2005-2015 contains measures for the construction of dwellings and social infrastructure (such as health facilities, educational establishments, cultural centres, etc.) in Roma settlements[74]. Indeed, improving housing conditions for vulnerable categories is a priority of the Bulgarian government, particularly given the very limited availability of public housing (only about 2.6% of the total housing stock)[75].

To stimulate private investments in the construction, maintenance and operation of high-quality physical and social infrastructure, such as parking areas, public transport facilities, green spaces, healthcare, education and cultural establishments, the Ministry of Finance adopted the **Public-Private Partnership Act**, which came into force in 2013[76]. The Act also seeks to ensure improved transparency and cost-savings, through a better allocation of the risks among the partners. Thus, the private party is expected to bear the risks related to the construction and the availability of the service, whereas the public partner is responsible for risks related to the demand of the service.

Insurance and liability related regulations

Professional liability insurance is compulsory in Bulgaria for activities related to design and construction, as stipulated in Article 171 of the **Territorial Development Act of 2001**, and must be taken out by all parties involved in the construction process (investors, designers, contractors, construction supervisors, consultants and suppliers of equipment)[77]. The compulsory insurance covers claim for property damage and for personal injuries and is valid for a period of one year, requiring to be renewed throughout the duration of the activity. However, voluntary insurance, such as **'Insurance of construction and assembly works'** can also be issued, as specified in Article 173 of the Act, with insurance periods which can exceed one year[78].

The duration of liability pertaining to the execution of works and repair of defects is defined in **Ordinance N° 2 of 31.07.2003** of the Minister of Regional Development and Public Administration. This depends on the type of work, ranging from 5 years for interventions such as internal installations, insulation and waterproofing, to 10 years for structural construction works[79].

Building regulations

The **Territorial Development Act** is a key legislative element in Bulgarian construction law. Among others it details spatial planning rules, project design and authorisation procedures, quality control and supervision of the works, the requirements to be met by the works and notifications that need to be provided to the relevant authorities throughout the building process[80]. The National Construction Supervision Directorate (NCSD) within the Ministry of Regional Development ensures compliance with the Act and controls the design and construction, including the use of high quality building materials[81].

Moreover, the Act requires that the **construction contract** is concluded in writing, since it is the basis of the relationship between the parties involved in the construction process. The contract is set out in Articles 258-269 of the Bulgarian Obligations and Contracts Art[82]. Finally, the **Bulgarian Chamber of Builders Act** from 2006 are regulates the requirements for individuals and legal entities that have the right to perform construction works[83]. Specifically, national and international firms need to be registered in the **Central Professional Register of Builders (CPRB)** in order to carry out construction works[84].

> According to the Bulgarian Construction Chamber, the country needs a whole new legal framework. There are proposed three legislative initiatives, which would replace the existing Special Development Act and would consequently lead to the simplification of the regulatory environment. All other palliative measures would only lead to new regulations. Bulgaria is aiming at a comprehensive reform.

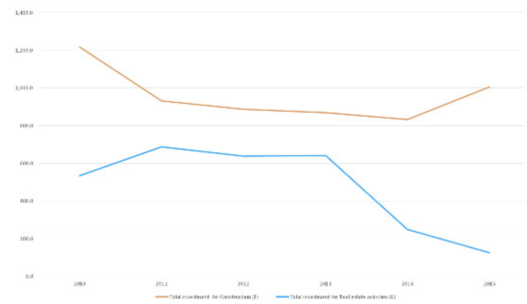
7

Current Status & National Strategy to meet Construction 2020 Objectives

TO 1 - Investment conditions and volumes

Total **investment by the broad construction sector**[85] has been declining since 2010 (Figure 10). Namely, investment by the construction sub-sector dropped by 17.5% from 2010 to 2015, from EUR 1,219.3 million to EUR 1,006.4 million. Investment by real estate also experienced a similar declining trend, with the levels of investment down by 23.5% in 2015 (EUR 125.7 million) compared to 2010 (EUR 535.1 million). Investment in intangible assets for both construction and real estate activities were negligible.

