

# Technical Assistance – Market Studies of Pipeline and Stakeholders

Lithuania

October 2024

## Disclaimer

This project benefits from support from the European Union under the InvestEU Advisory Hub. Its production was commissioned by the Council of Europe Development Bank (CEB) from Price Waterhouse Coopers (PwC).

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# A comprehensive analysis of social infrastructure investment in nine EU countries is a key objective of the project

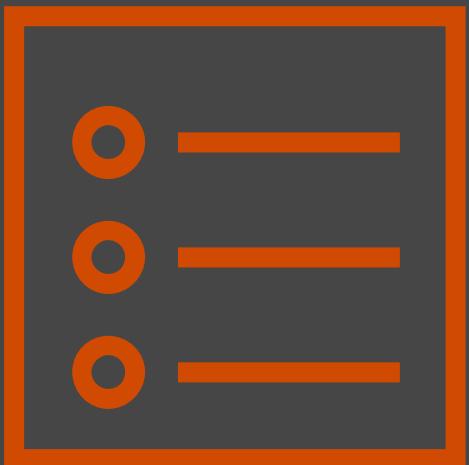
## Introduction – Project in focus

The project is initiated by the **Council of Europe Development Bank** who has hired **PricewaterhouseCoopers**, through the support of InvestEU Advisory hub, to identify market gaps and potential investment opportunities, with stakeholder engagement playing a crucial role in enriching the study's findings.

 Project overview and goals	 Methodology and phased approach	 Stakeholder engagement
<ul style="list-style-type: none"><li>The project, led by the <b>Council of Europe Development Bank (CEB)</b> and executed by <b>PricewaterhouseCoopers (PwC)</b>, is financed by the <b>European Commission under the InvestEU Advisory Hub</b>. This signifies a strong commitment from the EU to enhance social infrastructure.</li><li>The aim is to <b>map the current state of social infrastructure investments</b> in nine EU countries, notably including France. This involves a comprehensive assessment of market conditions, funding availability, and potential investment opportunities.</li><li><b>The study aligns with InvestEU's broader goals to stimulate investment across the EU</b>, specifically targeting the development and enhancement of social infrastructure.</li></ul>	<ol style="list-style-type: none"><li><b>Phase One - Desk Research:</b> In the initial phase, PwC conducts extensive desk research to collate and analyse existing market data and studies. This phase establishes a foundational understanding of the investment landscape in the targeted countries and identifies key stakeholders.</li><li><b>Phase Two - Direct Market Interviews:</b> Following the desk research, the second phase involves conducting interviews to gather firsthand market insights from identified stakeholders. This step is crucial to enrich the analysis with real-world perspectives and data.</li><li><b>Comprehensive Evaluation:</b> The combination of desk research and direct interviews ensures a thorough and multi-dimensional analysis, providing a detailed picture of the current market and identifying key areas for potential investment.</li></ol>	<ul style="list-style-type: none"><li><b>The CEB and PwC are actively engaging with principal stakeholders to gather insights and respond to specific inquiries.</b> This collaborative approach is essential for validating the study's initial findings and enriching the overall analysis with diverse perspectives.</li><li>Through this engagement, the <b>CEB seeks to build a network of informed and interested parties</b>, fostering a collaborative environment for future projects and investments.</li><li>Post-study, stakeholders will have opportunities to remain involved in ongoing dialogues and initiatives led by the CEB. This continued involvement is aimed at translating the study's findings into tangible investment actions and partnerships.</li></ul>

### Limitations

The main project limitations consisted of reduced data availability, which was mitigated through involvement of local experts who provided estimates, and in some cases, additional data access. As well as, access to stakeholders for the phase 2 interviews, which resulted in some segments being covered by only one interview.



# Introduction

# Lithuania's economy was growing with a stable rate, however, projected to be affected by the global economic cooldown

## Introduction – Overview of Lithuania's Economy

### Lithuania's economic forecast

Lithuania's GDP grew from 2018 to 2022, with a CAGR of 10,31%, which is significantly more than the EU-27's average GDP growth of 4,01% for that period. In the absolute terms that means that Lithuania added around EUR 21,88 bn to its economy in the five-year period. However, projections show that in 2023 the global economic cooldown will also be negatively reflected on Lithuania's economic growth.

Central bank of Lithuania projects that in 2023 the annual percentage change of the GDP, measured at constant prices, will stand at -0,6%. Similar projections were made also by the IMF, which projects change in the real GDP in 2023 at -0,2%. However, the European Commission projects a positive GDP y-o-y change of 0,5%, mostly due to the increase in consumer spending, and the EU-funded projects.

Lithuania	2018	2019	2020	2021	2022	CAGR
Population (mil.):	2,81	2,79	2,79	2,80	2,81	-0,03%
GDP bn (current EUR)	45,52	48,96	49,87	56,48	67,40	10,31%
GDP growth	4,0	4,7	0,0	6,3	2,4	N/a
GDP per capita (EUR)	13.400	14.060	14.060	14.870	15.100	3,03%
Unemployment	6,2	6,3	8,5	7,1	6,0	N/a
HICP (annual % change)	2,5	2,2	1,1	4,6	18,9	N/a

Sources: Eurostat, European Commission, OECD, IMF, Central Bank of Lithuania, Statistics Lithuania, PwC analysis

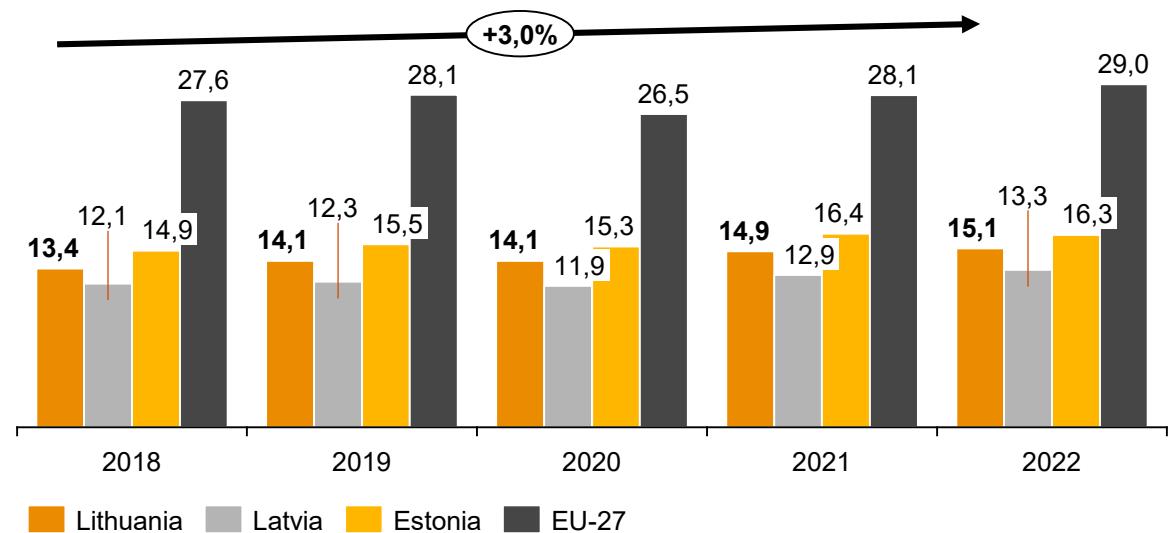
PwC

### GDP per capita and inflation

In the past five years, Lithuania's economic growth has been steadily rising with ~3% on a yearly basis, and it has shown a resilience amid the COVID-19 crisis. In 2020, when the COVID-19 pandemic happened, Lithuania's GDP per capita stayed at approximately the same level as the previous year, while a negative change can be observed in the basket of countries and in the EU-27 average. However, a three-year-long high inflation is expected to have a greater impact on Lithuania's economy and its future outlook.

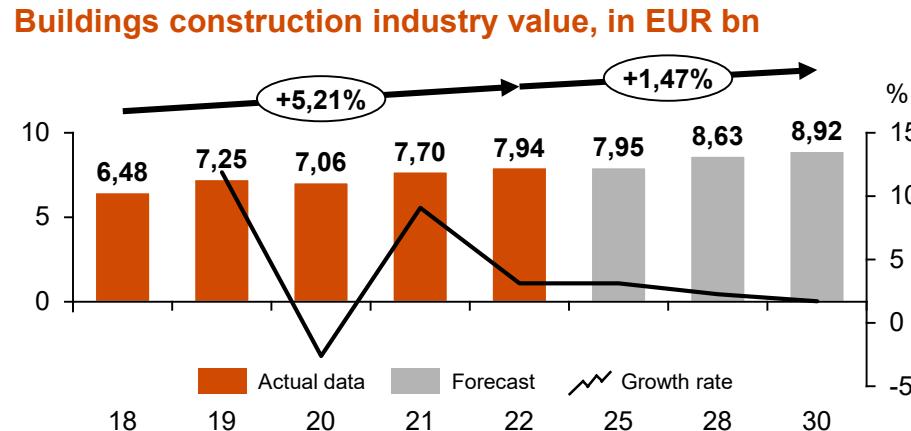
In 2022, due to an increase in the energy prices and disruptions in the value chains, a high inflation of 18,9% was observed. Inflation is projected to decrease to 9,2% in 2023 and normalise at 2,2% in 2024.

### GDP per capita of Lithuania and a basket of countries (EUR ths.) 2018–2022



# In five years, construction of buildings added ~19% to its gross output, however, the growth is projected to slowdown

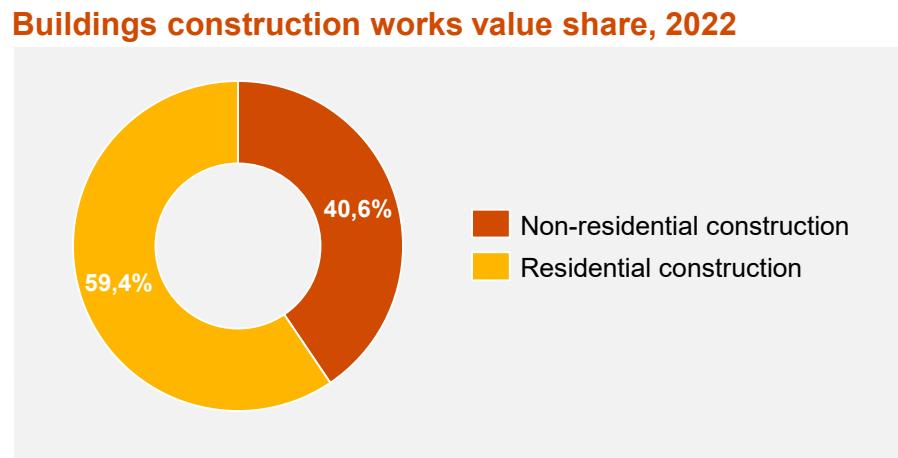
## Introduction – Overview of the Construction Sector (excluding infrastructure)



Since 2018, in the 5-year period, Lithuanian construction industry's gross output grew with a CAGR of ~5,21%, adding EUR ~1,48 bn in absolute terms. In 2020, the sector was affected by the COVID-19 crisis and consequent disruptions, when it declined in its gross output for about EUR ~190 M. However, in the following year the sector rebounded, reaching EUR ~7,7 bn gross output.

Stable growth was mostly due to the country's overall economic growth, growing wages, and the availability of credit. Moreover, investments from residents and businesses are additionally complemented by the governmental incentives, and EU-backed funding. Furthermore, a share of the growth is attributed to the renovations of the dwellings stock. The Lithuanian government set the objective to promote the renovation of half of the public and residential building stock by 2030, while also assuming that deep renovation of 500 per year will persist.

According to the projections by the Oxford Economics, in the near future the growth of the segment will stagnate, and then continue to slightly grow, with a lower rate. By 2030, buildings construction sector will growth with a CAGR of ~1,47%, reaching EUR ~8,92 bn in gross output. Therefore, in 8 years gross output of the sector is projected to increase for around EUR ~1 bn.



### Residential construction

The residential segment of the construction of buildings amounted for EUR 4,72 bn in 2022, which is equal to ~59,4% of the industry's value. In 2022, there were around 8,7k residential buildings build, and there were around 8,4k permits granted for the construction of new residential buildings.

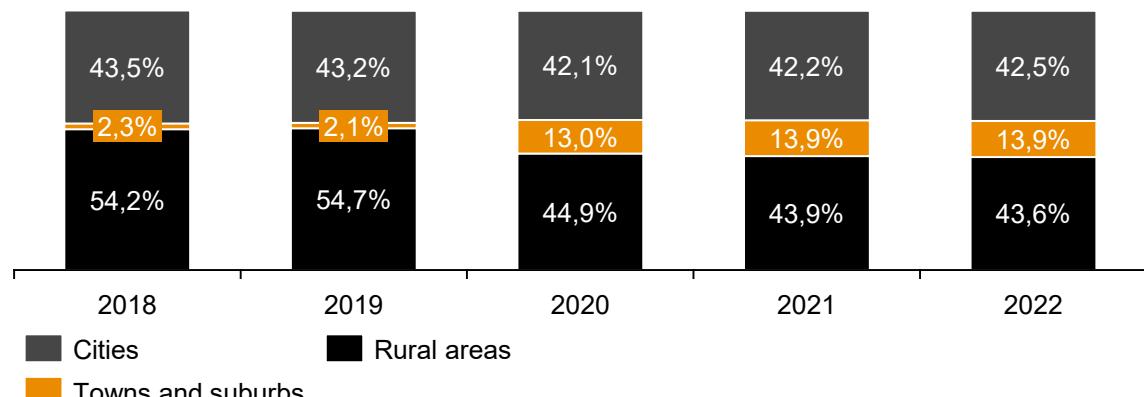
### Non-residential construction

The non-residential segment of the construction of buildings amounted for EUR 3,22 bn in 2022, which is equal to ~40,6% of the industry's value. In 2022, there were 833 non-residential buildings build, and there were around 1k permits granted for the construction of new non-residential buildings.

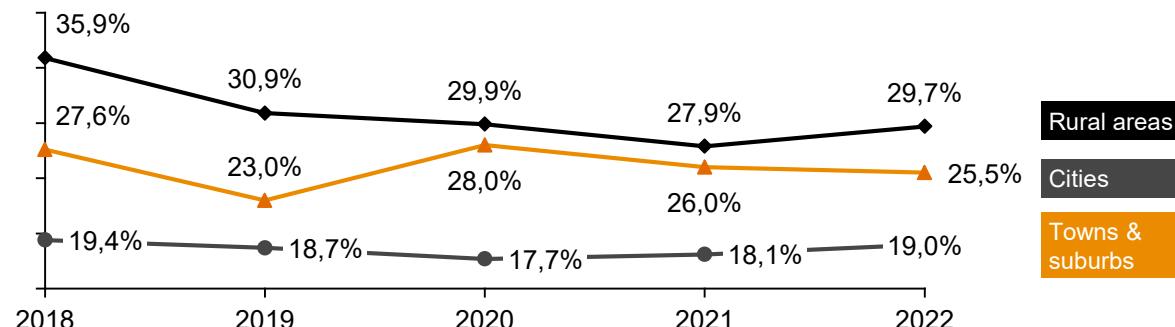
# Share of population living in rural areas has been decreasing, as well as the share of people at risk of poverty and exclusion

## Introduction – Overview of Lithuania's population

### Share of population, by degree of urbanisation, in %



### People at risk of poverty or social exclusion by degree of urbanisation, in %



Sources: Eurostat, Statistics Lithuania, PwC analysis

PwC

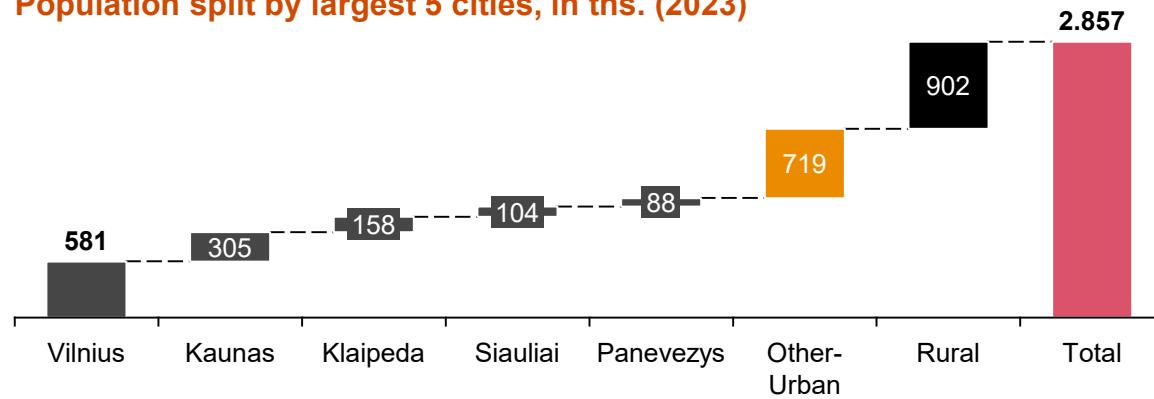
In 2023, population in Lithuania reached ~2,9M people, however, projections show that it will decline to ~2,7M people until 2030, and further to ~2,2M people until 2050.

Eurostat data shows that in the past 5 years the urbanisation segmentation of the population significantly changed. In 2018, the majority of the population (or around 54,2%) lived in rural areas, and ~43,5% of the population lived in cities, with the rest 2,3% of the population living in towns and suburbs. However, in 2022 the difference between the share of population living in rural areas and the share of people living in cities was around 1% in favour of rural areas, with the towns and suburbs segment significantly increasing to 13,9%, indicating people either moving to such areas, or reclassification of such areas.

National statistics show that in the beginning of the 2023 the combined population living in the urban areas of the five biggest cities in Lithuania amounted to around 1,2M people or about 43% of the total population of Lithuania. Almost half of those (~47%) lived in the capital city of Vilnius.

Share of people at risk of poverty and social exclusion was the largest among the rural population (~29,7%) and the lowest among the population living in cities (~19%).

### Population split by largest 5 cities, in ths. (2023)



# 2

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A photograph of a modern apartment building with a blue and orange facade, featuring multiple balconies with black railings. The building is set against a clear sky.

## Affordable social housing



# Social housing is a part of the municipal housing, however, in large part it is in need of large renovations

## Social and affordable housing

### Key conclusions – Phase 1

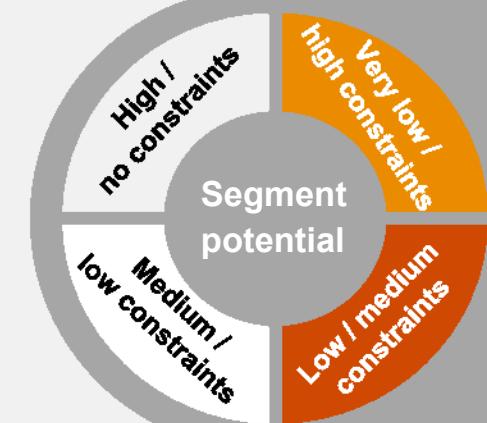
- Social housing is a part of the municipal housing stock, which is defined as a dwelling owned by a municipality either directly or through a municipal housing fund.
- The Ministry of Social Security and Labour is responsible for organisation and coordination of the housing support programmes, and allocation of the funding to the municipalities, while municipalities are responsible for provision of social housing to individuals and families.
- Overcrowding rate in Lithuania is significantly higher than the EU average (24,6% compared to 16,8%) and has been increasing since 2020.

