7. Towards a sustainable and resilient economy

7.1 Major challenges remain beyond the coronavirus crisis

The COVID-19 pandemic hit Belgium's economy hard. In 2021, however, it recovered strongly on the back of massive government support bolstering the demand side of the economy across the world. This steep revival has ushered in rising inflation, suggesting that policy priorities must now shift from supporting demand to a greater focus on the supply side of the economy. Belgium is no stranger to supply-side issues: even before the pandemic, the country was in need of structural reform to secure sustainable and resilient growth.

Chart 7.1

The Belgian economy has strengths and weaknesses

Source: Eurostat.

Recovery should not be about a mere return to pre-coronavirus conditions. For one thing, the COVID-19 crisis has set in motion a range of fundamental changes and the Belgian economy is bound to look different post-crisis. Examples include wider digitalisation both at the consumer level (online shopping) and in corporate Belgium (working from home, for instance), and digital technology will undoubtedly be used more than before the crisis. And it is against this backdrop that economic actors will have to find new ways to conduct their business.

Belgium's economy had been facing major fundamental challenges even before the pandemic hit, and its economic fabric has to continually adjust to be able to create prosperity for the medium and long terms. It is therefore imperative that the economy grows sustainably and has the resilience to withstand any negative shocks that might occur.

The Belgian economy is marked by a series of favourable, but also some unfavourable structural factors. Its strengths definitely include its high level of prosperity, as traditionally measured by GDP per capita. This figure is significantly higher than the euro area average and slightly ahead of the average for Belgium's three main neighbouring countries, although it lags the average levels recorded in the three Nordic EU Member States (Denmark, Finland and Sweden). On a number of other indicators, Belgium outperforms all European reference areas mentioned above. For instance, the Belgian economy boasts high productivity levels as it adds more value per hour worked; it is more integrated into the global economy; and has a strongly positive net international investment position, indicating that it has significantly more external assets than liabilities.

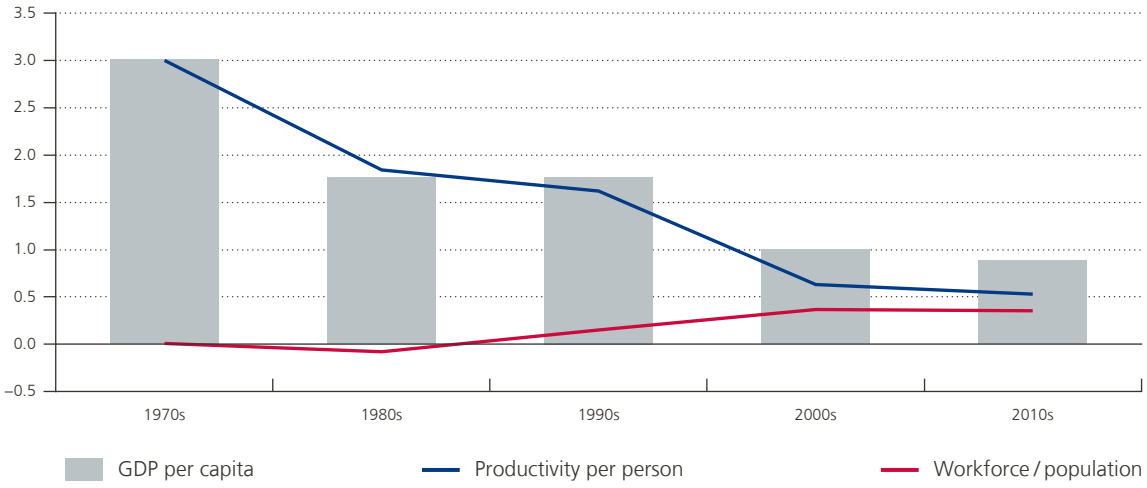
All that said, Belgium's public debt as a percentage of GDP is much higher than in other countries, leaving it with less fiscal margin to promote socially desirable initiatives and absorb negative shocks. Also, the Belgian economy is more emissions-intensive, as its businesses emit more greenhouse gases per unit of value added created than those in its reference zones. Consequently, the necessary transition to a low-carbon economy will involve much more effort in Belgium. And lastly, relatively fewer of its residents are in work, meaning that relatively smaller numbers of people are actively contributing to wealth creation, and productivity growth is also structurally lower than elsewhere in Europe.

Subdued productivity growth stems from a trend decline that is visible in most developed economies but markedly more pronounced in Belgium. In the

Chart 7.2

Drop in productivity growth slows prosperity growth

(average year-on-year change in relevant periods, in %)



Sources: OECD, NBB.