Figure 10: Investment by the Bulgarian broad construction industry between 2010-2015 (EUR m)



Source: Eurostat, 2017.

Total **investment in construction**[86] fell by 25.1% between 2010 and 2016 (Figure 11). In particular, investment in dwellings declined by 50.8% over the same period, in line with the drop in residential construction. In comparison, investment in non-residential and civil engineering fared slightly better, dropping by 18.9% over 2010-2016. In 2015, investment in the construction sector amounted to EUR 4.6 billion, of which EUR 642 million were invested in dwellings and EUR 4 billion in non-residential and civil engineering[87].

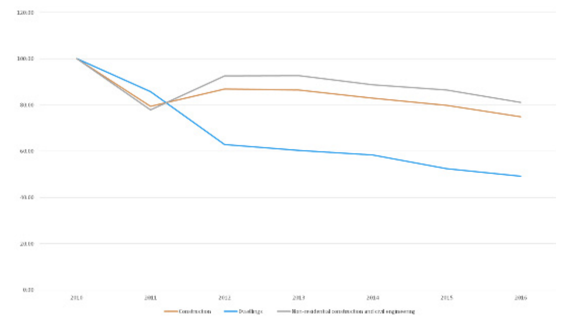
25.1%

Total investment in the construction sector 2010-2016

50.8%

Investment in dwellings 2010-2016

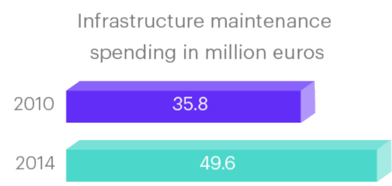
Figure 11: Investment in the Bulgarian broad construction sector between 2010-2016 (2010=100)



Source: Eurostat, 2017.

The share of total **inland infrastructure investment** in the GDP has decreased from 1.1% in 2010 to 0.7% in 2014. In fact, rail and road infrastructure have seen sharp decreases in investment, particularly from 2010 to 2014, where investment dropped by 50% and 10.2%, respectively. In 2014, investment amounted to EUR 64.9 million for rail and EUR 252.6 million for road infrastructure. Nevertheless, the Bulgarian Transport Ministry announced in 2017 that Bulgaria would invest EUR 2.25 billion in transport infrastructure by 2020 which will be mostly devoted to improving the airport and port infrastructure as well as finalising railway connection, which are funded under EU's Operational Programmes (OP)[88].

In terms of **infrastructure maintenance**, spending has increased by 38.6% on rail infrastructure, from EUR 35.8 million in 2010 to EUR 49.6 million in 2014, while there was a slight drop of 7.2% on road infrastructure, from EUR 99.7 million in 2010 to EUR 92.5 million in 2014. Bulgaria's investment in construction of new transport infrastructure reflects the fact that it needs to expand its motorway network, characterised by low density (5.5 km/km2), and offset its poor safety record[89].



Household renovation spending has seen an increasing trend since 2010. It grew from EUR 226 million in 2010 to EUR 315 million in 2015 (+39.4%). Moreover, it accounted for 1.2% of household disposable income, slightly higher than the 1.0% registered in 2010 and well above the EU-28 average of 0.8%.

> Nevertheless, the launch of the Strategy for the development of road infrastructure over the period 2016-2022 further underscores the role of transport investment. Bulgaria aims to create a sustainable and safe road network, which will be integrated to the EU Trans-European transport network (TEN-T)[90]. Specifically, Bulgaria is part of two TEN-T transport axes, namely the Orient/East Med Corridor and the Rhine-Danube Corridor. In terms of budget, the strategy foresees three scenarios for the period 2016-2022: 'sustainable development', with a budget of BGN 19.49 billion (EUR 9.98 billion); 'status quo maintenance' with a budget of BGN 12.56 billion (EUR 6.43 billion); and 'fiscal constraint scenario', budgeted at BGN 9.19 billion (EUR 4.7 billion)[91].