### Key conclusions – Phase 2

- The demand for social housing is surpassing the supply, with municipalities also being incentivised to increase the demand by the regulation that states that no household should wait for such accommodation longer than 5 years.
- Development of social housing is the responsibility of the municipalities, who are also utilising EU instruments to fund various projects.
- Apart for the need for development of new social housing units, need for renovation of existing units exists.



### PwC Assessment



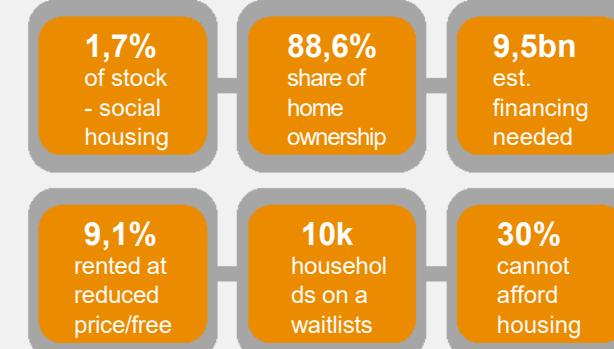
Social housing is a part of the municipal housing, however, it is regulated by the state, while the rest of the stock is autonomously managed by municipalities.



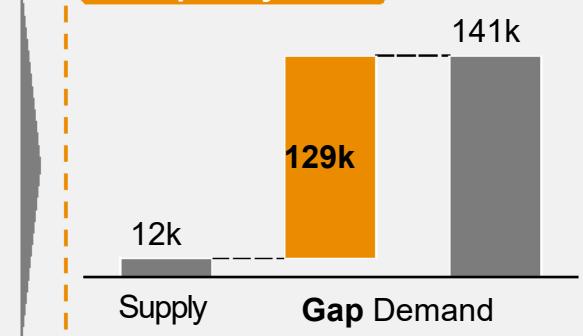
Lithuania has a small social housing stock which is in large part in need of large renovations.



### Key Segment Data



### Gap analysis



# Social housing in Lithuania has seen an increase in governmental investments, evident in an increased GDP share

## Social Housing – General Overview (1/2)

### Social Housing definition and oversight

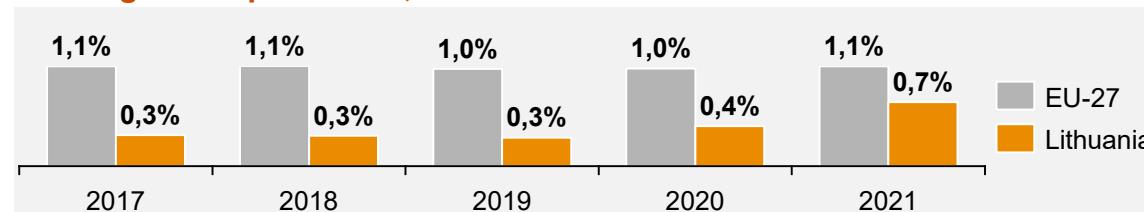
In Lithuania, social housing is defined within the Law of the Republic of Lithuania on „Support for the Acquisition or Rental of Housing“, as adopted on the 9<sup>th</sup> October 2014.

Social housing is a part of the municipal housing stock which is defined as a dwelling owned by a municipality, either directly or through a municipal housing fund. However, social housing does not include dormitories, hostels, officials' living quarters, residential premises of a medical or guardianship institution, or other municipal housing rented for purposes other than social housing.

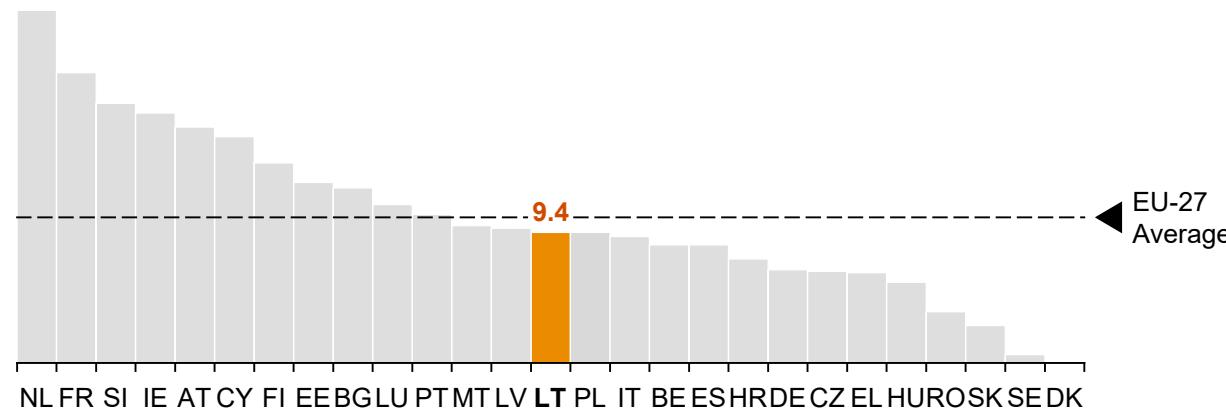
Persons that do not own housing in the territory of the Republic of Lithuania are eligible for social housing. Besides this, the decision to award social housing is also based on other criteria, such as evaluation of the households' income and value of other assets they might own.

After a period of stagnation, Lithuania shows increasing investments in housing and housing development. In the last three years, investments in those areas more than doubled, growing from 0,3% share of GDP in 2019 to ~0,7% share of GDP in 2021, significantly closing the gap to the EU-27 average.

### Government spending on social housing (housing development and housing social protection, in % of GDP)



### Tenants, rent with reduced prices or for free in Europe (2022, %)



### Responsibility for social housing

The main responsibility for coordination of governmental policies in regards to the state assistance for housing acquisition or rental falls to the Ministry of Social Security and Labour. Moreover, the Ministry is responsible for organisation and coordination of the housing support programmes, and allocation of the funding to the municipalities.

Municipalities are responsible for provision of social housing to individuals and families, where it is offered either from municipal stock, or it is rented from private providers. Furthermore, municipalities offer various other social services and tax benefits meant to ensure higher quality of living and easier access to accommodation.

# High ownership rate and increasing rents are defining housing market in Lithuania

## Social Housing – General Overview (2/2)

### Tenure Breakdown

Lithuania's share of home ownership is around 88,6%, which amounts for around 1,38M dwellings. For comparison, the EU-27 average for home ownership stands at around 69,1%. Moreover, only four countries (Romania, Slovakia, Croatia, and Hungary) have higher share of home ownership.

4/5 of owned homes are not burdened with a mortgage or loan, meaning, there are around 1,12M homes owned with no outstanding liabilities to the asset (or around 81,9% of owned homes), as opposed to 249k homes with mortgage or housing loan (or around 18,1% of total owned homes).

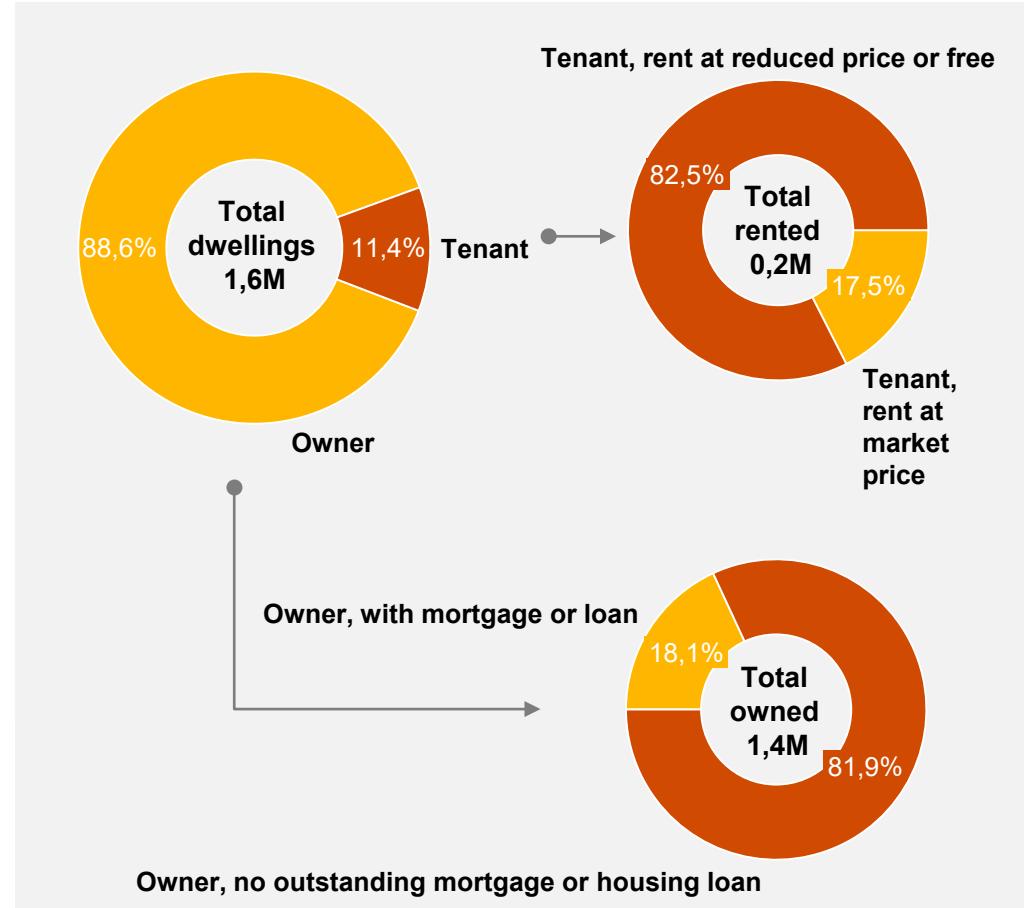
From the share of dwellings that are rented the vast majority or ~82,5% are being rented at reduced price or leased for free, leaving other ~17,5% tenants renting at market price. This means that about 31k tenants are renting at market price, and about 146k tenants at reduced price or for free.

In the past five years, homeownership has been steadily averaging at around 89%, reaching its highest value in 2019 of about 90,3%, at the time amounting for around 1,35M homeowners.

### Rental market

Rental market was in 2022 subjected to increased volatility. High inflation rate and increased pressure on demand, as a result of the Russian war in Ukraine, caused a decrease in available apartments in Vilnius by about 65% during March and April, which resulted in a total increase of ~30% in rents of apartments in Q2 and Q3 of 2022. For illustration, rents for a standard on-the-market two-room apartment were ranging from EUR 360 to EUR 520 at the end of 2022.

Moreover, according to HICP data obtained from Eurostat, annual average rate of change for actual rents paid by tenants in Lithuania in 2022 was 16,1%. This is a significant increase, considering that in the five-year period prior to that, the average yearly change was 3,64%. Furthermore, annual average index for actual rents paid by tenants, taking 2015 as a baseline, was more than 153. Meaning, that in 7 years actual rentals paid by tenants increased for more than a half.



Sources: Eurostat, Statistics Lithuania, Ober Haus, PwC analysis

# Total housing stock has been steadily increasing, mainly driven by investments by private sector

## Social Housing – Key Issues

### Growth of dwelling stock across all areas

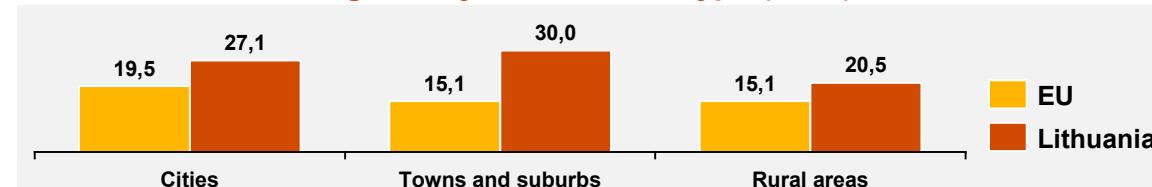
As of 2022, there are 1,56M dwellings in Lithuania, with the numbers steadily rising over the past years with CAGR of ~1,4% from 2018 onwards. 2/3 of the total dwellings stock is located in urban areas (or about 1M dwellings), with the remaining 1/3 of dwellings located in rural areas (or about 525k dwellings).

However, y-o-y growth of the total number of dwellings in rural areas, has been increasing with a faster rate, amounting to ~1,68%. Whereas in the urban areas the total number of dwellings increased for ~1,24%, in the same five-year period. The majority of new housing stock are small, either detached or duplex houses built by private investors.

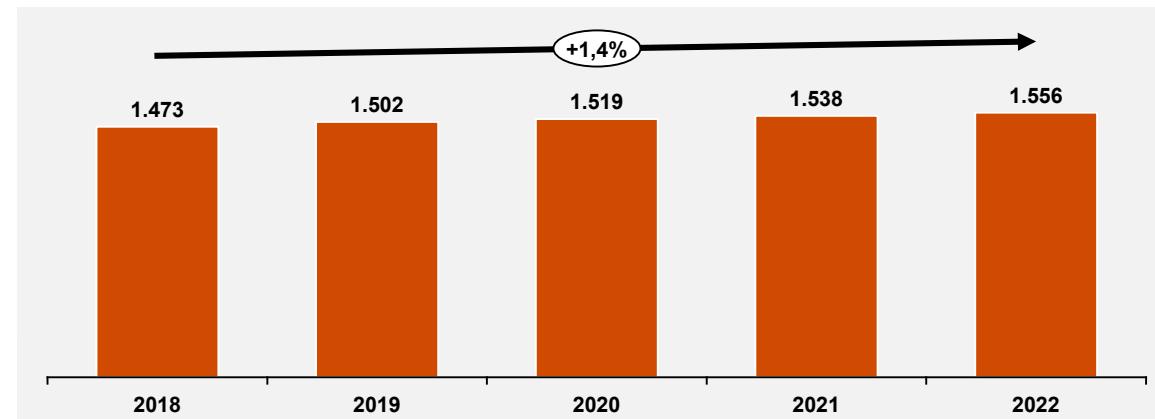
Considering the above, in Lithuania in 2022 there are ~550 dwellings per 1000 citizens, staying in line with the estimated EU average. However, the census for 2021 shows that there were around 15,6% unoccupied buildings out of the total dwellings stock, which amounts to around 243k dwellings. Moreover, the overcrowding rate in Lithuania is high, ranging from 30% in towns and suburbs to 20,5% in rural areas, and 27,1% in cities. For comparison, share in the EU stands at 15,1%, 15,1%, and 19,5%, respectively.

More than 2/3 of the total dwellings stock (or ~970k dwellings) was built in the period from 1946–1990, around 1/10 of dwellings (or ~147k dwellings) was built before that, with the rest built after that period. In 2018, ~73% of dwelling stock built before 1990 was already renovated.

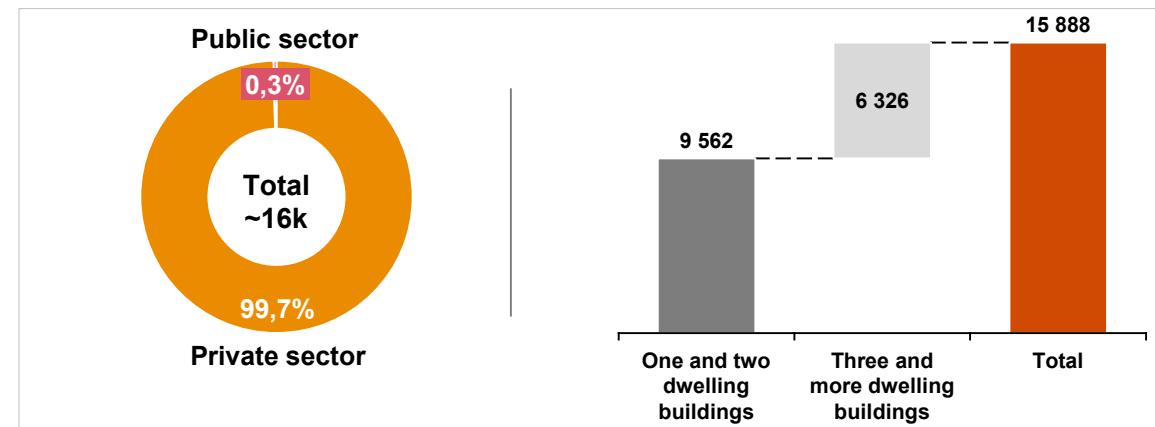
### Share of overcrowding rate by urbanization type (2022), in %



### Total housing stock (ths. units)



### Total new housing stock by investing entity (2022, dwellings)



# There is a high growth of housing loans in recent years, which was slowed due to the increase in interest rates

## Social Housing – Market Demand

### High ownership as the key characteristic

Population of Lithuania is strongly inclined towards home ownership as it has one of the highest homeownership rates in the EU. With share of homeownership of 88,6% that amounts to more than 1,38M homeowners that are in majority (~81,9%) owning their homes with no outstanding mortgages or housing loans.

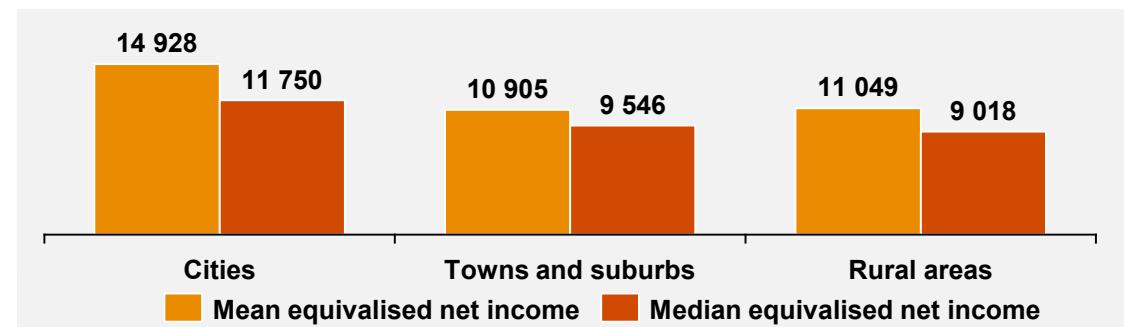
Growth of housing loans for households has reached its 15-year peak value in October 2022 when it stood at 12,64%. Since then, the housing market is showing signs of cooldown, with growth for housing loans for households reaching 9,8% in April of 2023. This corresponds with trends of increases in interest rates and pessimistic macroeconomic expectations. According to the ECB, as of the end of July, the cost of borrowing for households for house purchases stands at 5,71% per annum.

Calculation on the right considers the ability to purchase a home with mortgage loan for a first home, at a commercial bank (SEB), for a 50m<sup>2</sup> dwelling. It is assumed 40% of the household income is spent on repayment. The calculation for terms of the loan is done for a person aged 35, with a repayment period of 20 years, and 10% down-payment (commercial terms of the bank).

According to the national statistics office, the average price for a dwelling in a multi-dwelling building in 2022 in Lithuania was EUR 1.463 per m<sup>2</sup>, therefore a 50m<sup>2</sup> dwelling costs around EUR 73,2k. After a 15% down-payment, required by the bank's commercial terms, the loan amounts to EUR 62,2k, with 5,94% APR, resulting in a monthly instalment of EUR 446.