1970s, productivity per worker[1] was still growing by an average 3 % per annum, but the subsequent two decades saw rises of only 1.8 % and 1.6 % respectively. In fact, during the 2000s and 2010s, productivity growth shrank even further, to a little over 0.5 % per annum on average. Such subdued productivity growth is cause for concern. After all, productivity trends used to be the key source of prosperity, given systematically slow employment growth in Belgium. Over the past five decades, then, the pace of wealth creation has fallen significantly in the country.

To retain and grow economic prosperity, it is essential to get more people into the workforce and boost their productivity. And the climate challenge is making it important for Belgium to be able to make the transition to less carbon-intensive activities and to a renewable energy supply that is still reliable and affordable. These challenges can only be taken on properly if the sustainability of public debt is assured.

1 Data on the volume of labour and therefore also on productivity per hour worked have only been available since the 1990s, which is why productivity per person has been used for this long-term comparison. For the entire period for which data are available, particularly during the 2000s and 2010s, the conclusion still stands: productivity growth (per person and per hour worked) has persistently slowed.

These various challenges are discussed in more detail in this chapter.

All these goals are interlinked to some extent, and progress in one area may contribute to a favourable development of other factors. Measures to enhance productivity, such as training and education, can make work more attractive as real wages go up. When the low-educated join the workforce, this may temporarily reduce measured average productivity, but as they train and gain experience, long-term productivity may well go back up. Both higher employment and increased productivity benefit public finances, helping to bring public debt down to more sustainable levels. This, in turn, creates margins to absorb negative shocks, and to focus more government support on productivity-enhancing, inclusive and net-zero policy measures. Lastly, the greening of Belgium's economy will undoubtedly require a reallocation of labour and capital. Although this may temporarily affect productivity, this does not need to lead to a permanently less dynamic productivity trajectory. Innovation is the key to align further economic growth with caring for our climate.

Belgium has many key advantages that need to be preserved and enhanced to make its economy

more inclusive, more dynamic and carbon-neutral, while ensuring the sustainability of its public finances. The country has weaknesses, too, which need addressing.

Among Europe's innovation champions, with a few areas that need more focus

Its innovation capacity is one of the Belgian economy's key strengths and the country has been at the forefront of European innovation for years. During the health crisis, it reaped the benefits from its strong specialisation in pharmaceutical research and, in 2021, it joined the Nordic EU countries in the group of *innovation leaders* according to the European Commission's Innovation Scoreboard [1].

1 The group of innovation leaders consists of all countries whose Innovation Scoreboard rating exceeds 1.25 times the European average. When the scoreboard was first drawn up, Belgium ranked among the group of strongly innovative countries, with innovation performances between 1 to 1.25 times the European average.

Belgium has improved its performance since the Innovation Scoreboard was first launched, notching up a 20.7 point advance between 2014 and 2021, from 122.8 to 143.5 points. By contrast, the European average increased by a mere 12.5 points in the same period. Belgium's improvement ties in directly with its R&D spending, which has been on the up and up since 2005 on the back of some of the most generous direct and indirect government aid programmes within the EU. In fact, these accounted for nearly 3.2 % of GDP in 2019 and for the first time exceeded the 3 % target set down in the Europe 2020 strategy.