Investments in rail and road infrastructure are particularly supported by EU funds. Notably, by the end of 2016, Bulgaria had signed agreements for EUR 294 million under the **Connecting Europe Facility**[92]. Major infrastructure projects to be completed by 2022 include the renovation and modernisation of 220 km of railway lines, 60 km of new highways and 12 metro lines. Similarly, two projects are expected to start in early 2018: the 126-km long Vidin-Vratsa-Montana road and the conceptual preparation plan for the Rousse-Veliko Tarnovo motorway[93]. Moreover, the **European Structural Investment Funds (ESIF)** will provide Bulgaria with a total of EUR 9.9 billion for 2014-2020[94]. The two largest allocations are EUR 2.2 billion for Environment Protection and Resource Efficiency, and EUR 1.4 billion for Network Infrastructures in Transport and Energy, highlighting the country's priority investment areas[95].

On the other hand, despite the investments made in the water sector in 2016, water supply and sewerage infrastructure in five out of six regions experiences extremely poor performance. Bulgaria lacks investments in projects for water and sewage sector especially in the less populated areas (between 2,000 and 10,000 people) and would require more than BGN 11.7 billion (EUR 5.98 billion) of investments in this sector[96].

In addition, the EIB is also an important source of funding for infrastructure investment, as EUR 350 million of its total lending to Bulgaria (EUR 1.33 billion) is devoted to transport and telecommunication[97]. Furthermore, the EIB is providing a EUR 500 million loan to co-finance projects supported by EU Funds in the areas of transport (also urban transport) and environment[98]. Moreover, in 2016 Bulgaria received **EUR 467 million** from the EIB that primary contributes to projects in infrastructure, transport, energy, environment, and manufacturing. Bulgaria expects to receive more funds from the EIB alongside the government's rehabilitation programme in 2017[99].

Finally, EU funds are also utilised to finance research and innovation infrastructure, aiming to enhance the competitiveness of the Bulgarian economy. For instance, the construction of a technology park, the **Sofia Tech Park**, was financed with EUR 36 million from the 2007-2013 programming period through the Regional Development Fund[100]. It was finally completed in December 2015, mainly focusing on information and communication technologies, life sciences and green energy. The Sofia Tech park is the first of its kind in Bulgaria and the largest in the Balkan region, aiming to boost the competitiveness of science and entrepreneurship in Bulgaria[101]. In 2017, Microsoft already set up there its innovation centre for accessing modern technologies and solutions in the Bulgarian market[102].

> Moreover, in 2016 Bulgaria received EUR 467 million from the EIB that primary contributes to projects in infrastructure, transport, energy, environment, and manufacturing. Bulgaria expects to receive more funds from the EIB alongside the government's rehabilitation programme in 2017.

TO 2 – Skills

Bulgaria is among the lowest in the EU in terms of investment in education, which accounts for 4.1% of GDP (below the EU average of 4.9%) and for only 9.7% of total general government expenditure. Educational expenditure is expected to decrease further to 3.2% of GDP in 2019 and to 8.7 % of total public spending. Controversially, the government has introduced changes to the funding at all educational levels and announced that spending on education will be a priority in the 2017 budget.

In Bulgaria, enrolment in **vocational education and training (VET)** system is above the EU average (53.7% compared to an EU average of 48.9 % in 2014), with over one third of the workforce owning a vocational degree[103]. Despite this, a number of challenges are linked to the vocational education system, such as lack of qualified teachers, limited practical application of trainings, as well as lack of cooperation with industry[104]. Consequently, the government launched a reform of the VET system aimed at addressing some of these issues, including supporting the conditions for **dual training**, in its **Strategy for the development of vocational education and training for 2015-2020**[105].

> To modernise the VET system, the government launched a Strategy for the Development of Higher Education in the Republic of Bulgaria for the period 2014-2020.