From the limited available official statistical data, on average rent for a 50m<sup>2</sup> dwelling was in 2022 estimated to be EUR 368 per month. However, discrepancies among regions are high, ranging from EUR 254 in Panevėžys to EUR 541 per month in Vilnius counties. Therefore, at set conditions, the bottom three deciles (amounting for ~441k households) are candidates for social housing, as the cost of housing is higher than 40% of their HH income.

### Annual mean and median equivalised net income (2022, EUR)



### Average total income per household (2022, deciles)

Decile	EUR	40% HH income, EUR
D 1	397,5	158,99
D 2	688,1	275,24
D 3	904,6	361,82
D 4	1.167,2	466,86
D 5	1.488,7	595,50
D 6	1.611,7	644,67
D 7	1.951,3	780,51
D 8	2.222,7	889,07
D 9	2.811,9	1.124,78
D 10	4.782,5	1.913,01

Sources: EUROMOD 2023, Eurostat, Statistics Lithuania, SEB

# Social housing in Lithuania represents 1/2 of public dwellings, and is characterised by low quality and long wait times

## Social Housing – Market Supply

### Lack of social housing and decrease in supply

As per 2022, there were ~25,8k units of public ownership in Lithuania, out of those ~45,7% (~11,8k dwellings) were allocated to social housing. Publicly owned housing that is not rented as social housing is rented with the standard market prices. Additionally, in 2022 there were EUR 3,5M spent on social protection expenditures or paid for rent benefits by the Lithuanian government.

Publicly owned housing amounts for less than 1,7% of the total dwelling stock, however, social housing amounts for less than 0,8% and according to the report issued by the European Commission in 2022 is of low quality. Moreover, the number of publicly owned dwellings has been decreasing with ~3,4% on a yearly basis since 2018, when there were nearly 30k of such units.

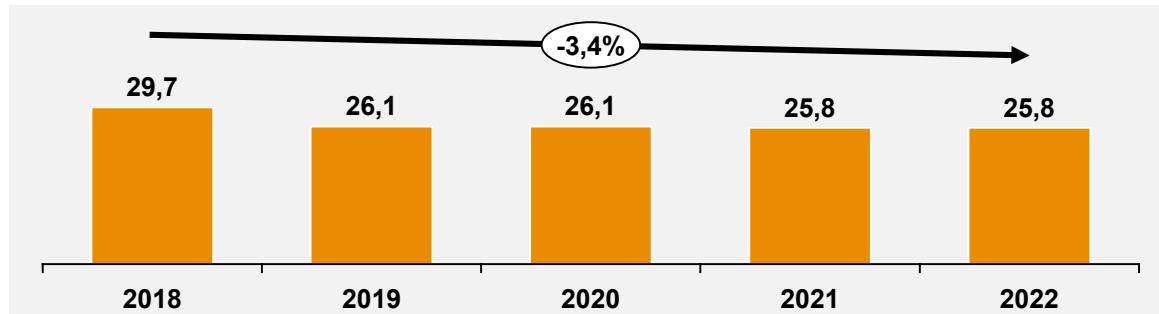
Spending on social housing is considerably lower than the EU average. In 2020, means-tested benefits for housing function in Lithuania stood at EUR ~10,1 per inhabitant, while the EU average was EUR ~105,5, or about 10x more. In 2021, the spending in Lithuania increased slightly to EUR ~10,6 per inhabitant, however, still falling behind the EU average.

Supply of social housing is estimated to be considerably lower than its demand. According to estimations by the Ministry of Social Security and Labour, the average wait time for social housing was six years, ranging from 3 to 12 years, depending on municipality. Moreover, the waiting list for social housing is not meeting the demand by ~10k places.

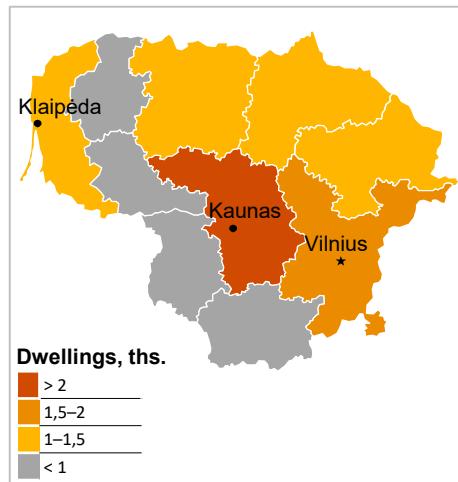
Largest share (~38%) of the social housing dwellings is located in two major counties. The Kaunas county has ~2,6k dwellings (or about 22% of the municipal stock), while the Vilnius county has ~1,9k dwellings (or about 16% of the municipal stock).

The rest of the dwellings are dispersed through other counties, which have on average around 8% of the municipal housing stock. The least amount of dwellings (~600 dwellings or ~5% of the total municipal stock) are located in Tauragė county.

### Rental housing stock by public entities, dwellings (ths.)

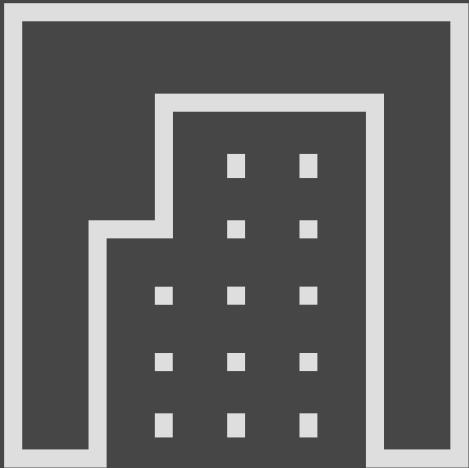


### Share split of public housing stock and social housing by region (2022)



# 3

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## Student housing

# Short term demand is driven by the increases in prices on the housing market, while long term demand is uncertain

## Student housing

### Key conclusions – Phase 1

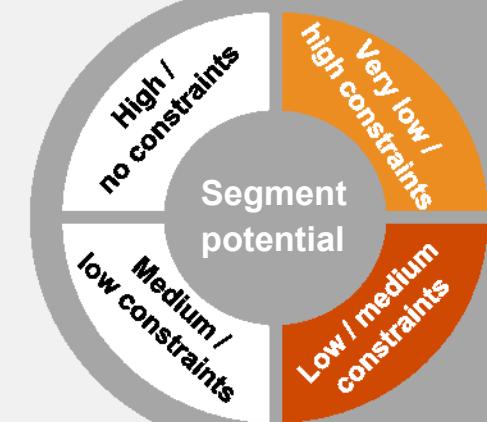
- Students have 4 student housing options, as approximately 24% of them are living in designated student accommodation (either provided by universities or by private providers), ~28% are living with their parents, and around 48% are living in private flats.
- Public student housing providers own ~97% of all student accommodation institutions, which is 95 institutions in absolute terms, while private providers own 3 private student accommodation institutions.
- The majority of student accommodation is located in the capital region, Vilnius county, where around 12,2k places were available, or more than 54% of the total stock

### Key conclusions – Phase 2 (Student housing)

- Estimated current gap in demand and supply stands at about 10 thousand student beds.
- Private players have observed a full occupancy rates in the past years.
- A high competition was observed in the real estate market with many developers expressing interests in purchasing the same buildings as the interviewed stakeholder



### PwC Assessment



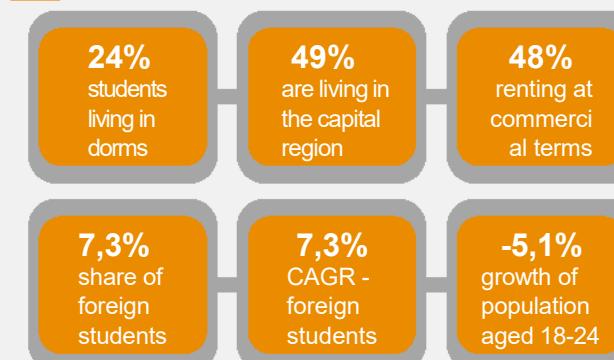
On one hand the future demand for student housing is projected to decline, due to decrease in the total number of students.



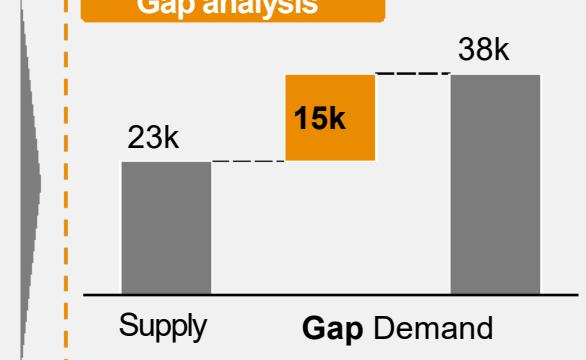
On the other hand the short term demand for student housing has seen increase due to inflationary pressure on housing market.



### Key Segment Data



### Gap analysis



# Designated student accommodation can accommodate less than a fourth of the student body

## Student Housing – General Overview

### Student housing options

Students in Lithuania have several options available for accommodation. According to our research, approximately 24% (or about 25k students) are living in designated student accommodation, ~28% (or about 29k students) are living with their parents, and around 48% (or about 50k students) are living in private flats.

Students that live in purpose-built student accommodation (PBSA), can choose between private and public providers.

#### Accommodation provided by public universities

1 PBSA provided by public universities is most often located near the teaching premises. Quality and cost of living depends on the student dorms that the students are admitted to.

#### Accommodation in privately owned student dorms

2 In major university cities in Lithuania, such as Vilnius and Kaunas, private PBSA options are available. Quality of living in such PBSA is often higher, however, consequently more expensive.

Students that choose not to live in PBSA, are either living at home or are renting flats or rooms from the private real estate market.

#### Living at home and commuting

3 Higher percentage of students live with parents than in PBSA. This option is more common among younger students, allowing them to keep the costs low.

#### Private rooms or flats

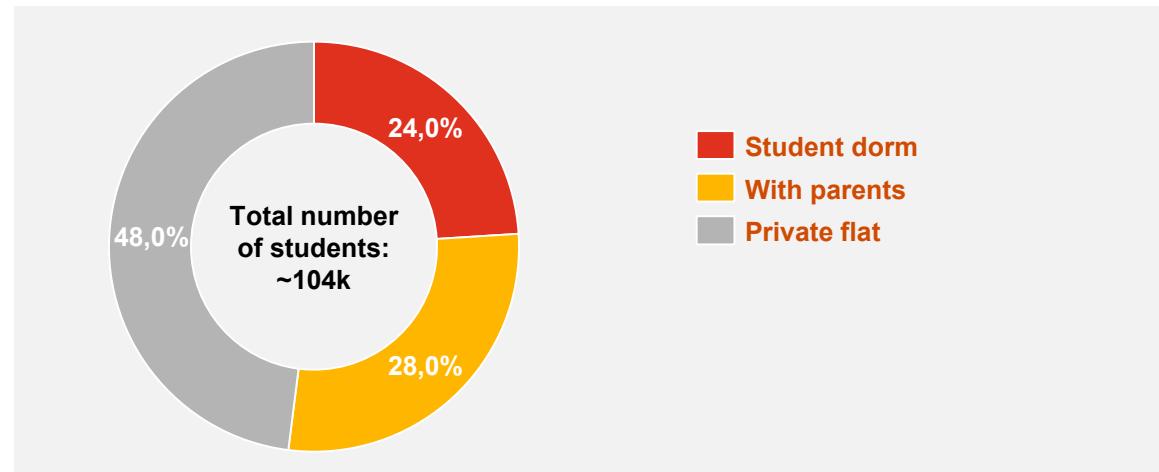
4 Renting from the private market is on average more expensive than choosing to live in PBSA provided by public university, however, it allows for more freedom and flexibility.

### Admission to the student dorms provided by public universities

Depending on the university, request for the admission is usually done through the universities' websites either before the semester or the school year starts. Therefore, some universities are admitting students in student accommodation only once per year.

Admission criteria for the student dorms differs by the university. Some universities are allocating student dorms based on the various factors, such as living proximity to location of studies and income, while others are allocating student dorms based on the first come first serve basis.

### Split of students per type of accommodation, %



Sources: Eurostat, Statistics Lithuania, Eurostudent database, PwC analysis

# Prices for PBSA vary greatly per type of accommodation, and can be higher than on the rental market

## Student Housing – Key Drivers

### Significant differences in pricing of private and public PBSA

Our research has found that the cheapest option for students in Lithuania is to seek accommodation in university provided PBSA.

Prices for such accommodation range between EUR 50–260 per month, depending on the type of room. For example, for a single-bed room students can expect to pay from EUR 80 to 260 per month, for a place in a double bed shared room the price usually ranges from EUR 60 to 210 per month.

The cheapest option is a triple bed shared, with prices ranging from EUR 50 to 150 per month. However, prices are heavily dependent on the specific dorm and can differ significantly, also within single university PBSA.

Privately owned PBSA is significantly more expensive than PBSA provided by universities, and in some cases even more expensive than renting a flat or a room on the housing market. Prices for privately owned PBSA range from EUR 220 to 810 per month, depending on the provider, size of the room, location, etc.

For a single room students can expect to pay from EUR 400 to 810 per month, depending on the commodities included, size of the room, location, etc. A double bed shared room can cost from EUR 330–450 per month, while a triple bed shared room can cost around EUR 220, however, supply of such rooms might be limited.

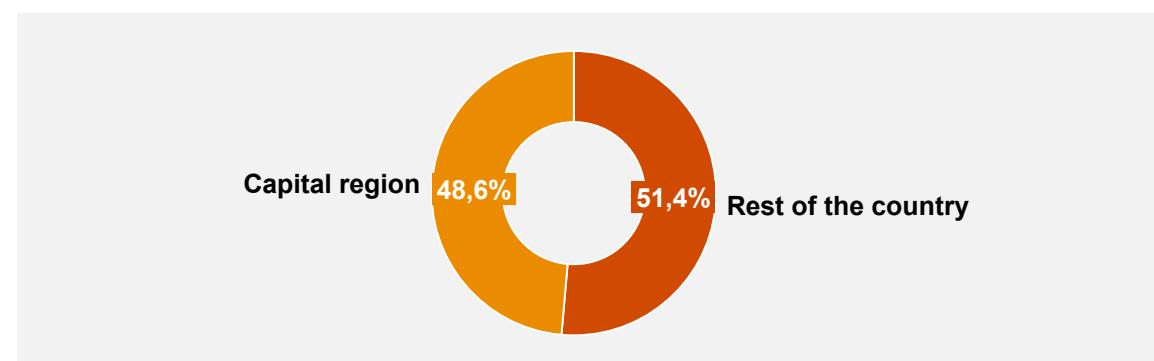
Quality of living is set to be higher in PBSA provided by private operators as compared to the PBSA provided by universities. Moreover, privately owned PBSA is known to be more modern, includes more commodities, and can be more flexible.

Renting from private owners in the housing market in the university city can be a cheaper option than renting both from PBSA operated by private operators or universities. Prices for a room in a shared flat range from EUR 120 to 500.

### Price of student accommodation

Student housing type	Price / month
<b>University accommodation</b>	<b>EUR 50–260</b>
• 1-bed room	EUR 80–260
• 2-bed room	EUR 60–210
• 3-bed room	EUR 50–150
<b>Private student housing</b>	<b>EUR 220–810</b>
• 1-bed room	EUR 400–810
• 2-bed room	EUR 330–450
• 3-bed room	EUR ~220
<b>Rental market (rooms or flats)</b>	<b>EUR 120–500</b>

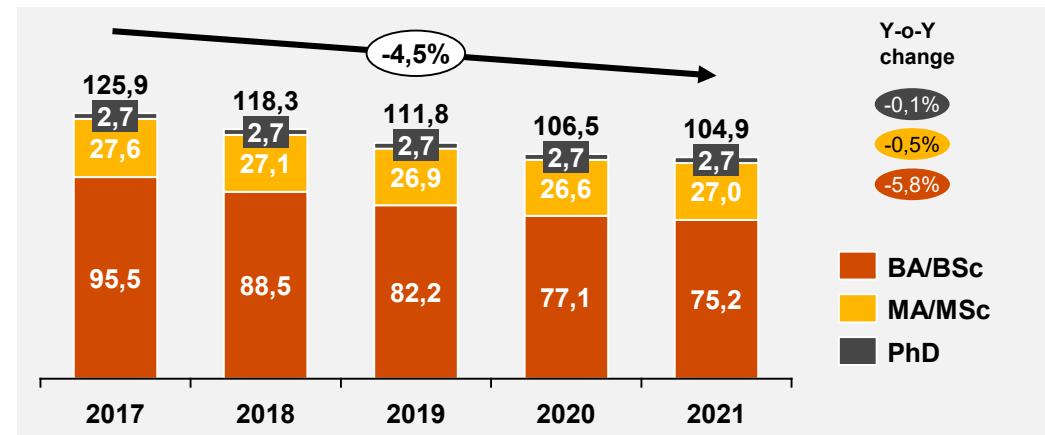
### Distribution of students by regions, 2021, in %



# Number of enrolled students is decreasing, mostly due to the decreasing number of bachelor students

## Student Housing – Market Demand

Number of tertiary education students, in ths.



Decreasing total and newly enrolled students

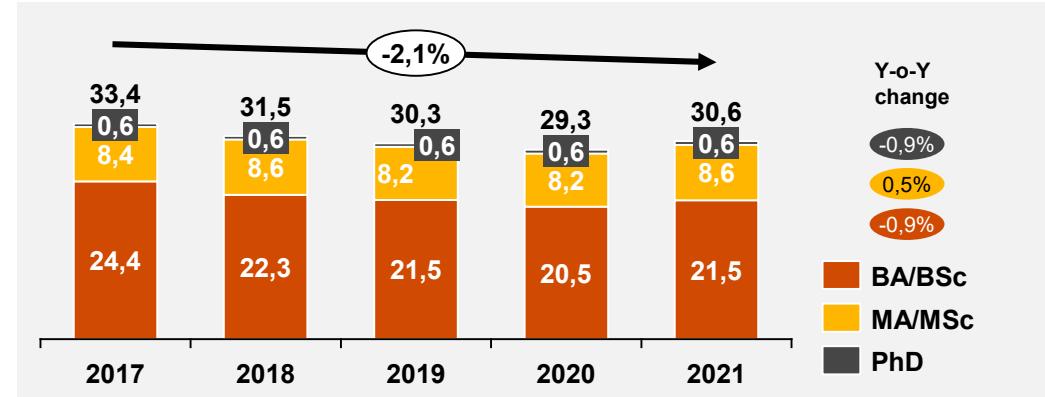
The total number of students in higher education is decreasing by 4,5% on a yearly basis for the period of five years since 2017. The decrease is mostly due to 5,8% less students attending bachelor programmes y-o-y, amounting for ~20k less students in 2021, as compared to 2017.

Moreover, trend of the overall decrease of students is expected to continue in the coming years due to the ever-reducing number of newly enrolled students. Year on year decrease in the five-year period, for both, Bachelor and Doctoral programmes, stood at 0,9%. However, the number of newly enrolled students in Master programmes remained stable, increasing for around 200 students in 2021 as compared to 2017.