Belgium is one of the EU's innovation leaders

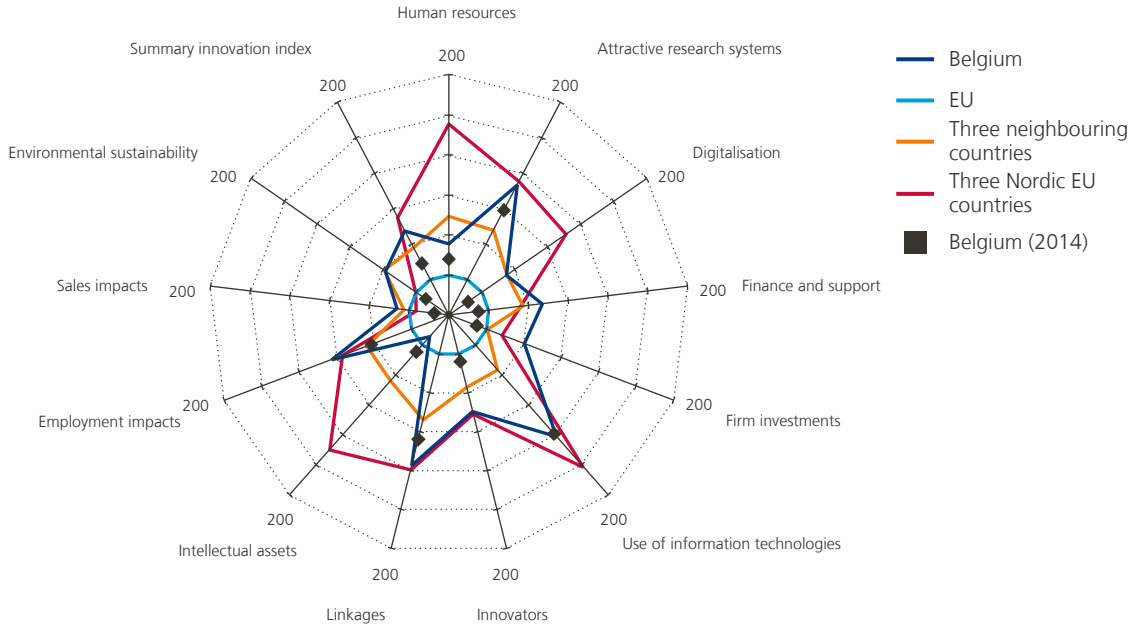
It may look hard to marry these generally excellent scores on innovation with the weak productivity growth that has been Belgium's bane for many decades now.

As argued in previous editions of this Report, these overall weak aggregate productivity growth figures mask a wide variety of very different performances indeed. Belgium's leading technology companies continue to innovate and lock in major productivity

Chart 7.3

Belgium among European innovation champions

(12 sub-indicators of the Innovation Scoreboard, data 2021, EU average = 100)



Source: Eurostat.

gains, whereas the technologically laggard invest little in R&D and merely succeed in keeping the gap from widening further in the best-case scenario.

So, the challenge is not so much to boost innovation efforts as to get more companies to innovate. A broader-based corporate innovation drive could enhance aggregate productivity growth as it could reduce the concentration of R&D on a limited number of sectors and businesses and the related concentration of specialisation in a number of innovation types (the intellectual assets dimension on the Innovation Scoreboard).

In addition, spreading innovation across the country's economic fabric should be enhanced and facilitated, and the digitalisation of whole segments of the economy – rapidly imposed by the health crisis – could bolster productivity. Companies will then have to make the additional effort to invest in tangible (IT equipment, robotisation, 3D printing, etc.) and intangible assets (software, data, etc.) as well as in training their workforce, so as to make the best possible use of the new organisation of production facilitated by such digitalisation.

And there are other weaknesses or potential bottlenecks in the innovation arena. For one thing, the Belgian innovation ecosystem would benefit from better performance on lifelong learning for employees (the human resources dimension), which would, in the main, have a positive impact on productivity and the employment rate (see section 7.2).

Lastly, Belgian production of innovations in environmental technologies is well below the European average, even if the country is sixth on the European ranking for ecological sustainability of the innovation ecosystem. To make a success of the transition to a low-carbon economy and actually play a leading role, Belgium will have to create additional incentives to increase production of green innovations.

An economy that is digitalised to a large degree, but still has some gaps to close

The degree of digital transformation is another advantage for Belgium. Perhaps less striking than its innovation capacity, but in 2021 it came 12th among the 27 EU countries in the Commission's DESI ranking (Digital Economy and Society Index) and ended up 6th on the integration of digital tools in companies (online sales, social media presence, electronic information-sharing between businesses, etc.).

That said, the DESI index also flagged a number of weaknesses in Belgium's digital transformation. More specifically, the country is trailing in its roll-out of 5G and of high-speed fibre-optic networks. Investment is planned to address these issues[1], including in Belgium's National Recovery and Resilience Plan.

Digital human capital is another area of concern. The percentage of the Belgian population with basic or advanced digital knowledge exceeds the European average, but the proportion of information and communication technology (ICT) graduates is lower, and this is reflected in significant shortages of ICT specialists in the labour market.

The shortage of ICT specialists in the labour market is depressing growth

A recent study[2] revealed that companies with a skilled workforce in science, technology, engineering & mathematics (STEM) benefit the most from digital transition and innovation. Businesses' innovation and digitalisation efforts therefore need to include training policies to ensure their people have, acquire and retain the necessary skills.