In addition to its efforts to modernise the VET system, government also launched a **Strategy for the Development of Higher Education in the Republic of Bulgaria for the period 2014-2020**, given the country's shortage of high-skilled professionals, such as engineers (see Skills shortage)[106]. The Strategy foresees various actions to make higher education more relevant to market needs, improve education infrastructure and update the requirements for regulated professions. Furthermore, Bulgaria presents the second lowest rate of adult participation in lifelong learning in the EU, namely 2.0% in 2015, compared to the EU average of 10.7%[107]. However, the Bulgarian government introduced the **Lifelong Learning Strategy of 2014-2020**, which aims to increase the adult participation rate to 5% by 2020 and to involve disadvantaged groups more closely[108].

> In terms of specific programmes dedicated to enhancing skills in the construction sector, the Bulgarian Construction Chamber is active coordinating a number of EU-sponsored programmes such as 'Train-to-NZEB: The Building Knowledge Hubs' and 'BUILD UP Skills EnerPro', both aimed at increasing the skill level related to energy efficiency of buildings. Moreover, the programme 'HIGH HEELS: Building opportunities for women in construction sector' focuses on soft skills training of women[109].

Furthermore, the Bulgarian Chamber of Commerce (BCC) and Industry and the Bulgarian Entrepreneurial Chamber in Building signed the so-called **Memorandum for Encouragement of Construction Entrepreneurship** in 2011. The goal of this initiative is to raise the prestige of the 'construction entrepreneur' by introducing a voluntary register to qualify as such[110]. In addition, the Ministry of Education and Science (MES) together with BCC, organise the annual **The Best Young Builder** competition, which seeks to enable students from VET schools to demonstrate theoretical and practical knowledge for building activities[111]. Similarly, the project **I CAN BUILD** aims to familiarise young professionals with professions in the construction sector and ensure a reasoned choice for their future career development[112].

> Finally, in 2017, the Bulgarian government introduced 100% state-funded projects called "Flexible Opportunities for Employment and Vocational Training in Enterprises with Variable Activity Intensity", under the Human Resources Development Operational Programme. With a total budged of BGN 30 million (EUR 15.3 million), the primary focus is on employers operating in manufacturing, construction and tourism sectors with the aim to help employers to raise the skills of inactive and unemployed people and attract them to join their sectors in order to tackle labour shortages[113].

TO 3 - Resource efficiency / Sustainable construction

The 2014-2020 **National Energy Efficiency Action Plan for Bulgaria (NEEAPB)** sets out the Bulgarian energy policy actions, in line with the requirements of the Energy Efficiency Directive (2012/27/EU) and the Directive 2010/31/EU on the energy performance of buildings[114]. The NEEAPB details a series of programmes implemented to mobilise investments to improve the energy performance of buildings.

An instance is the **National Green Investment Scheme** launched in 2010. Through the establishment of the National Trust EcoFund, Assigned Amount Units (AAUs) were sold under the Emission Trading Scheme. The proceeds of the transactions were used to fund projects aiming to improve energy efficiency and decrease the final energy consumption of buildings[115]. Between 2011 and 2015, a total of BGN 32 million (EUR 16.4 million) were mobilised for such purpose, of which BGN 27.2 million (EUR 13.9 million) consisting of subsidies from the sale of AAUs. The funds have supported energy efficiency interventions on 90 public buildings in 39 Bulgarian municipalities, including kindergartens, schools, health facilities, administrative buildings and cultural/social establishments. As a result, it was achieved a reduction of greenhouse gas emissions of over 484,000 tonnes of CO2 equivalent[116].