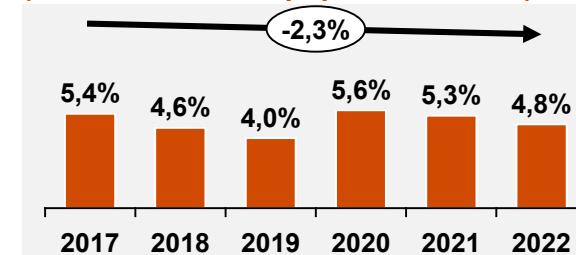
Within the same period the number of early leavers from education remained on average around 5%, which is less than half of the EU average at more than 10%. The spike in the number of early leavers in 2020 can be closely attributed to the COVID-19 pandemic, and associated lockdown. Moreover, the number of foreign students has been increasing for around 7,3% y-o-y in five-year period (amounting for around 1,1k more foreign students in 2021 compared to previous year).

According to the national statistics, the majority of foreign students were European nationals, with majority of those being from the EU, followed by students from Asia and Africa.

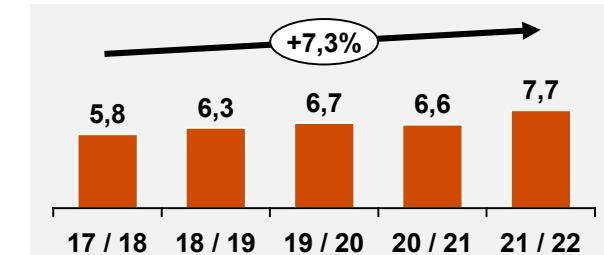
Number of newly enrolled student per year, in ths.



Number of early leavers from education, (% of total student population 18–24)



Number of foreign students, in ths.



# Majority of student accommodation is of public ownership, concentrated in the capital region

## Student Housing – Market Supply

### Majority of student housing is concentrated to the capital region

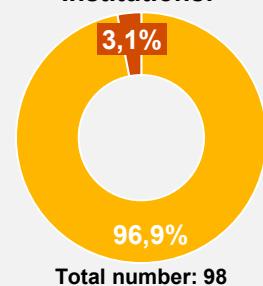
In Lithuania, the vast majority of student housing is in public ownership. Public providers owned ~97% of all student accommodation institutions, which is 95 institutions in absolute terms, on the other hand, there are 3 private student accommodation institutions. Public institutions averaged ~234 places per institution, while private institutions averaged slightly less with ~183 places per institution.

The majority of student accommodation is located in the capital region, Vilnius county, where around 12,2k places were available, or more than 54% of the total stock. The rest of the stock amounting to ~10,8k places, were located across other regions, with majority of those being in Kaunas county, where ~71% (or ~7,7k places) are located. Hence, we can deduce that two biggest regions amount to the majority, or ~86,6%, of the total stock.

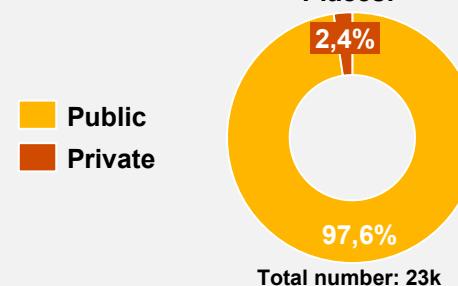
Student accommodation in Tauragė county was not identified, which was due to no demand for such accommodation, since there are no institutions of higher education.

### Overview of ownership of institutions and places

#### Institutions:



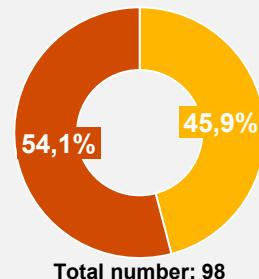
#### Places:



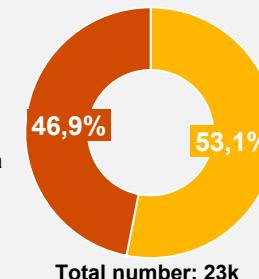
Sources: Statistics Lithuania, PBSAs' websites, PwC analysis

### Concentration of institutions and places

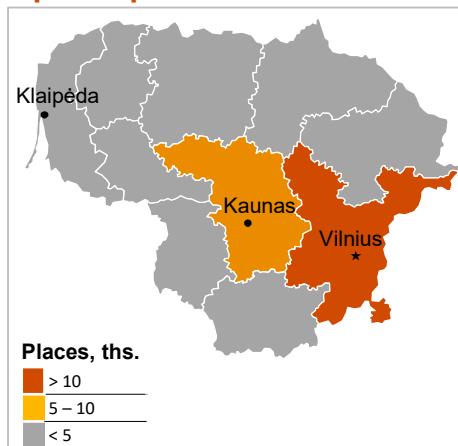
#### Institutions:



#### Places:



### Split of places in student accommodation institutions



Region	Total	%
<b>Lithuania</b>	<b>23.037</b>	
Vilnius county	12.231	53,1%
Kaunas county	7.718	33,5%
Klaipėda county	364	8,2%
Šiauliai county	350	1,6%
Utena county	338	1,5%
Panevėžys county	255	1,5%
Alytus county	152	1,1%
Marijampolė county	68	0,7%
Telšiai county	20	0,3%
<u>Tauragė county</u>	0	0%

# 4

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## Universities and vocational training centres





# Higher education institutions are **characterised by excess capacities and high public ownership**



## Universities

### Key conclusions – Phase 1

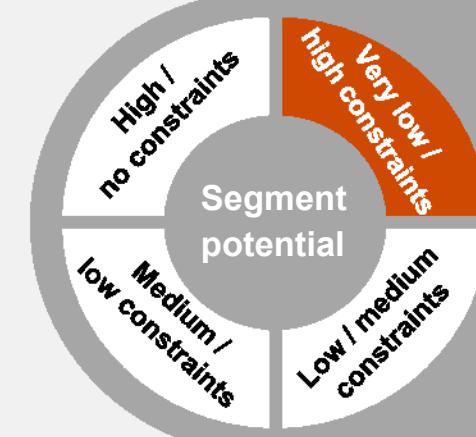
- In Lithuania the Ministry of Education is in charge of policy development within the Higher Education segment, as well as being the principal owner of public HEIs, which enroll a majority of students (88,5% or 93k students).
- Population aged 18-25 has been steadily decreasing in the last five years with a CAGR rate of -5,1%, with this trend expecting to continue up to year 2050, although with a smaller rate of decline of -1%.
- Largest share of students (48,7%) attend tertiary education in the capital region, with the rest being split among other regions.

### Key conclusions – Phase 2

This segment has not been shortlisted for phase 2.



### PwC Assessment



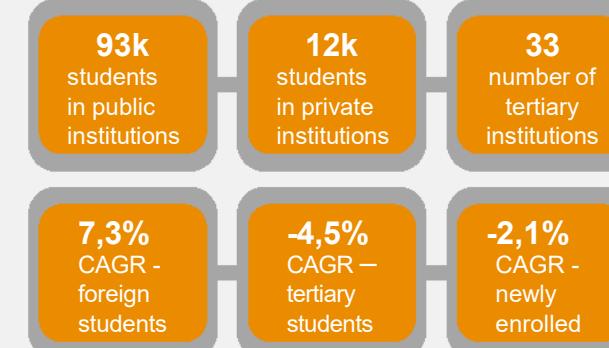
The vast majority of higher education institutions are in public ownership, and are concentrated in the capital region.



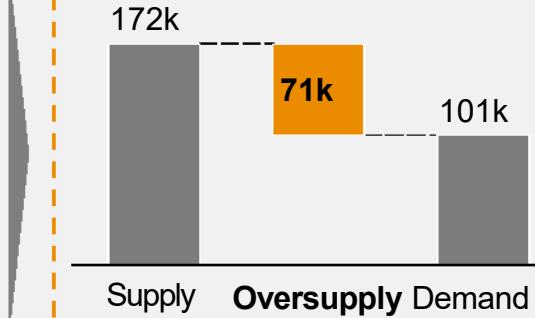
According to our calculations, Lithuanian higher education institutions are characterised by excess capacities.



### Key Segment Data



### Oversupply analysis



# Lithuania has an above average share of population with a university degree, mostly obtained at public institutions

## Universities and vocational training centres – General Overview

### Organisation of tertiary education in Lithuania

In Lithuania, education policies on national level are defined by the parliament, while the main bodies in charge of policy are the Government and the Ministry of Education, Science and Sport, who are also the principal owners of the public HEIs. The main defining laws of the higher education system and vocational education in Lithuania are *The Higher Education and Research Act*, and *The Law on Vocational Education and Training*. In Lithuania, HEIs retain level of autonomy guaranteed by this law.

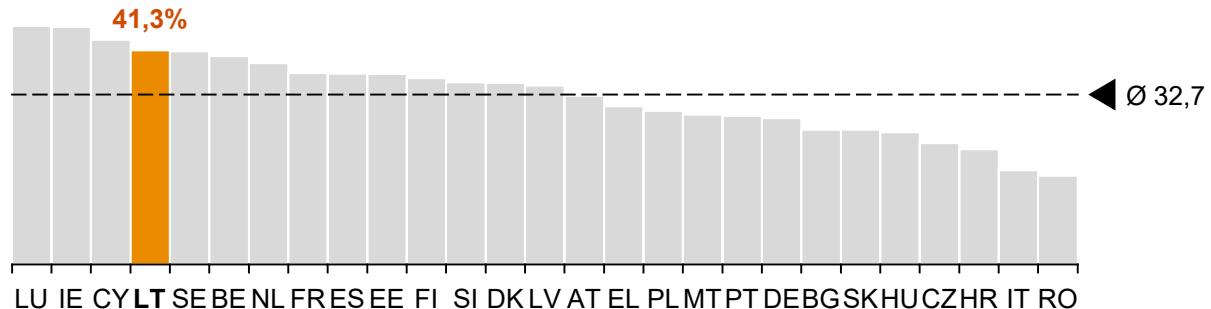
Share of population with a university degree is with 41,3% higher than the EU average at 32,7%, and is among the highest in the EU, preceded only by Luxembourg, Ireland, and Cyprus.

Higher / tertiary education in Lithuania is provided at universities and colleges (where also vocational education is provided), further divided to public and private institutions. According to the National Education Agency, there are currently 11 public universities, 6 private universities, 10 public colleges, and 6 private colleges. Main difference between the two is that universities provide academic education, whilst colleges provide education intended to provide practical education for particular professions.

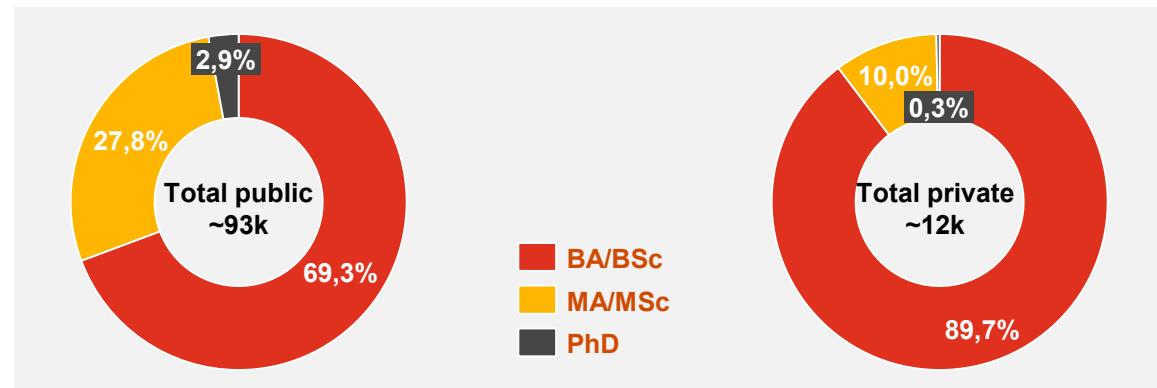
However, students are mostly pursuing higher education in public institutions. In 2021, around 88,5% or 93k students attended public institutions, with the rest ~11,5% or 12k students attended private institutions. On average there were ~4,4k students per public HEI, and ~929 students per private HEI. Thus, indicating larger size of public HEIs as compared to private HEIs.

Higher education follows the Bologna process, therefore ensuring compatibility with the European Credit Transfer and Accumulation System (ECTS). Therefore, there are three cycles of degree attainment: Bachelor's, Master's and Doctoral. Additionally, a short cycle study programme is provided.

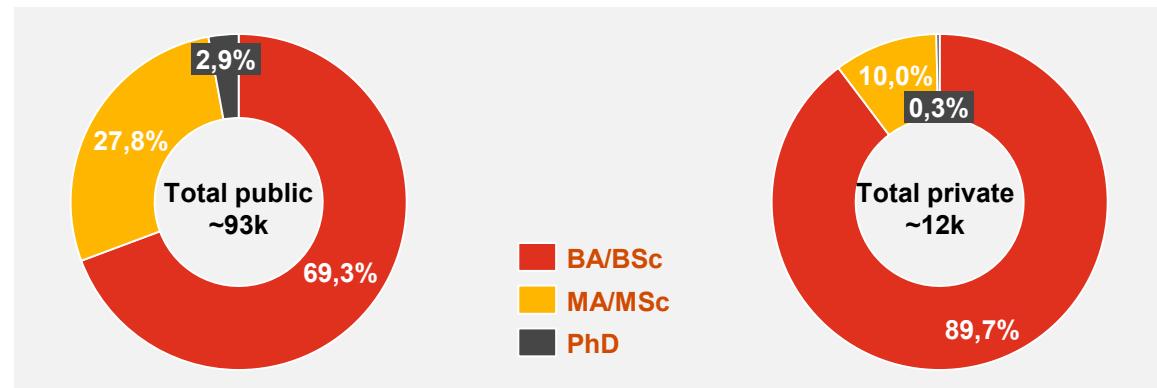
### Share of population with university degree, 2022, in %



### Split of students by public institutions, 2022



### Split of students by private institutions, 2022



Sources: Eurostat, Statistics Lithuania, European Commission, PwC analysis

# Attainment of tertiary education is fairly accessible and well recognised on the labour market

## Universities – Key Drivers

### Tertiary education is subsidised for Lithuanians and EU citizens

Population growth for the segment of the population aged 18–24, as a key driver of potential demand for university students in Lithuania, is predicted to increase by 2035, followed by a sharp drop in population. This will result in CAGR of ~1,0% over a 25-year period, which is lower than the current CAGR of ~5,1% within the last 5 years.

According to the Eurostat data, the number of foreign students in Lithuania has been increasing, reaching a CAGR of around 7,3% until the year 2022. This has resulted in a total amount of foreign students being 7,7k in the same year.

Quality of the higher education is periodically being assessed by the Centre for Quality Assessment in Higher Education. In 2022, four Lithuanian universities were ranked among top 100 on the QS EECA 2022: Vilnius University (top 19), Kaunas University of Technology (top 54), VILNIUS TECH (top 56), and Vytautas Magnus University (top 61).

Higher education is deemed to be fairly accessible, with state offering subsidies for students with sufficient academic performance, allowing them to study for free. For students who fail to secure subsidies, or are not EU/EEA nationals, the tuition varies by University and study programme, with Medical and natural sciences being more expensive. In addition, PhD programmes can be free or can offer paid positions.

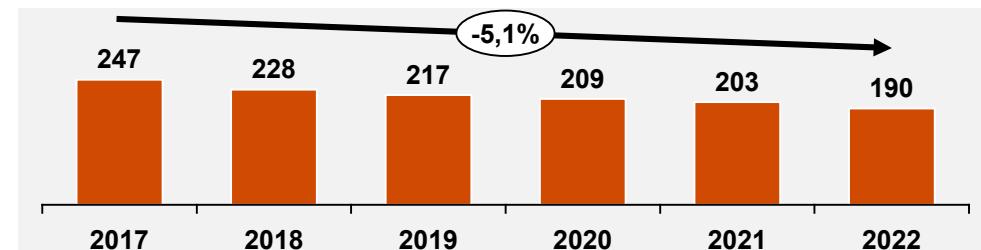
Higher education diploma is well perceived in Lithuania, not only does the country have among the highest shares of population with a university degree, but also according to the data by the OECD 25–34-year-olds with a Bachelor's degree earn 60% more than their peers without tertiary education. Moreover, 25–34-year-olds with Master's or Doctoral education earn 85% more than their counterparts.

### Average public university tuition, per year, in EUR

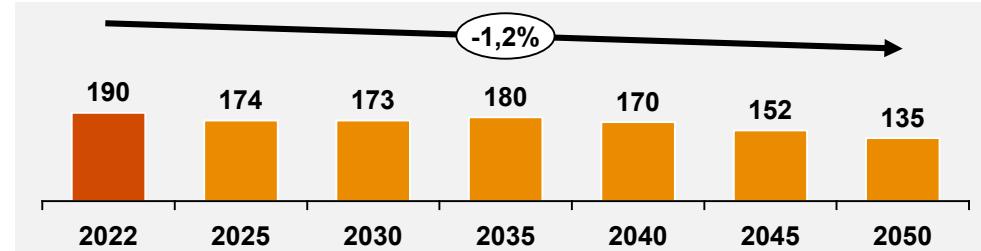
Cycle	Bachelor's programme	Master's programme	PhD
Price per year	EUR 1.000–5.300	EUR 2.200–6.500	EUR 7.100–8.500

Sources: Eurostat, Statistics Lithuania, University websites, PwC analysis

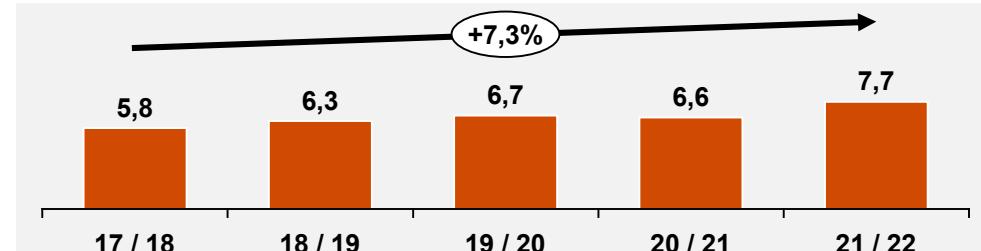
### Population, 18–24-year-old, in ths.



### Projected population, 18–24-year-old, in ths.



### Number of foreign students, in ths.



# Number of total and newly enrolled students has been steadily decreasing, in-line with the demographic trends

## Universities – Demand

### Decreasing number of students

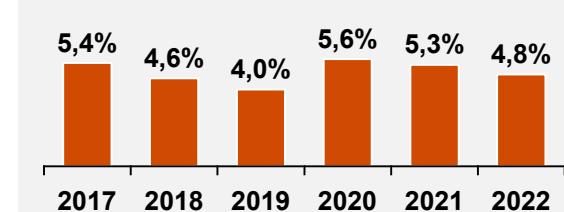
The total number of students in Lithuania has been decreasing by 4,5% on a yearly basis since 2017. In 2021, it has reached ~105k students enrolled in BAs, MAs and PhD programmes, representing a decrease of 21k students from 2017.

The majority of students are enrolled into Bachelor programmes (71,7%), followed by students enrolled into Masters studies (25,7%), and PhD students (2,6%). All three cycles are experiencing a decrease in the number of students, where BA students are decreasing with 5,8%, MA with 0,5%, and PhD with 0,1%; this is in-line with the overall reduction of the total population of 18–24-year-olds in Lithuania.