A final weakness is Belgium's underperformance relative to the EU average in terms of the digitalisation of government services, and particularly in terms of open data. To improve this situation, Belgium's

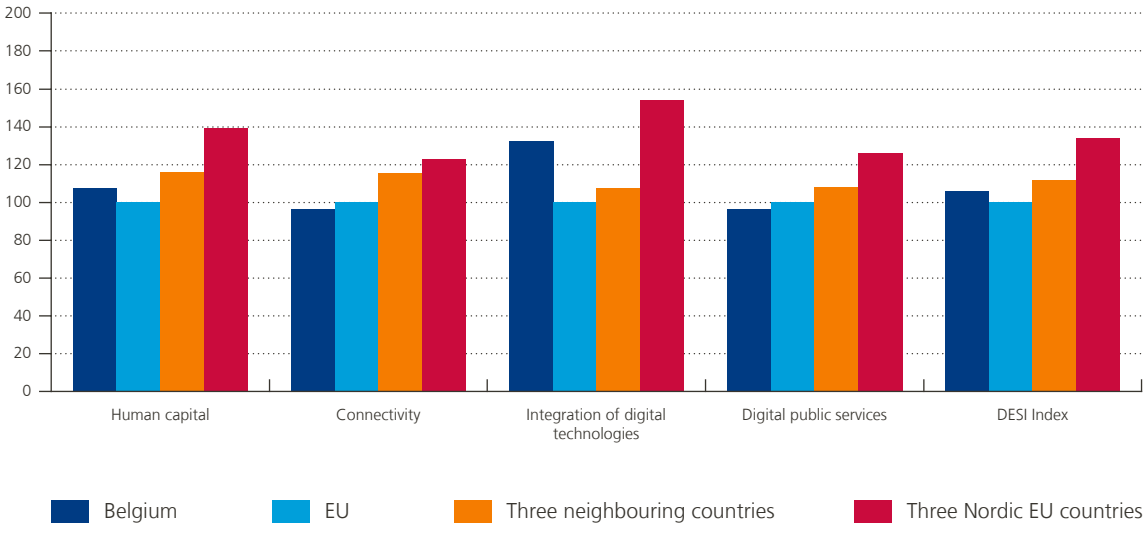
1 Historical operator Proximus is planning to have 70 % of households on its high-speed fibre-optic network by 2028.