Another instance is the Residential Energy Efficiency Credit Line (REECL), a facility introduced by the European Commission, the European Bank for Reconstruction and Development (EBRD), and the Bulgarian Energy Efficiency Agency to reduce energy consumption and bills in Bulgarian households. With a budget of EUR 50 million, the REECL allows adhering banks to provide loans to households or associations of homeowners for energy efficiency measures such as double-glazing, thermal insulation, energy efficient installations (e.g. solar water heaters, biomass-fuelled boilers and heat pump systems)[117]. Similarly, in 2016 EBRD announced the provision of a loan and technical assistance of EUR 5 million to the United Bulgarian Bank, aiming to improve energy efficiency in residential buildings[118].

> The Residential Energy Efficiency Credit Line (REECL), is a facility introduced by the European Commission, the European Bank for Reconstruction and Development (EBRD), and the Bulgarian Energy Efficiency Agency to reduce energy consumption and bills in Bulgarian households.

The National Programme for Energy Efficiency of Residential Buildings, launched in early 2015, aims to support the renovation of private multi-family apartment blocks through a budget of BGN 1 billion (EUR 511.3 million)[119]. The Ministry of Finance released the budget forecast for the period 2017-2019, with one of the main priorities being to implement the National Programme with the aim to provide better living conditions and environment to citizens and heating comfort through energy efficiency mea-

In addition, the resources, provided by international financial institutions such as the European Investment Bank (EIB)[121], the Council of Europe Development Bank (CEB)[1220]and the World Bank[123], are allocated through the Bulgarian Development Bank (BDB) to homeowner associations in residential prefabricated panel buildings. Support is provided in the form of grants of up to 100% of the eligible expenses. The grants include structural reinforcements of the building, energy audits, efficiency measures such as thermal insulation of external walls and roofs, replacement of windows and heating, plumbing and ventilation. The programme aims to renovate over 70,000 prefabricated building blocks across the country, benefiting more than 1 million families.

Support to the implementation of energy efficiency measures in the building stock, including residential buildings, administrative buildings and student residences, will also be provided under the **Operational Programme 'Regional Development' 2014-2020,** with an allocation of BGN 661 million (EUR 338.5 million)[124].

TO 4 - Single Market

Bulgaria scores moderately well in relation to the metrics of the EU Single Market Scoreboard, with its performance in terms of Infringements and Internal Market Information System being generally in line with the EU average. However, its performance in Public Procurement is poor, particularly with regard to the 'one bidder' indicator[125], no calls for bids[126], cooperative procurement[127] and missing calls for bids[128,129].

This situation is well reflected in the construction sector, particularly in the public procurement market for construction works, which accounted for 31% of the sector's total turnover in 2013[130]. The public administration thus constitutes the largest single client of the sector, entailing a higher risk of corruption and favouritism[131]. Indeed, political patronage is still an influential factor in the award process of large infrastructural projects, such as the development of major road and energy infrastructure. This is particularly the case when national funds are involved, with the practice of single-bidding being more prevalent in these instances than in contracts involving EU funds, something associated with a higher level of competition[132]. Moreover, the value of the contracts secured by the 40 largest Bulgarian construction companies over the 2010-2015 period accounts for 62% of the total value of all construction public procurement. Specifically, the top seven contractors received more than two-thirds of the construction contracts awarded to the top 40 companies[133].

An important barrier to the access to the Bulgarian construction market by foreign service providers lies in the country's regulatory framework for construction services, which is one of most restrictive in the EU[135]. Horizontal authorisation schemes in Bulgaria include company registration schemes that authorise companies (contractors and developers) to enter the national construction services market. These schemes impose a wide range of requirements (financial, technical, professional, insurance), creating a considerable administrative burden. The authorisations and licences of foreign service providers are therefore not recognised in Bulgaria, requiring them to undergo additional practices to be able to operate[136]. Thus, this regulatory framework affects market participation and goes against the Services Directive (2006/123/EC).