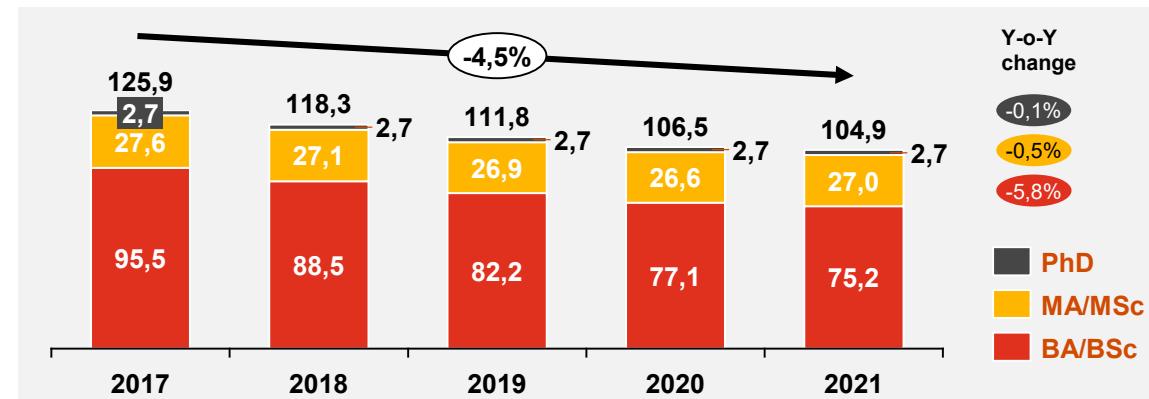
The number of newly enrolled students has been decreasing at the rate of 2,1% on a yearly basis, since 2017. The largest decrease happened from 2017 to 2019, when it decreased by ~9,2%, or for about 3,1k students, since then the number has stabilised at around ~30k newly enrolled students. However, share of foreign students has been steadily increasing, reaching ~7,3% in 2021.

Number of early leavers from education was reducing up to the year 2020, when it sharply increased to 5,6%. This can be mostly attributed to the effects of the COVID-19 pandemic and the associated lockdown, as we can see a decline in the subsequent years, however, this is still significantly lower than the EU average of 9,9%.

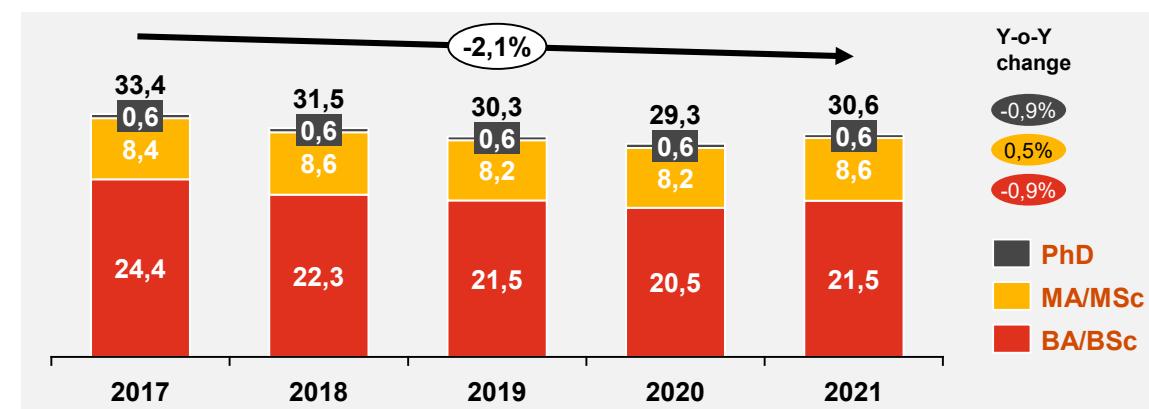
### Number of early leavers from education, Share of foreign students (% of total population)



### Number of tertiary education students, in ths.



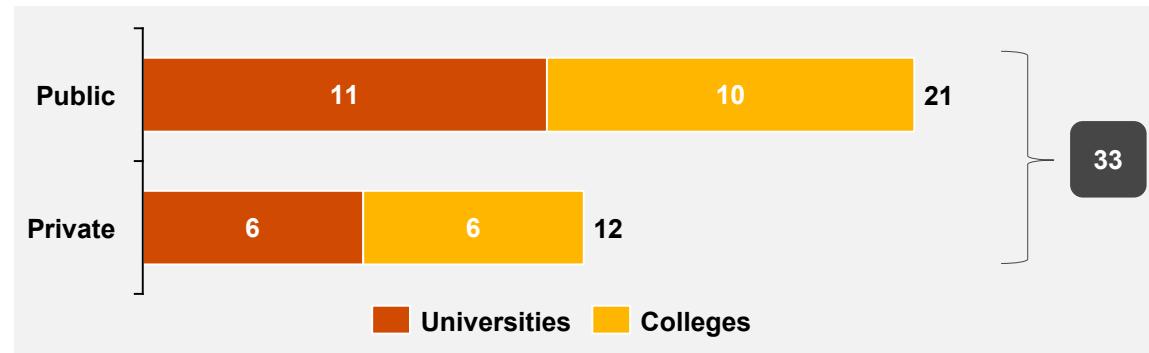
### Number of newly enrolled student per year, in ths.



# Largest share of students attend tertiary education in the capital region, at public universities

## Universities – Supply

### Number of tertiary education institutions



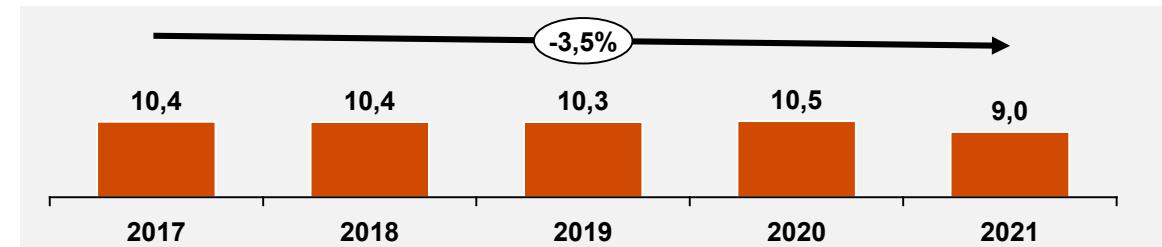
As of 2023, in Lithuania, there are 33 HEIs, out of those 21 are public, while 12 are private. Latest data available shows that there were about 105k tertiary education students. Majority or ~88,5% (about 93k students) of those are attending public HEIs, while the rest or ~12,5% (about 12k students) are attending private HEIs.

In total, there are 17 universities, with 11 of those being public and 6 being private. On top of that there are 16 colleges, 10 public and 6 private.

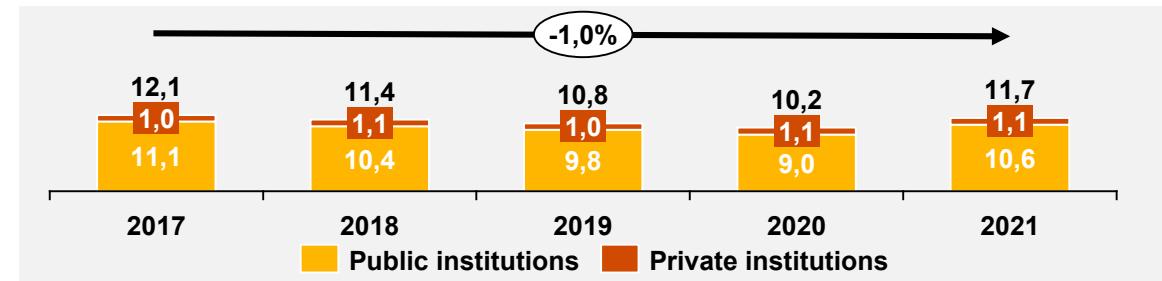
The most universities, 11 of them, are located in the capital region where also the most students are concentrated. In 2021, the split of students studying in the capital region as compared to the rest of the county was almost equal, with ~48,6% of tertiary students studying in the capital region.

In Lithuania, there is an observed improvement of the student-teacher ratio, indicating an improvement in education quality. In 2017, student to teacher ratio was standing at around 16,2, while in 2021 it was 9,0. However, this improvement is mostly due to the decreasing number of students, and not increases in the number of the academic staff, as this number reduced at CAGR 1% within the last 5 years.

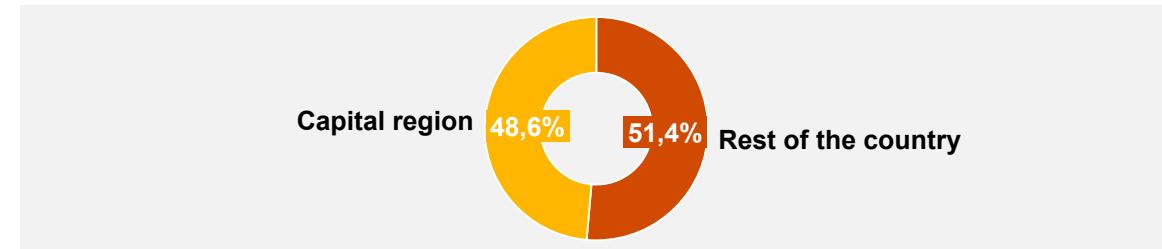
### Student-teacher ratio



### Number of academic staff in tertiary education, in ths.



### Distribution of students by regions, 2021, in %



# 5

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## Pre-school facilities



# While a nationwide oversupply has been observed, there is a localised demand and shortages of places



## Pre-school facilities

### Key conclusions – Phase 1

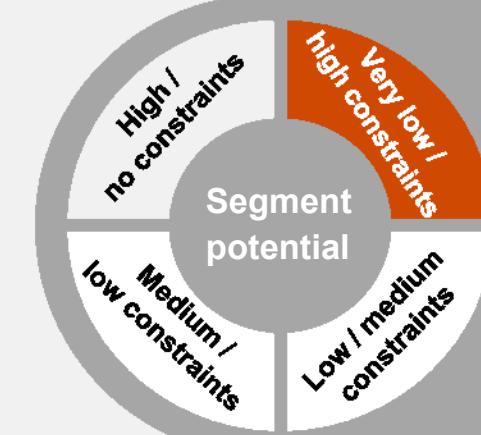
- Population of children aged 0-6 has been declining with a CAGR of 3% in the last five years, mainly driven by the decreasing number of new-born children. This trend is expected to continue in the coming years.
- The enrolment rate of children living in rural areas is less than half of those living in urban areas (43% in case of rural, as opposed to 100% in case of urban). About 14% of children commute to urban area, while the rest are cared for by the family.
- In recent years the number of available places in pre-school facilities in Lithuania has increased by CAGR 1%, despite reducing number of institutions (mainly public institution).
- The data indicates that in most counties there are spare capacities in number of places within the pre-school facilities. In three counties (Vilnius, Tlešai, Marijampole), the utilisation of places is at above 95% indicating potential shortages in the future

### Key conclusions – Phase 2

This segment has not been shortlisted for phase 2.



### PwC Assessment



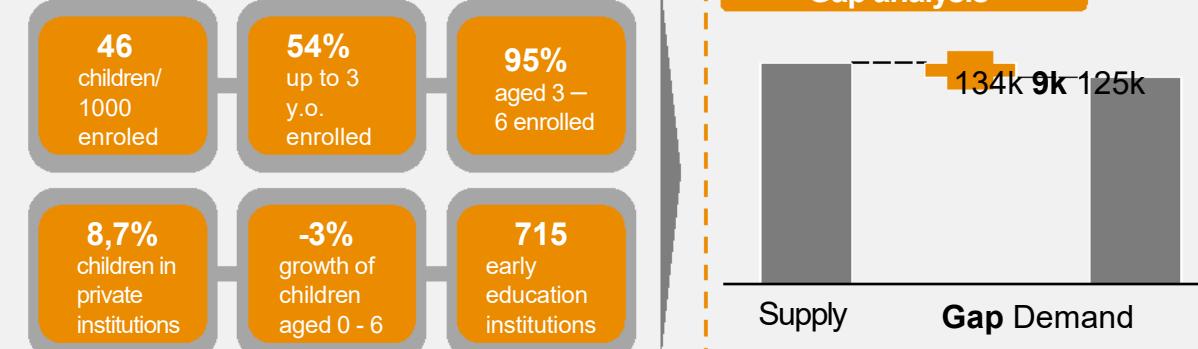
Nationwide there is an oversupply of places, however, in some municipalities there are shortages that indicate localised demand (e.g. In Vilnius).



Additionally, greater demand for places has been observed in the urban areas, where parents often commute to work.



### Key Segment Data



# Number of children enrolled to pre-schools is higher than the EU-average, despite pre-school education being nonobligatory

## Pre-Schools – General Overview

### Two types of early childhood education

Early childhood education in Lithuania consists of two stages: non obligatory „pre-school education“, and compulsory „pre-primary education“. The „pre-school education“ itself is further divided into two stages: firstly, from birth up to including 2 years, and secondly, from the age of 3 up to entering the „pre-primary education“.

Pre-primary education in Lithuania is compulsory, children attend such education in the calendar year in which they turn 6, however, in some cases parents can enrol their children in pre-primary education before the child turns 5 years old. The intent of pre-primary education is in one year of its duration to prepare children for primary education.

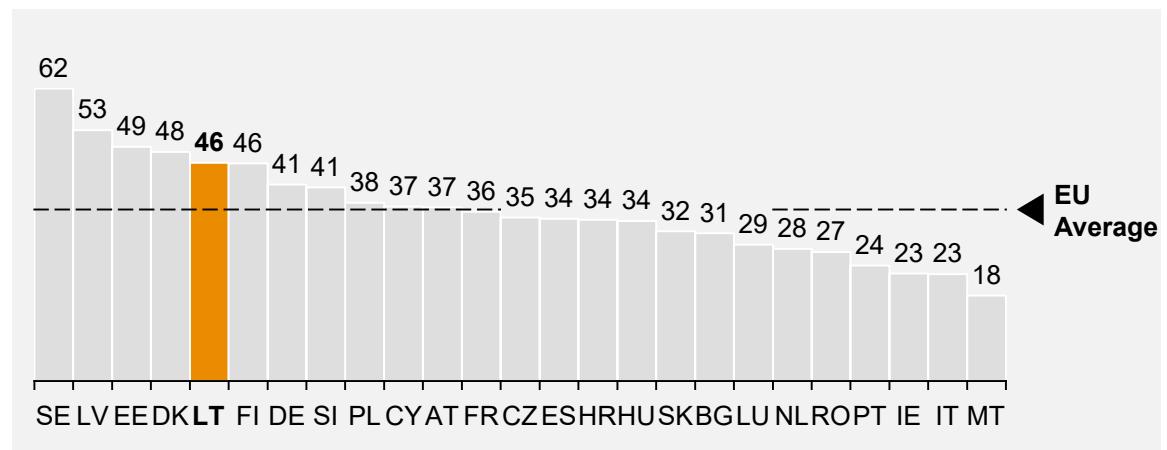
Early childhood education is provided through state, municipal, or private providers. However, publicly regulated early childhood education cannot be provided at home, therefore, parents that want their children to be a part of such education have to enrol their children in designated institutions.

Considering pre-school education is not compulsory, there is no legislation dictating a guarantee to a place in such institutions. This explains relatively low numbers of enrolled children up to 3-years-old, as compared to other EU countries. In contrast, pre-primary education is compulsory and a guarantee to a place in pre-primary education establishment is mandated.

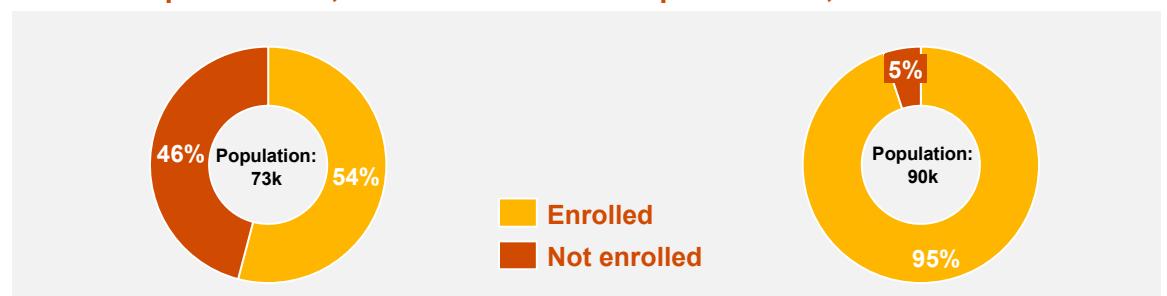
Provision of early childhood education and its regulation is laid down in the Law of Education and is overseen by the Ministry of Education, Science and Sport. Moreover, organisation of pre-primary education is structured in the Outline of the Procedure for Pre-Primary Education.

Management of early childhood education is decentralised and split among public and private providers, who mainly operate one or two schools. However, institutions must abide by all relevant standards set on the governmental level.

### Number of children enrolled to pre-school facilities, per 1000 citizens, 2021



### Share of children aged up to 3, enrolled in pre-schools, 2022



Sources: Eurostat, OECD, European Commission, Statistics Lithuania, PwC analysis

# Number of pre-school-aged children has been declining, segment is dominated by public institutions

## Pre-Schools – Key Drivers

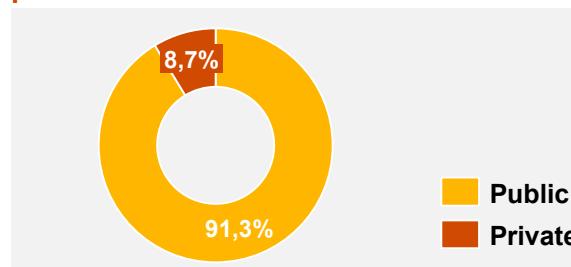
### Higher enrolment in groups of older children

The number of children aged 0–6 has been declining with a CAGR of ~3% in a five-year period since 2018, when it was ~178k, reaching ~158k in 2022. In the same period, the number of children in the group aged below 3 years old was decreasing with a CAGR of ~5,3%, while the number of children in the group aged 3 to below 6 remained approximately the same, with a slight decrease of CAGR ~0,9%. However, this decline is expected to accelerate due to the effects of the decrease of children in the group aged below 3 years old.

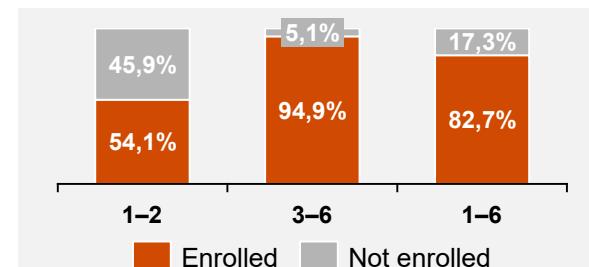
The number of new-born children has been in decline, resulting in a negative CAGR of ~5% for a five-year period since 2017, or around 6k less children being born in 2021 as compared to 2017. On the other hand, fertility rate is projected to improve with a CAGR of 0,4% until 2050 when it will reach 1,67. This indicates that the number of new-born children will decline slower within the next 30 years.

Enrolment rate of children attending early childhood education are lower in group of children aged 1–2, but it improves for children aged 3–6, reaching 94,9%. Vast majority of these children are enrolled in a public institution, which are providing such education to ~91,3% of all enrolled children.