2 See Bijnens G. and E. Dhyne (2021), The return on human (STEM) capital in Belgium, NBB Working Paper 401.

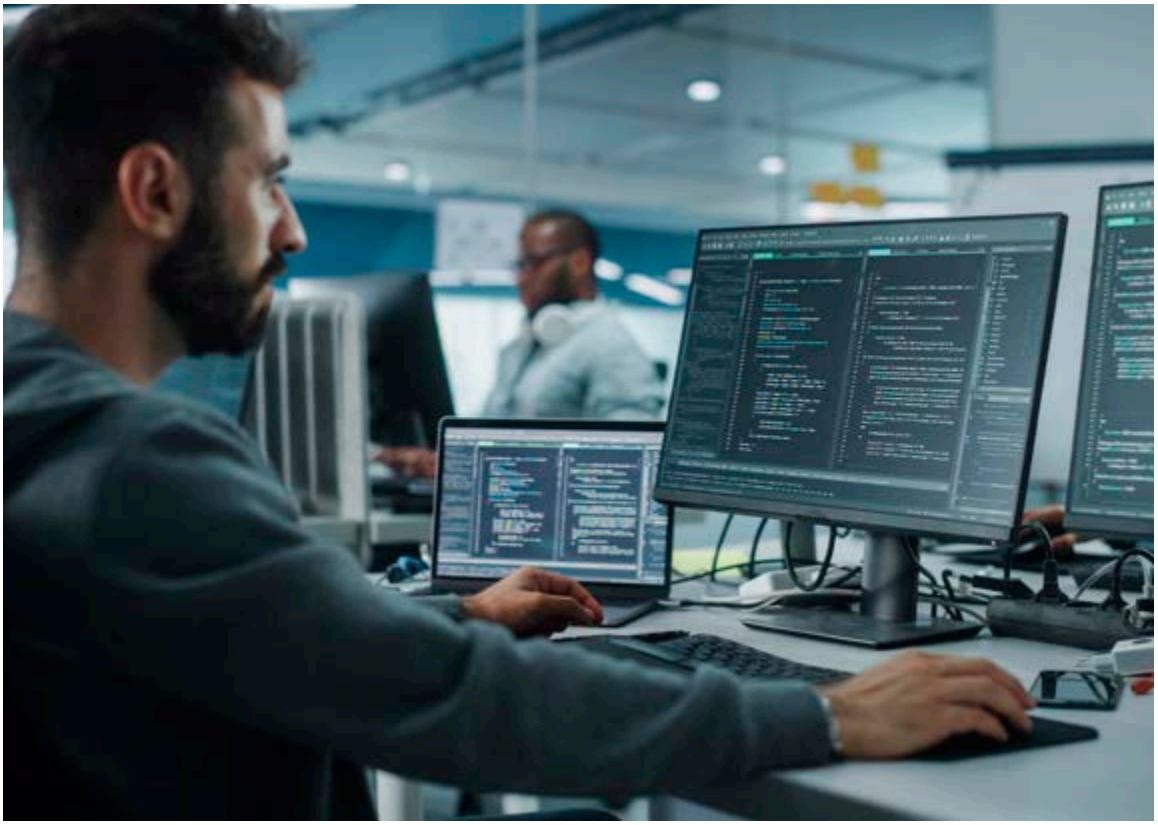
Chart 7.4

The Belgian economy is amply digitalised but still has weaknesses in fibre-optic connections and digitalisation of government services

(DESI index and components, 2020, EU average = 100)



Source: Eurostat.



National Recovery and Resilience Plan has earmarked € 796 million for capital spending on the digitalisation of government services.

Better rules and regulations for smoothly operating markets

A stable regulatory framework, setting out fair rules and sending clear signals to the various economic actors so as to allow them to make optimum investment and consumption decisions is essential for the recovery of productivity growth and the fight against global warming.

One particular aspect of regulations that influence productivity growth lies in the rules governing corporate demographics. However, the small numbers of companies starting or ceasing to trade in the past two decades may well have affected the process of reallocating resources. The post-2008-2009 financial crisis zombification of the Belgian economy described in numerous studies may have been partly due to excess protection of existing businesses and to cumbersome incorporation and liquidation procedures for companies – even if other factors may have come into play.

Reallocation of resources continued during the crisis

Low risk of zombification following the health crisis

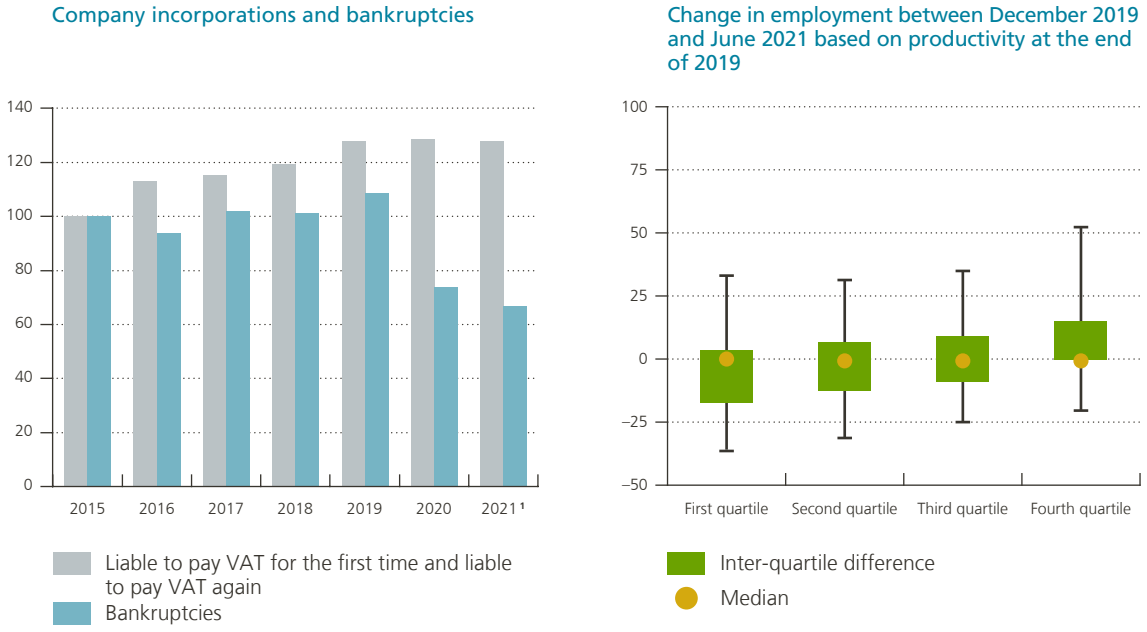
The historically low bankruptcy rates recorded in 2020 and 2021 might suggest that the COVID-19 pandemic could cause a fresh wave of zombification, but various factors appear to suggest that this risk is not as high as it was after the financial crisis.