With respect to the implementation of **Eurocodes**, Bulgaria published all 58 Parts as National Standards. Moreover, National Annexes are published to all Parts, with the exception of EN 1997-2[137]. In Bulgaria, Eurocodes are compulsory for the design of new construction works awarded under the Public Procurement Act, as well as for new works classified as first and second category[138] according to the Territorial Development Act. The first category includes large infrastructure projects of national relevance such as highways and similar, while the second category defines smaller projects of national or regional importance[139]. For new construction works under the third category (municipal roads), fourth category (private roads and other buildings) and fifth category (low-height residential and multi-purpose buildings)[140], either **Eurocodes** or national regulations can be used in the design

A new Law on Public Procurement came into force in April 2016, aiming to increase the transparency and predictability of the contract award process, simplify administrative procedures and reduce the regulatory burden on SMEs. Moreover, a national centralised single platform model for e-procurement is currently being introduced, and should be fully implemented by 2020[134].

The value of the contracts secured by the 40 largest Bulgarian construction companies over the 2010-2015 period accounts for 62% of the total value of all construction public procurement.

TO 5 - International competitiveness

Bulgaria ranks 49th out of 137 economies in the 2017-2018 **Global Competitiveness Index**[141]. It performs below the EU average in terms of internationalisation of its SMEs, with the time and cost required to export being above the EU average. However, the cost of exporting for documentary compliance was estimated at USD 52 (EUR 44.17) in 2016, highly above the EU average of USD 16.43 (EUR 13.96) and w 2 hours, which is slightly longer than the EU average of 1.39[142].

> Bulgaria performs below the EU average in terms of internationalisation of its SMEs, with the time and cost required to export being above the EU average.

The **Bulgarian SME Promotion Agency (BSMEPA)**, a government institution aiming to provide information and consulting services to SMEs, implements measures to support their competitiveness and internationalisation. For instance, under the EU-funded project 'Promoting the internationalisation of Bulgarian companies', the BSMEPA supports SME participation in international fairs and exhibitions abroad, though a budget of BGN 18 million (EUR 9.2 million)[143]. Instances include international trade fairs in the fields of civil engineering, building technologies, equipment and materials in Vladivostok (Russia)[144], Algeria[145], Montenegro and Morocco[146]. BSMEPA also cooperates with the **Bulgarian Construction Chamber (BCC)** in the organisation of construction trade missions, e.g. to Morocco.

In 2017, BSMEPA organised an exhibition of 24 Bulgarian companies presenting their services and products in the framework of **Webit Festival Europe** which was held in Sofia 2017. The main aim was to create conditions for sustainable development and successful integration of Bulgarian enterprises. Similarly, BSMEPA arranged a series of free seminars focused on boosting online trade, marketing and e-commerce opportunities for Bulgarian SMEs in both domestic and international markets[147]. Similarly, the International Forum "Modern Business in the Digital Age" is developing a digital platform of the Bulgarian economy, which will facilitate communication between the business and global market and in this way will increase growth in exports by Bulgarian companies[148]. The improvement is essential for Bulgaria because the country is among the EU's lowest countries for digital public services and the integration of digital technology by businesses, facing challenges of the slow uptake of digital technology and low digital skills[149].

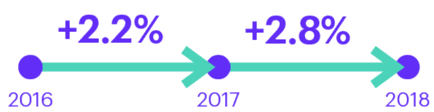
> The BSMEPA also operates the online National Export Portal, which helps entrepreneurs acquire skills to carry out foreign trade activities by gathering export-related information, publishing tender opportunities, information about foreign markets, and export strategies for various manufacturing sectors (for instance, manufacturers of wood and products of wood, and of metal products, relevant to the construction sector)[150].

International (extra-EU) cooperation in the construction sector is also fostered by the Ministry of Regional Development and Public Administration, which signed **agreements in the field of construction and architecture** with countries such as Turkmenistan[151] and Russia[152].