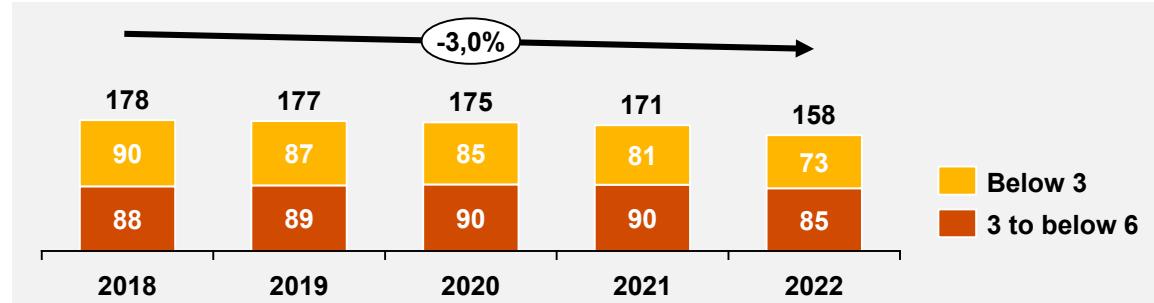
### Split of children between public and private institutions



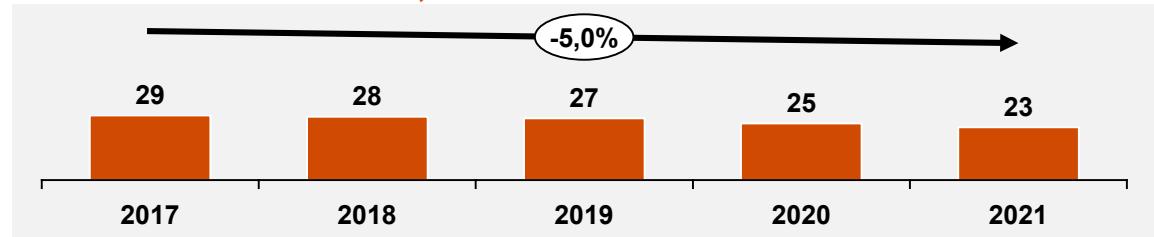
### Share of enrolled children by age group, 2022



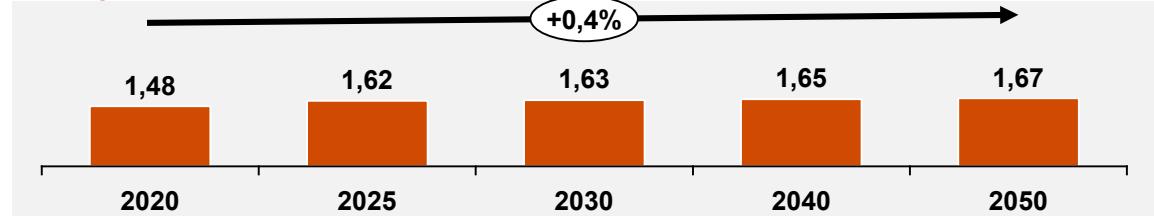
### Number of children aged 0–6, in ths.



### Number of new-born children, in ths.



### Fertility rate



# Enrolment rate of children in rural areas is less than half of those living in urban areas

## Pre-Schools – Demand

### Demand is higher for pre-school education of older kids in urban areas

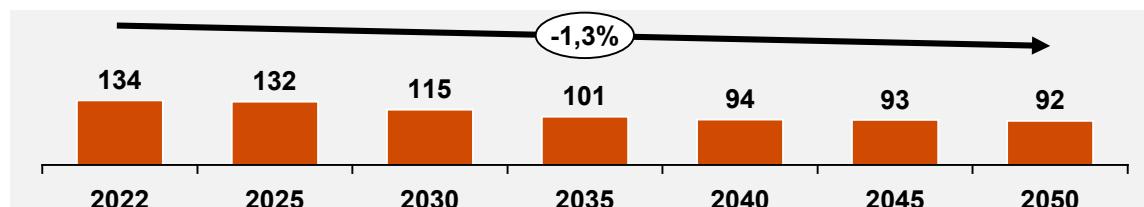
As indicated by the national statistics, in Lithuania, there is more demand for pre-school education in urban than in rural areas. Moreover, enrolment in early childhood education for children aged 3–6 in urban areas exceeds the number of registered children in those areas, by about 14%. This is mostly due to parents enrolling their children close to their workplace out of convenience. For the same group of children, enrolment rate in early childhood education in rural areas was around 50%.

Considering that the enrolment rates for children living in rural areas across the age groups is low (less than half of children are enrolled), it cannot be assumed that all unenrolled children are commuting, rather that the children are cared for by family or elders. This would indicate either inherently lower demand for pre-schools, or lack of facilities in rural areas.

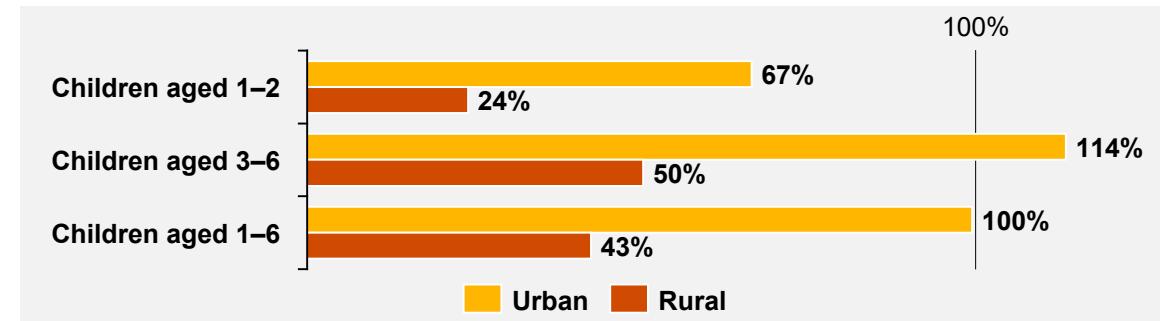
Moreover, in 2022 the lowest enrolment rate in early childhood education was with ~61% in Taurage county, which also has the lowest share of population living in urban areas (about 44,5%). On the other hand, while the largest enrolment rate was in Panevėžys county (about 81%), the share of population living in urban areas in this county is with ~60% slightly below national average.

According to Eurostat, number of children eligible for early childhood education is projected to rapidly decrease for about 30% until 2040, and then for about 2k in next ten years, declining with a CAGR of 1,3%.

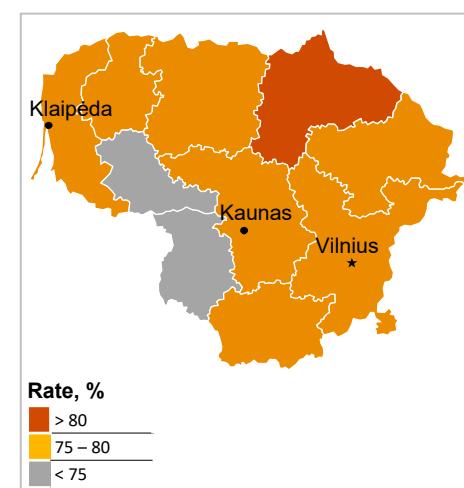
### Projected number of population of children aged 1 up to 6 (in ths.)



### Enrolment in early childhood education by type of area, 2022



### Gross enrolment rate in early childhood education by region (2022/2023), children aged 1–6



# Supply of available places has been increasing, mostly due to the growing private segment

## Pre-Schools – Supply

### Supply of early childhood education in Lithuania

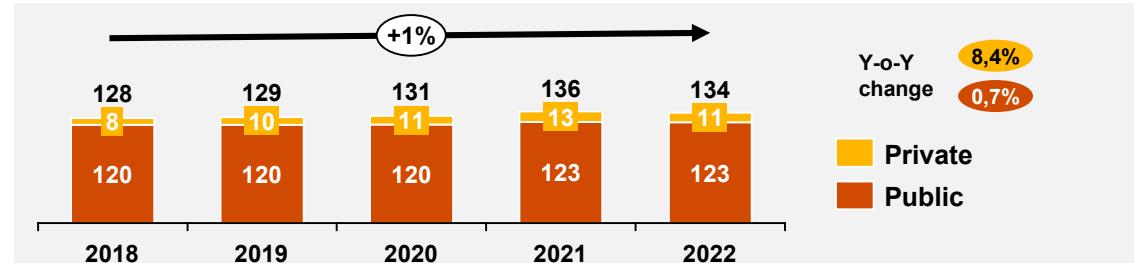
In 2022, there were 715 institutions offering early childhood education in Lithuania, with capacity of ~134k places.

Approximately one quarter (or 175) of all early childhood education institutions were privately owned. Their capacity was about 8,5% or ~11k places. Therefore, the majority of institutions, or 540 institutions, were publicly owned, offering ~91,5% or 123k places. Therefore, public institutions are larger and can provide early education to more children per institution than private ones.

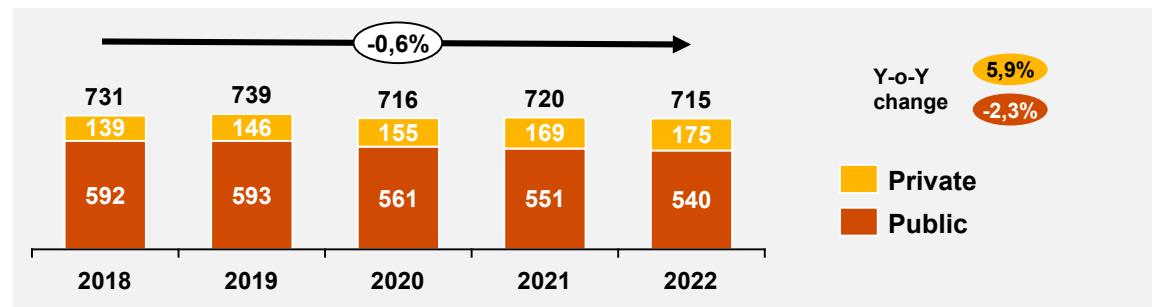
The most places are available in the capital region in Vilnius county (~45k places), where 275 institutions are located. The least places are located in Taurage county (~3k places), where 9 institutions are offering early childhood education.

Total number of available places in Lithuania is increasing with 1% on a yearly basis from 2018. However, places available at private institution are increasing with a higher rate than those at public institutions (~8,4% compared to ~0,7%). On the other hand, the number of institutions is decreasing with a CAGR of 0,6% in the same period. This decrease is mainly due to decrease of ~2,3% y-o-y of public institutions, since that total number of private institutions is increasing with about 5,9% - which also drives the number of available places.

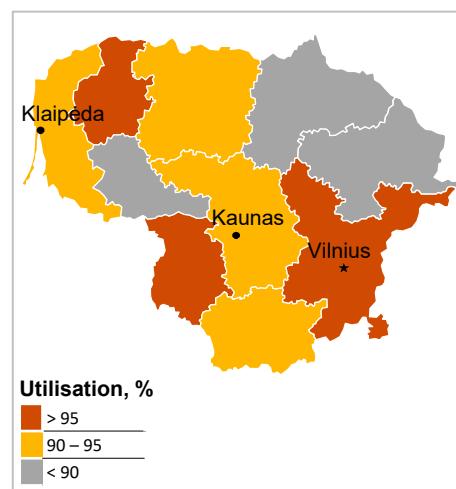
### Number of available places in Lithuania (in ths.)



### Number of early childhood education institutions, in ths.



### Supply of places and institutions in Lithuania by region in absolutes, 2022



Region	Places	Institutions
Lithuania	~134k	715
Vilnius county	44,9k	275
Kaunas county	28k	153
Klaipėda county	17k	83
Šiauliai county	11,2k	54
Panėvėžys county	9,2k	49
Telšiai county	5,8k	31
Marijampolė county	5,4k	19
Alytus county	5,1k	19
Utena county	4,6k	23
Tauragė county	3,1k	9

# 6



## Hospitals





# The hospitals segment is in **large part in public ownership** and is burdened mainly by **the lack of medical personnel**

## Hospitals

### Key conclusions — Phase 1

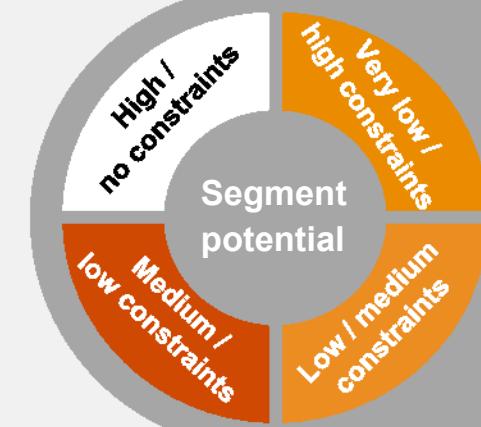
- Health care in Lithuania is the responsibility of the Ministry of Health, which bears the responsibility of preparation of health policies and regulations.
- Hospitals and hospital beds almost exclusively have public ownership. In 2022, there were 70 public and 2 private hospitals.
- Both, number of physicians (-1,4% CAGR), and number of nurses (-1,2% CAGR) per 10k population has been decreasing over the last 5 years.

### Key conclusions — Phase 2

- The demand for health care services in Lithuania is expected to increase, both, for public and privately offered services. The increase in demand will be mainly driven by the insufficient attention to disease prevention and healthy lifestyles among Lithuanians, aging population, and private health insurance provided by employers becoming a standard benefit of employment.
- Private operators are heavily investing in the segment with many of them expanding and constructing new facilities, however, according to the interviews they do not have issues with financing.
- Issues of the segment are mainly relating to the shortages of the medical personnel.



### PwC Assessment



The segment is experiencing mainly issues related to the lack of medical personnel, which is leading to un-utilisation of medical equipment.



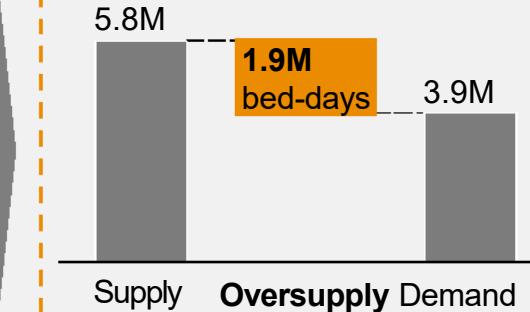
Public hospitals are mainly in need of renovations and modernisations, while private players do not report financing issues.



### Key Segment Data



### Oversupply analysis



# Healthcare is mostly provided by public operators and financed by the government, with large out-of-pocket spending

## Hospitals – General overview

### Definition of the segment and ownership

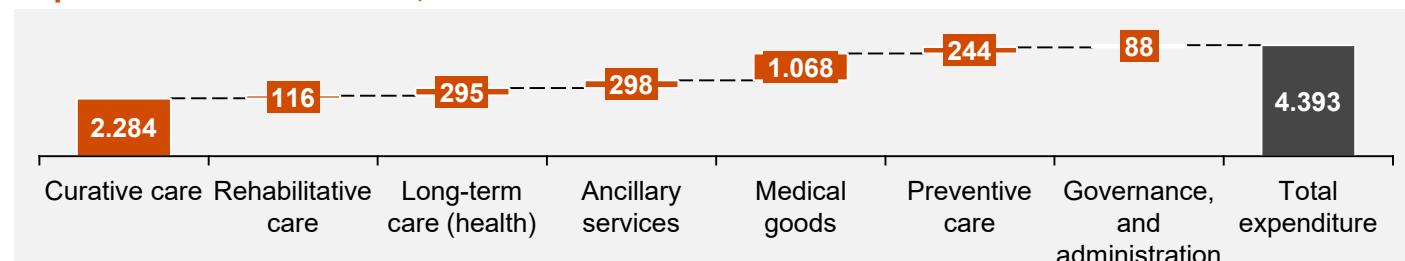
Healthcare in Lithuania is, on the highest level, the responsibility of the Ministry of Health, which bears the responsibility of preparation of health policies and regulations. Moreover, it monitors the health status of the population, licensees and professionals within the healthcare sector, it manages the network of subordinated institutions and some providers and is governing the National Health Insurance Fund (NHIF).

The NHIF is the main player around which the entire health system in Lithuania is organised. The fund is recognised as the compulsory scheme, aiming to cover the entire population through mandatory insurance. Therefore, insured population can access healthcare services paid by the NHIF. Funds are allocated to the NHIF through mandatory earmarked payroll contributions.

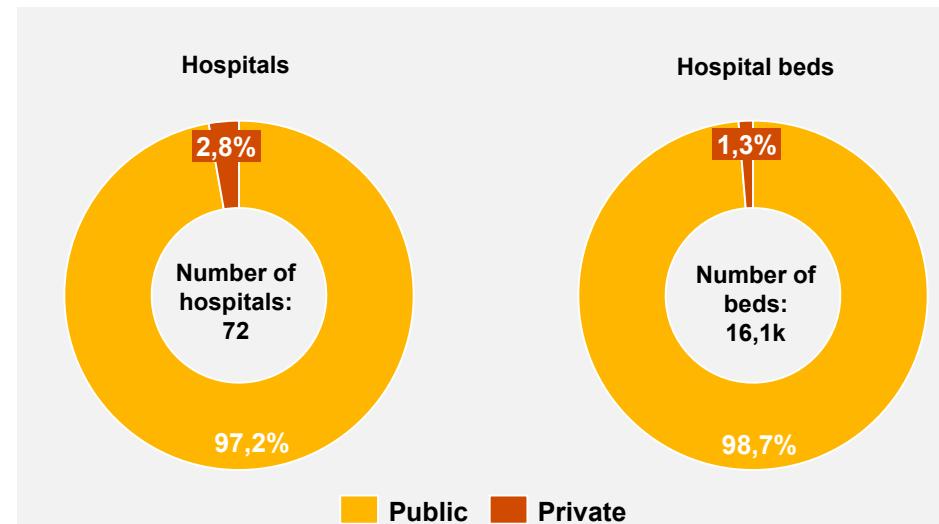
In 2021, total expenditures for healthcare in Lithuania amounted for around EUR 4,4B, which was around 7,8% of the GDP. About half, or EUR ~2,3B, of the total healthcare expenditures was intended for curative care, which amounted for ~4,1% of the GDP. More than 2/3 (about EUR 3B) of total healthcare expenditures in 2021 were by government schemes and compulsory healthcare financing schemes. Household out-of-pocket payments amounted to a bit more than 30% of the total expenditures.

Hospitals and hospital beds are almost exclusively under public ownership. In 2022, there were 70 public and 2 private hospitals. Large and general hospitals are owned by the state, however, they have a certain level of autonomy, while primary care centres, polyclinics, and small to medium-sized hospitals are generally owned by municipalities.

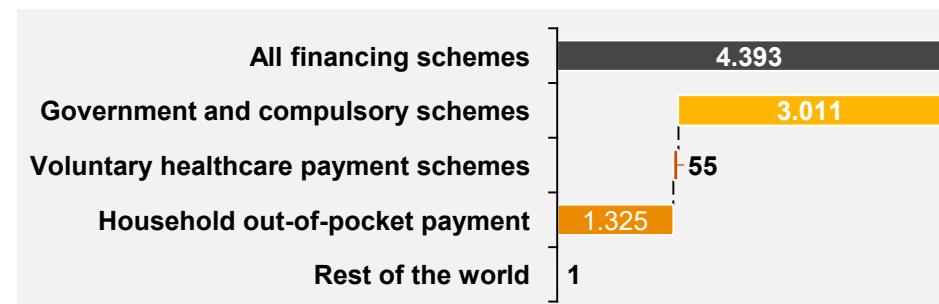
### Expenditure on healthcare, 2021 EUR M



### Healthcare ownership, 2022



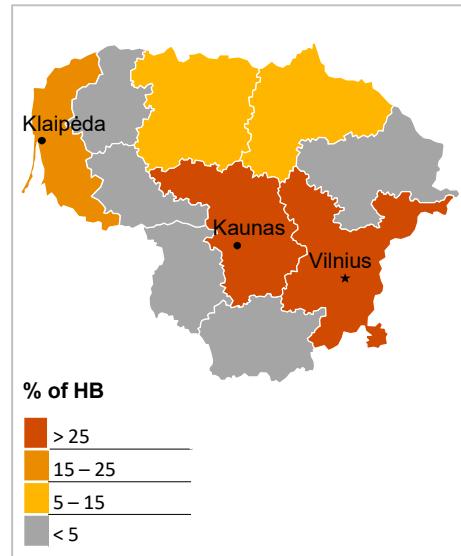
### Expenditure by financing scheme, 2021, EUR M



# The biggest challenge experienced by Lithuanians requiring health care are long waiting lists and reducing number of staff

## Hospitals – Key Issues (1/2)

### Regional split of hospital beds (HB) and population (POP), 2022



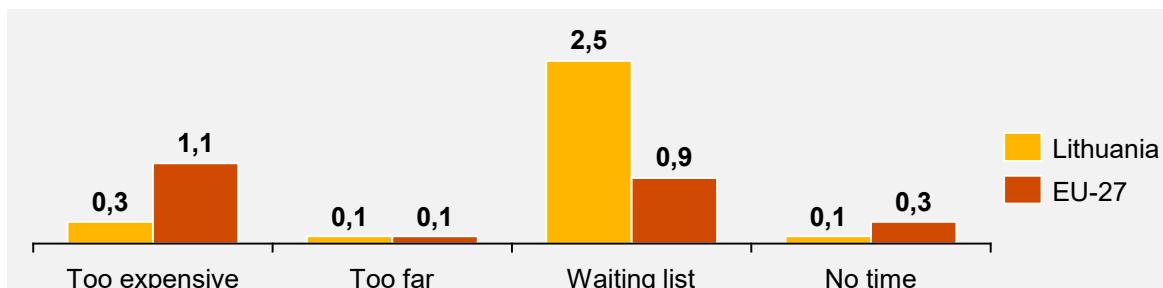
Region	% HB	% POP
<b>Lithuania</b>	~16k	
Vilnius county	31,9%	29,2%
Kaunas county	25,3%	20,3%
Klaipėda county	15,2%	11,6%
Panėvėžys county	8,5%	7,6%
Šiauliai county	6,4%	9,3%
Utena county	3,5%	4,5%
Alytus county	2,9%	4,8%
Marijampolė county	2,4%	4,9%
Telšiai county	2,1%	4,7%
Tauragė county	1,9%	3,2%

In 2022, provision of hospital beds in Lithuania amounted for one bed for 174 persons. In absolute terms most beds were available in the capital region, Vilnius county, where ~31,9% of total beds were available to ~29,2% of the total population, meaning there were 160 persons per hospital bed in that county. The lowest provision of hospital beds, as indicated by the highest ratio of persons per hospital bed of 388, was in Telšiai county, where ~2,1% of total beds were available to ~4,7% of the total population, while the highest provision of hospital beds was with 133 persons per hospital bed, in Klaipėda county, where ~15,2% of total beds were available to ~11,6% of the total population.

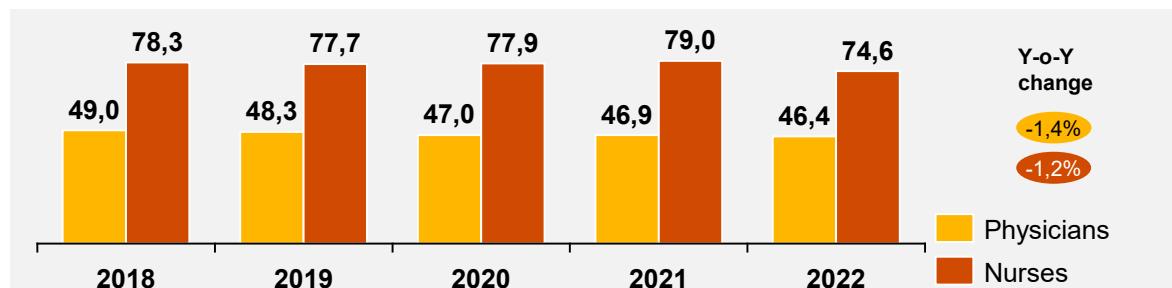
As compared to the EU-27 average, healthcare in Lithuania is not perceived as too expensive as it presents an unmet need for ~0,3% of total population aged 16 or above (EU-27 average was ~1,1%). The biggest gap in reported unmet need is seen in waiting lists, as they were declared as the main reason by ~2,5% of total population, which is significantly higher than the EU-27 average of ~0,9%.

Both the number of physicians and number of nurses per 10k population has been decreasing over the last 5 years. Number of physicians has been decreasing with 1,4% y-o-y since 2018, as compared to y-o-y decrease of 1,2% in the number of nurses per 10k population.

### Self-reported unmet demands of population by reason (% of population 16+)



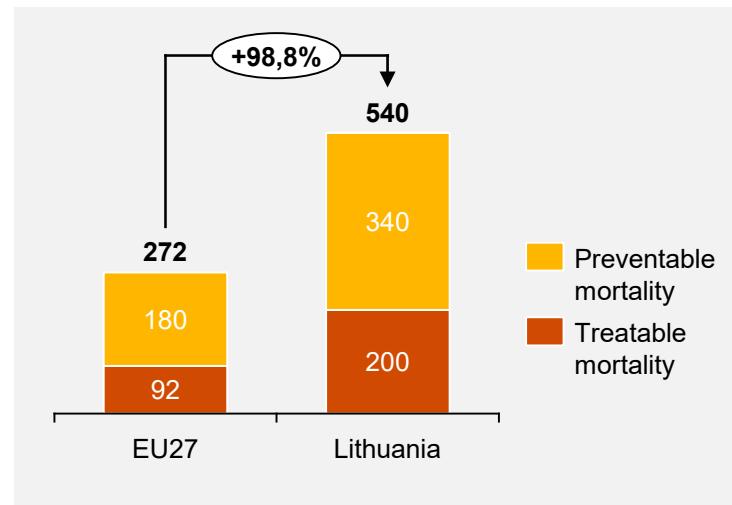
### Physicians and nurses, per 10 thousand population



# Both, preventable and treatable, mortality rates are higher of the EU average, less people perceive themselves in good health

## Hospitals – Key Issues (2/2)

### Mortality rate compared to EU average

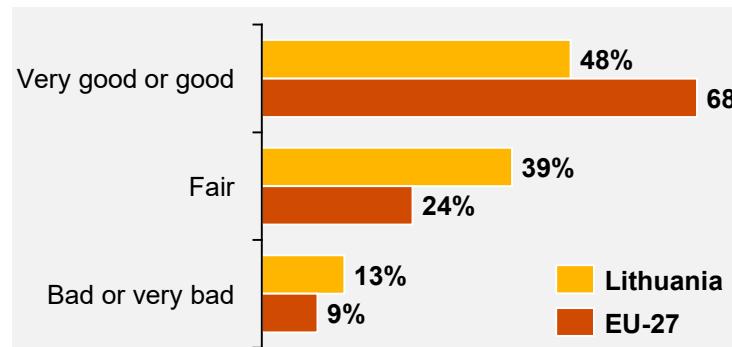


Lithuania is 3<sup>rd</sup> out of the 27 EU member states, both for rate of preventable mortality (340 to the EU-27 average of 180), and for the rate of treatable mortality (200 to the EU-27 average of 92), as the only two countries with higher rates are Romania and Bulgaria. Combined treatable and preventable mortality rate in Lithuania is almost twice the EU-27 average (540 to the EU-27 average of 272, or ~98,8% higher).

In 2021, there were ~47k total deaths (excluding injury, poisoning and certain other consequences of external causes) in Lithuania. Diseases of the circulatory system contributed to the largest share of deaths, amounting for almost half of total deaths (~49% or ~23k deaths), out of which ~61% (or ~14k deaths) were due to the ischaemic heart diseases. Neoplasms contributed for ~17% of total deaths (or ~8k deaths), which was the second largest cause of death. The majority of those deaths (~98%) were due to the malignant (cancerous) neoplasms. Deaths related to COVID-19 were the third largest group, accounting for ~15% of total deaths, which is in absolute terms ~7k deaths.

Data for 2021 has shown that Lithuania had with ~1,5% (the EU-27 average was ~3,6%) one of the lowest shares of children with unmet needs for medical examination or treatment out of all 27 EU members (only three EU-27 states had better share, while one had the same). The share of children with unmet needs was the largest in rural areas (~2,3%) and the lowest (~0,9%) in cities, while share in towns and suburbs was around 1,1%.

### Self-perceived health, and risk factors



In 2022, ~48% of the population aged 16 and above perceived themselves as either in "good" or "very good health", which is ~20% lower than the EU-27 average. Moreover, on average ~4% more people perceived themselves as in "bad" or "very bad" health (~13%) than in the EU (~9%). Share of people perceiving themselves as in "fair health" was at ~39%, which is significantly higher than the EU-27 average of ~24%.

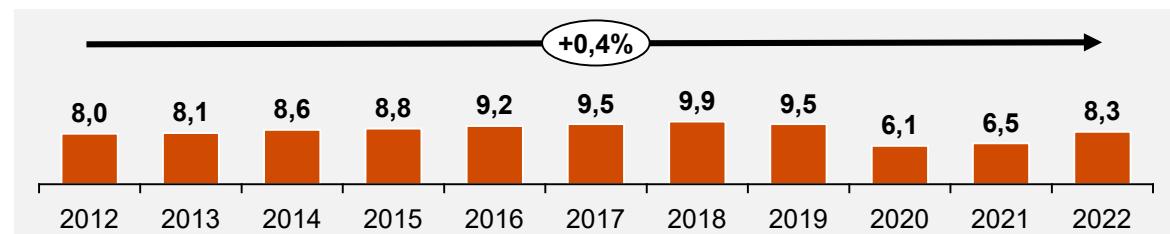
The biggest death risks are in relation to behavioural risk factors. Dietary risks were estimated to amount for ~25%, tobacco to ~14%, and alcohol to around 6%.



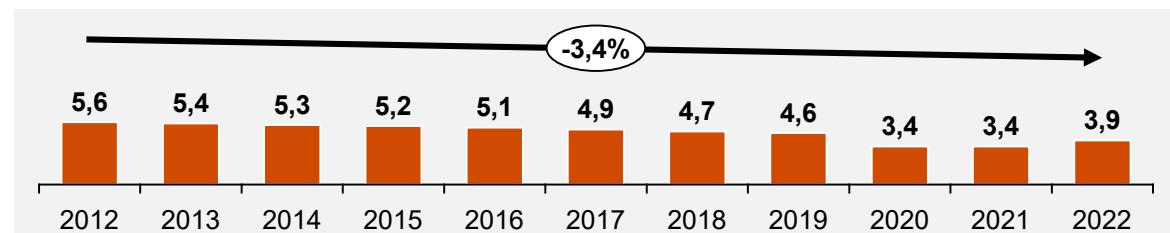
# The market demand is mostly influenced by the effects of the COVID-19, and the subsequent reductions in consultations

## Hospitals – Market Demand

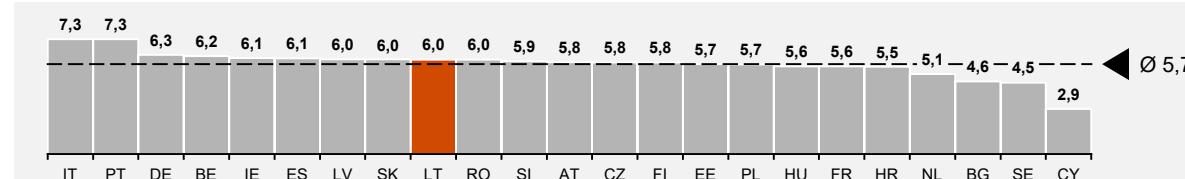
### Average number of visits to physicians, per capita



### Number of hospital days for inpatient cases in Lithuania in M.



### Average in-patient length of stay across EU in days in 2021 (curative care)



Sources: Eurostat, Statistics Lithuania, PwC analysis

In the last decade in Lithuania, number of hospital days for inpatient cases has been steadily declining with a CAGR of about 3,4% since 2012. The largest decline, of about 26%, as compared to the previous year can be seen in 2020, when COVID-19 pandemic started. According to the national statistics office, in the same year, hospital days because of the COVID-19 were around 17k, while in 2022 this number almost doubled to ~32k hospital days.

The number of medical doctor consultations per inhabitant were steadily increasing up to 2018, reaching 9,9 consultations. Due to effects of the COVID-19 pandemic the number of consultations dropped sharply to 6,1 and is slowly starting to rebound.

In 2022, the most hospital days were due to diseases of the circulatory system, which amounted for about 23,7% (or about 933k hospital days). Hospital days due to neoplasms (the second largest cause of deaths) amounted for about 8,4% of hospital days (or about 332k hospital days).

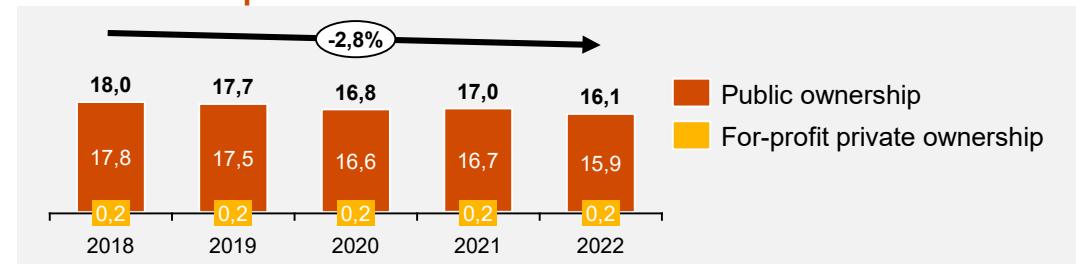
According to the Eurostat data, average in-patient length of stay for patients of curative care was in 2021 in Lithuania 6 days, which is just above of the 5,7-day average of basket of selected EU countries for which the data is available. The longest average of in-patient length of stay in 2021 was due to infectious/parasitic diseases, averaging at around 12,7 days. Patients hospitalised due to circulatory system conditions spent on average 8,5 days in curative care, which is about 0,1 more than the average in-patient length of stay due to COVID-19. Patients hospitalised due to neoplasms on average spent 6,7 days in curative care.

Considering that patients hospitalised due to infectious/parasitic diseases had the longest average length of in-patient stay, they amounted for only ~4% of all discharges. On the other hand, the patients hospitalised due to circulatory system diseases were the major driver of demand for hospital beds, while also being the leading factor of deaths in Lithuania.

# Number and utilisation of hospital beds has been declining, with majority of beds intended for curative care

## Hospitals – Market Supply

### Number of hospital beds in ths.



In-line with the declining trend of the EU and developed countries, number of beds has been steadily declining in Lithuania in recent years. The decrease of hospital beds can be seen in a negative CAGR of 2,8% since 2018, which in total amounted for about 1,9k less beds available in 2022 as compared to 2018. Decrease in the number of hospital beds indicates that overall healthcare medical treatments and procedures became more efficient and effective, thus decreasing the amount and length of in-patient stays.

Moreover, the Ministry of Health set out the requirements for infrastructure and staff loads with the intent to increase the quality of patient care. Furthermore, the Ministry is implementing initiatives for more healthcare to be provided at patients' homes, all leading to decreases in the hospital beds.

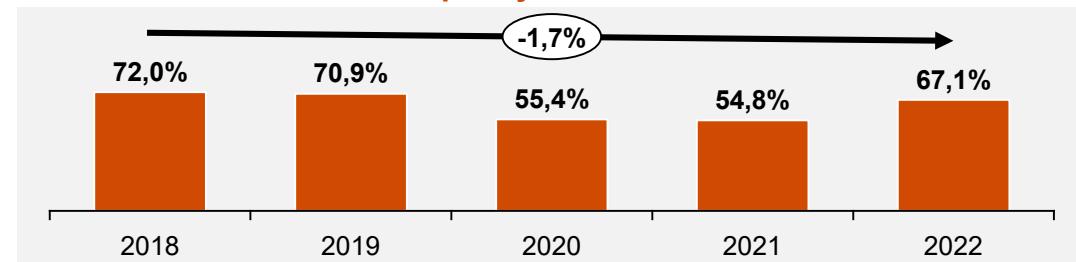
Looking at the range of data from the past 15 years, the decline in the supply of curative care hospital beds is reflected also in the number of beds in general hospitals per 10k population, which has been on a declining trend since 2011, when it reached its peak value of 54,1 beds per 10k population. In 2022, that number was 41,4 beds per 10k population amounting for decline of ~2,4% on a yearly basis.

Utilisation of hospital beds in Lithuania, as calculated by multiplying the total number of beds with 365 days and dividing with the number of actual hospital bed-days, has been declining with 1,7% on a yearly basis since 2018.

In that period, the lowest utilisation of hospital bed capacity can be seen in 2021, amidst the COVID-19 pandemic when it reached 54,8%. In 2022, utilisation of bed capacity was still lower than the pre-pandemic levels, however, it is recovering, as it was about 22,5% higher than in its lowest point in 2021.

The vast majority of hospital beds, ~73,5% (or about 11,8k beds) are those intended for curative care. About 14,6% of total hospital beds (about 2,4k beds) are psychiatric care beds in hospitals, while about 8,9% of total beds in hospitals (about 1,4k beds) are designated to other patients (such as those rehabilitating). The remaining ~3,0% of beds (about 0,5k beds) of the total supply are long-term care beds intended for patients diagnosed with tuberculosis.

### Utilisation of current bed capacity in Lithuania



### Capacity by type of bed, 2022



7

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# Retirement homes





# Demand for elderly care is expected to increase, which is being mitigated by private investors

## Retirement homes

### Key conclusions — Phase 1

- The responsibility for administering long-term care services for elderly is delegated to the municipalities. They are responsible for sufficient provision, planning, organising, and monitoring of such services within their territory, as well as setting quality indicators.
- In terms of social assistance, in Lithuania elderly have at their disposal either retirement homes, referred to as care institutions for elderly, or living in dedicated communities.
- Prices for accommodation in elderly care institutions differ among various providers (EUR 900 - 2.000), however, they are relatively high when compared to the average rent in Lithuania of EUR 575.

### Key conclusions — Phase 2

- Potential of the segment has been identified by the private players who are heavily investing in the segment and closely cooperating with public stakeholders, such as Ministry of Social Security and Labour, Ministry of Health, and municipalities, to increase the supply within the segment through PPP.
- The main issue in construction of new retirement homes relates to the land plots and use, while other issues are related to the workforce and lack of qualified personnel.