8 Outlook

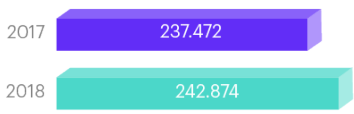
The Bulgarian economy has been on an upward trend since 2010, with the robust GDP growth rate of 3.4% in 2016 driven mainly by buoyant net exports and private consumption[153]. The country's economic outlook will continue growing, with GDP forecast to increase by 2.9% in 2017 and 2.8% in 2018, reaching BGN 88.3 billion (EUR 45.2 billion). The outlook for the construction sector mirrors the positive trajectory of the economy, with predicted growth at 2.2% in 2017, 3.4% in 2018 and 4.3% in 2019, with an average annual growth of 2.8% over the period of 2017-2026.

Predicted GDP growth



In parallel, the number of workers employed in the broad construction sector is projected to continue its increasing trend, reaching 237,472 in 2017 (+1.4% compared to 2015) and 242,874 in 2018. This represents a 3.7% increase with respect to 2015 levels, but is still 12% lower than 2010. Similarly, the number of enterprises in the broad construction sector is forecast to grow to 53,360 in 2017 and to 55,011 in 2018, an increase of 5.2% and 8.5% compared to the 2010 levels, respectively. The value added of the broad construction sector is predicted to increase by 9.3% in 2017 and 10.8% in 2018 compared to 2014, amounting to EUR 2,638.9 million in 2017 and 2,674.4 million in 2018. Turnover is also forecast to grow by 1.4% in 2017 (compared to 2015), reaching EUR 12,963, and by 4.2% in 2018 (relative to 2015), reaching EUR 13,314.5 million.

Number of workers in the broad construction sector forecast



The Bulgarian construction market is expected to be driven primarily by the civil engineering segment in the coming years, with a total EUR 5.6 billion investment allocated by 2020[154]. Growth in the civil engineering market was largelw spurred by the completion of EU projects in road and water infrastructure[155], and will continue to be driven by transport infrastructure, particularly the development of the road and railway network as supported by EU funds[156]. Upcoming road projects such as the Struma motorway connecting Sofia to the Greek border and the motorway between Varna and Burgas will contribute to the substantial growth of the sub-sector in the coming years, which is therefore forecast to grow by 3.4% in 2017, accounting for 59.4% of total construction market, and at an average of 4.39% until 2020[157]. The positive forecasts for the civil engineering segment as of 2018 are due to the considerable delays accumulated by large projects in the water, sewerage and railway segments, which were planned to start already in 2016 but will instead begin in 2018[158].

> The outlook for the residential market is weak and expected to worsen from 2022 onwards. The segment was hard-hit by the crisis, with investment in dwellings collapsing by 68.7% compared to peak of 2008[159]. Demand for housing was negatively affected due to tightening credit conditions and thus the high levels of indebtedness will hinder future investment[160].

The **non-residential segment** will on the one hand benefit from the increase in tourism, which will remain a considerable driver of growth for the segment. However, the limited demand and the lack of new developments in the pipeline will prove to be a constraint for the non-residential building industry, also affecting the residential construction segment, although non-residential construction will retain a moderate but positive growth rate of 0.5% in 2017[161]. Industrial construction, including construction related to agribusiness, healthcare and education, is considered an important trend going forward. Overall investors expect favourable developments, although the buoyant pre-crisis growth rates of 17-18% per year will not be replicated in the near future[162] but stable growth can be expected in the period of up to 2020[163].

> Finally, Bulgaria's high dependence on external (mostly EU) financing for infrastructure as well as the public sector's limited fiscal resources are potential risk factors to the industry[165]. Therefore, the need to maximise the absorption of EU co-financing is a major priority for the construction sector.

Despite the overall positive developments in the industry, there are some limitations to the construction outlook related to the negative trends experienced so far, such as the unstable business and investment environment, high levels of indebtedness (business-to-bank) and B2B, liquidity shortages, a large budget deficit as well as outstanding debt owed to construction companies[164].

> There are some limitations to the construction outlook such as the unstable business and investment environment, high levels of indebtedness (business-to-bank) and B2B, liquidity shortages, a large budget deficit as well as outstanding debt owed to construction companies.

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