PwC Assessment



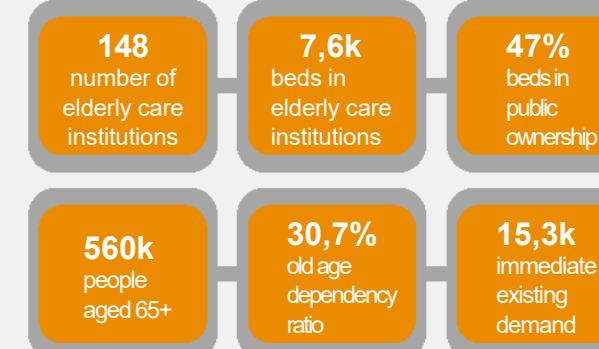
Demand for places in elderly care institutions is expected to increase, which has been recognised by all stakeholders of the segment.



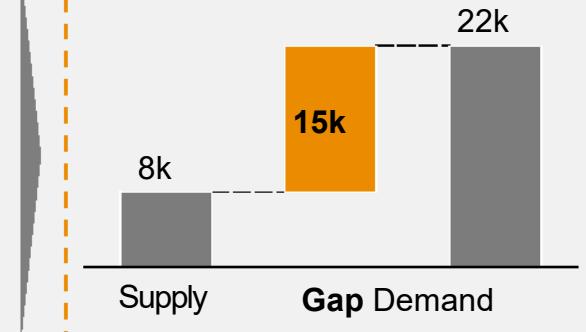
A high level of cooperation between public bodies and private players have been observed.



Key Segment Data



Gap analysis



# Retirement homes segment in Lithuania is fragmented, and mostly driven by smaller private operators

## Retirement Homes – General Overview (1/2)

### Characteristics of the system

In Lithuania, the responsibility for policy design and provision in the segment for long-term care for elderly is divided between the Ministry of Social Security and Labour, and the Ministry of Health. The former is responsible mainly for services in terms of social protection, while the latter is responsible mainly for services in terms of healthcare provided through primary care and nursing hospitals. Therefore, the ministries are responsible for setting the legislative environment on the higher level. Moreover, providers of such services must obtain operating licences from the responsible ministry.

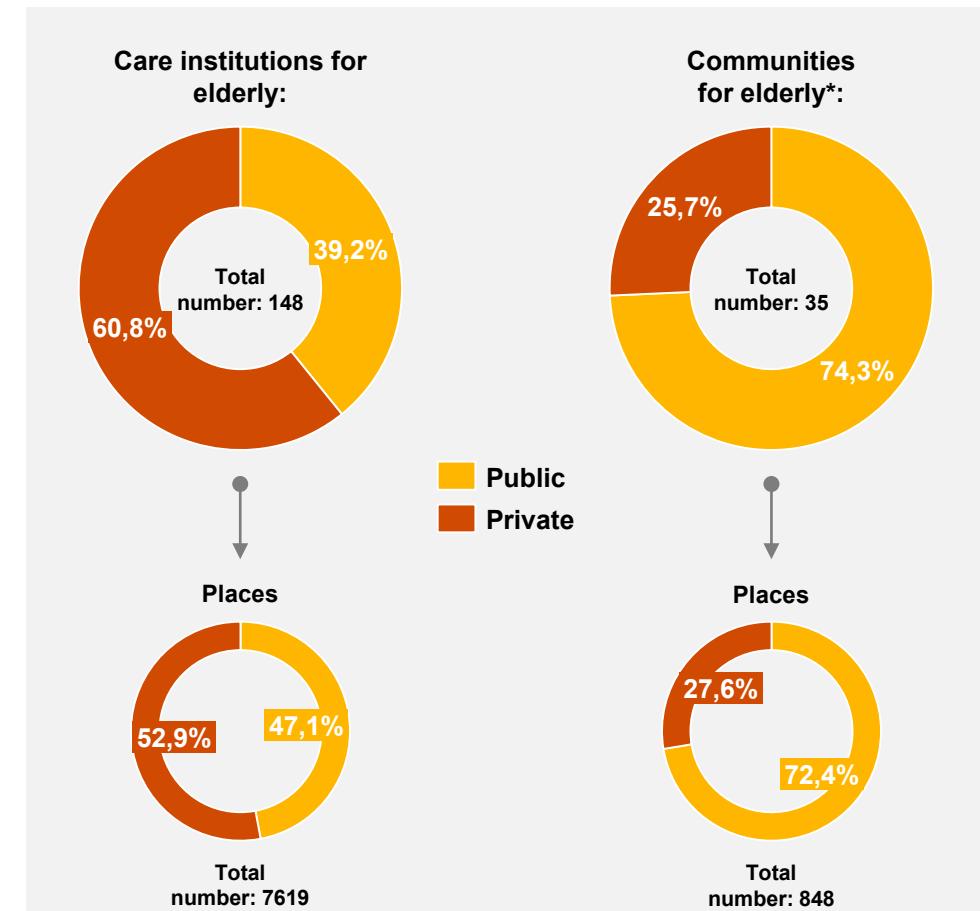
The responsibility for administering long-term care services for elderly is delegated to municipalities. They are responsible for sufficient provision, planning, organising, and monitoring of such services within their territory. Moreover, municipalities are responsible for setting quality indicators that must be followed by institutions providing such services.

Municipalities have a large amount of autonomy when it comes to administering services for elderly people, including setting the prices of services and allocation criteria. While funding for social protection related long term care services is mostly provided by the Ministry of Social Security and Labour. The ministry provides municipalities with central government transfers and subsidies, which according to OECD in this segment represents almost 90% of municipal revenue. On the other hand, healthcare related long term care services are funded by the Ministry of Health.

In terms of social assistance, in Lithuania elderly have at their disposal either retirement homes, referred to as care institutions for elderly, or living in dedicated communities. According to the national statistics, the majority of care institutions were of non-governmental ownership (~61% or 90 private institutions), however, they offered slightly above half of the places (~53% or ~4k places), indicating that such institutions of private ownership are of smaller size than public ones.

Additionally, continuing care retirement communities are available for elderly, however, those are available to a lesser extent than retirement homes. In 2022, there were 35 such communities as compared to 148 retirement homes. The majority or almost 3/4 of those were owned by municipalities.

### Overview of institutions and places by ownership, 2022



\*Communities for elderly are not included in the supply calculation of this segment

Sources: Eurostat, Statistics Lithuania, PwC analysis

# There is a high discrepancy in supply of retirement home beds across regions, with prices exceeding average monthly pension

## Retirement Homes – General Overview (2/2)

### Domestic care and prices of homes

In total there were 7.619 places available in Lithuania in 2022, ~53% of those places, or 4.034 places, were of private ownership, while the rest ~47% of total places, or 3.585 places, were of public ownership. Across Lithuania the total number of places amounted for a provision rate of around 1,4%, meaning there was approximately 1 bed per 74 elderly persons (persons aged 65 or over) available. In comparison, provision rate in Estonia stood at ~2,9%, and in Latvia at ~1,6%.

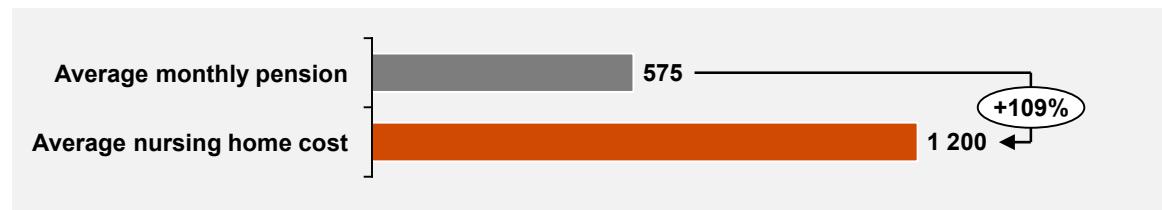
The majority of those places, or ~2k places, were located in the Kaunas county where around 21% of elderly people in Lithuania live, amounting to 1,7% provision rate or 1 bed per 60 persons. The lowest provision rate was with ~0,9% in the Panevėžys county, where 414 places were at disposal to around 9% of elderly population, meaning there was 1 bed per 117 persons.

In contrast, the highest provision rate was with ~1,7% in Marijampolė county, where 484 places were available for ~5% of the total elderly people in Lithuania, therefore, there was 1 bed per 58 elderly persons. In the capital Vilnius county, where the largest number of elderly population lives (~26% of the total elderly population) the provision rate stood at ~1,2%, meaning there were ~1,8k places or 1 place per 80 persons.

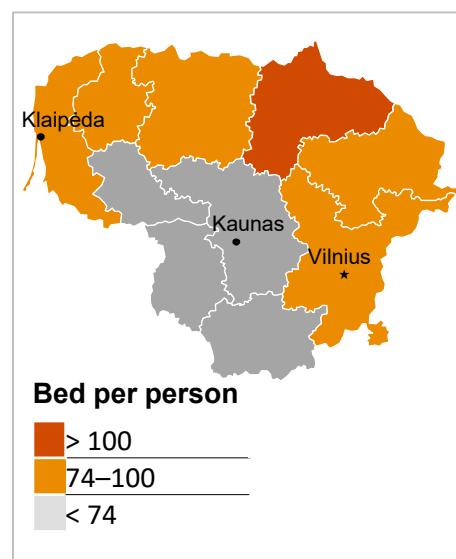
Prices for accommodation differ among various providers, however, they generally start at around EUR 900 per month and can reach more than EUR 2.000 per month. Prices are based on the services included, quality of living, location of the premises, and various other common deciding factors. However, generally prices per month fluctuate around EUR 1.200.

Considering the average old-age monthly pension is EUR 575, the majority of costs has to be covered by the family or savings from the beneficiary. For this reason, the Government offers financial help for people requiring accommodation in such institutions and are not able to afford it themselves. Compensation is offered by the Ministry of Social Security and Labour, which also sets the criteria of eligibility.

### Pension and monthly fees for retirement homes, per month, in EUR



### Split of beds in residential homes, by regions



Region	Bed per p.	Institutions	Places
<b>Lithuania</b>	74	<b>148</b>	<b>7.619</b>
Kaunas county	60	41	1.921
Vilnius county	81	23	1.775
Klaipėda county	75	15	850
Šiauliai county	80	12	694
Alytus county	59	12	526
Marijampolė county	58	11	484
Panevėžys county	117	9	414
Utena county	84	9	360
Tauragė county	63	8	306
Telšiai county	91	8	289

Sources: Eurostat, Statistics Lithuania, PwC analysis

# While Lithuania has a high share of elderly people, old-age dependency ratio is lower and diverging from the EU average

## Retirement Homes – Key Drivers

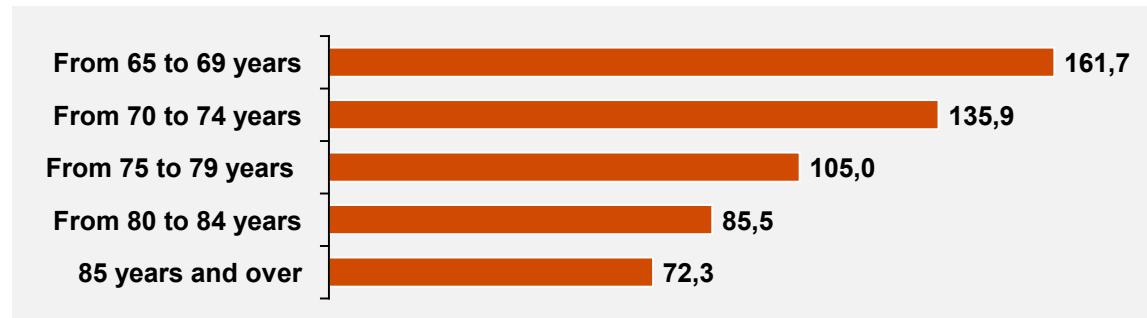
### Life expectancy in below the EU average

The average life expectancy at birth for a person living in Lithuania in 2021 was according to the Eurostat's data around 74,2 years old. Difference between life expectancy of a male and female on average differed by about 9,3 years, being 69,5 years for males and 78,8 for females. Compared to the EU-27 average, life expectancy for females was lower by about ~4 years (the EU-27 average was 82,9 years), while life expectancy for males was lower by about 7,7 years (the EU average was 77,2 years).

However, in 2021 persons of age 65 could on average expect to live for 16,1 more years, reaching 81,1. Males of the same age class could expect to live for 13,2 more years, reaching 78,2, and females for 18,2 more years, reaching 83,2. Out of those, males could on average expect to live healthy for 5,2 more years, while females for 6,6 more years. Taking into account this data, we can expect an increase for demand of the LTC services.

Old age dependency ratio (population 65 and over to population 15 to 64 years), was in 2022 lower of the EU's (~33% in 2022), rising with a lower rate and reaching 30,7% in 2022.

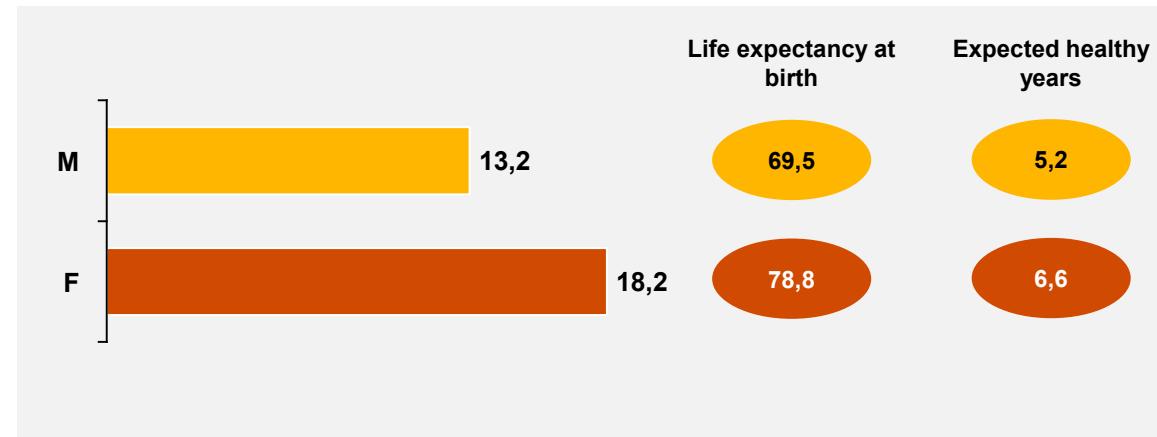
### Population aged 65+ (2022), in ths.



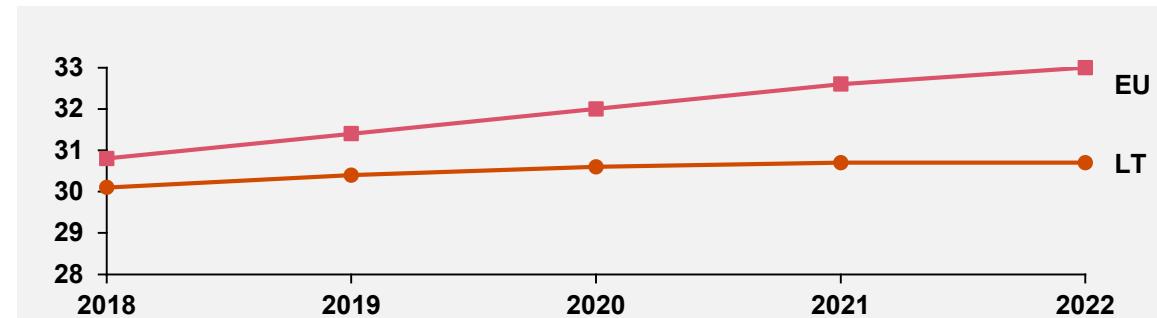
Sources: Eurostat, Statistics Lithuania, PwC analysis

PwC

### Average life expectancy at age 65 (2021)



### Old-age dependency ratio, in %



44

# Ageing population is driving the demand upwards, while the growth of supply, coming from private players, will continue

## Retirement Homes – Demand & Supply

### Demand

We identified growth of the elderly population as the main driver of demand in this segment. In 2022, there were around 561k persons 65 years or older, which is around 20% of the total population of Lithuania. Projections show that in the following years the number of elderly people in Lithuania will increase to ~679k by 2035, amounting for a CAGR of ~1,4% of a 15-year long period. However, the number of persons aged 80 years or over will in the same period increase only by ~0,5%, reaching 175k persons in 2035 (in 2022 the number of 80-year-olds stood at ~158k, amounting for ~5,6% of total population).

However, life expectancy is projected to increase both for males and females. By 2035, for both genders at the age of 65, it is expected to increase for ~0,2 years on a yearly basis, reaching 16,7 years for males, and 21,5 for females.

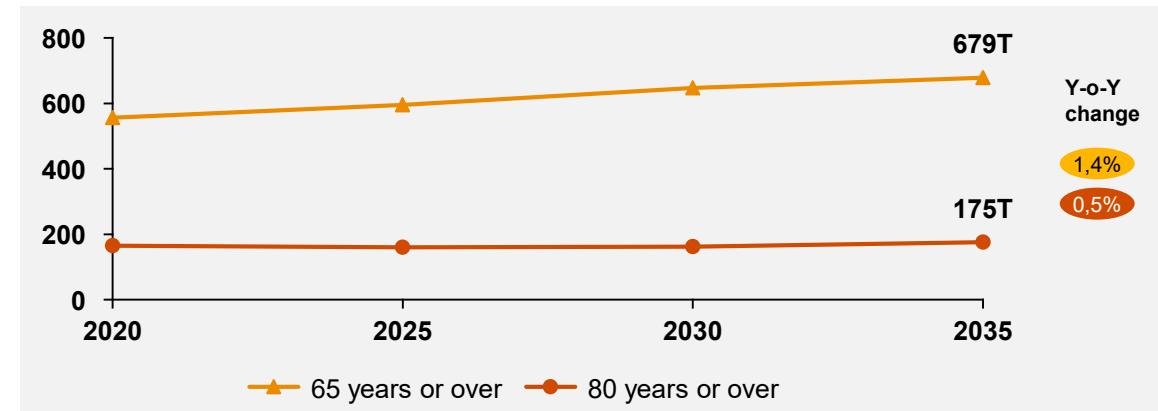
All of this indicates that the demand for the retirement homes will increase in the near future.

### Supply

Accordingly to the national statistics office, there were 148 retirement homes in Lithuania, with capacity of more than 7k places. The majority of those institutions (~61% or 90 institutions) were of private ownership, offering ~4k places of accommodation. In the period of 5 years, since 2018, the number of private institutions was increasing with 7,7% on a yearly basis, also increasing the number of places by 9,3% y-o-y. Thus, indicating that facilities being constructed in the later period are of higher capacity offering more places than their older counterparts. In contrast, in the same period the number of public institutions remained relatively stable, fluctuating between 59 and 58 facilities. The same is true also for the number of places available in such institutions, which increased by 91 places in 5 years to ~3,6k places in 2022.

Considering that public investment in the segment has been stagnating, and with private investments growing, we can expect the market to continue to be dominated by private players, who are smaller in nature, only operating one or two homes.

### Population projections for elderly, in ths.



### Supply of beds in social welfare homes (elderly)