For one thing, a lot of new companies have been established in recent years, even throughout the health crisis. And, secondly, the forced disruption or closure of selected activities, which coincided with periods of moratorium on corporate bankruptcies, inspired many entrepreneurs – as

Chart 7.5

Dynamic business demography has gone hand in hand with efficient reallocation of resources, even in the midst of the crisis

(left-hand chart: index 2015 = 100, right-hand chart: in %)



Sources: Statbel, NBB.

1 Companies that became liable to pay VAT for the first time and those that became so again in the first ten months of 2021; bankruptcies in the twelve months of 2021.

noted in chapter 5 – to partly tap into their own money to get their business back on track and redefine their business models. This should fuel renewed growth.

Lastly, during the crisis, various Belgian governments have taken measures to protect businesses and employees to keep Belgium's manufacturing fabric from fraying. This would not appear to have hindered an efficient reallocation of resources. Companies that cut their workforces the hardest between December 2019 and June 2021 were precisely those that were performing at the bottom end of their sectors by the end of 2019, whereas the best-performing companies continued to grow and recruit people during the crisis.

BOX 7

Sustainable development indicators

By the Law of 14 March 2014 amending the Law of 21 December 1994 containing social and miscellaneous provisions, the Parliament instructed the Federal Planning Bureau (FPB) to devise a set of beyond-GDP indicators measuring quality of life, human development, social progress and the sustainability of the Belgian economy. To honour this, the FPB and the National Accounts Institute have, since 2016, published an annual report on beyond-GDP indicators. From 2022, to achieve greater consistency, these indicators will be joined with those measuring progress on the United Nations' sustainable development goals (SDGs). In keeping with the Law, what follows is a summary of this report under the title "Sustainable development indicators".

A broad selection of individual indicators

Since the 2019 edition, the individual indicators are also grouped around the 17 SDGs. The data for the 1990-2020 period will be exclusively available via www.indicators.be, together with notes on 81 indicators for the SDGs plus five supplementary beyond-GDP indicators.

The report also recounts the progress achieved on the indicators' transition to the SDGs, under the evaluation brief given to the FPB by the Law of 5 May 1997 on the coordination of federal policy for sustainable development. These evaluations are also reported online. In keeping with its brief, the FPB constantly updates the indicators of sustainable development and aligns them with developments in knowledge and public debate.

Evaluation of individual indicators

Progress made towards the goals – set at Belgian, European or global level – is evaluated depending on the indicators:

- For indicators that come with a targeted number and a deadline, the evaluation considers whether the target can be achieved within the timeframe set if current trends are continued over the 2015-2030 period. These targets are set by a range of programmes and agencies (SDGs, the Europe 2020 strategy, the National Reform Programme, the federal long-term view for sustainable development) or to reflect international commitments made by Belgium.

- For indicators that have qualitative targets only – e.g. up, down or stable in relation to the SDGs and the federal long-term vision for sustainable development – the evaluation determines whether the indicator's historical trend (since 2000) is moving in the right direction in a statistically significant manner. This evaluation is less pertinent, as no firm pronouncements can be made on its level and the speed at which it is changing.

Progress towards the SDGs

Out of the 86 indicators featuring in this year's edition, the FPB takes stock of progress made towards the SDGs, based on a selection of 51 indicators (three per SDG).

An evaluation on the available data in November 2021 does not throw up a clear trend: on current trends, 35 of the 51 indicators are rated as unfavourable or undetermined, with additional efforts needing to be made to achieve the SDGs. Out of the four components that make up sustainable development (social, environmental, economic and governance) the indicators for the environmental component (16 out of 51 indicators) received the most favourable evaluation, whereas those for the social component (23 indicators) are rated more unfavourably. The economic and governance components (7 and 5 indicators respectively) comprise too few indicators to arrive at any trends.

Considered by the various relevant categories of the population, the report finds that, for breakdowns by gender (40 indicators) many gaps are narrowing (life expectancy, unemployment rate, employment rate), with the exception of a small number of indicators (long-term incapacity for work, inactivity for family responsibility reasons, higher education graduates). Unsurprisingly, breakdowns by income levels (20 indicators) and education levels (11 indicators) are more favourable for those on higher incomes or higher levels of education – differences that typically increase, particularly in terms of poverty risk. Beyond age-related differences – on health, incapacity for work, employment rate and joblessness), no general trend may be ascertained when drawing distinctions based on age categories. Breakdowns by region (43 indicators) are also available but have not been analysed.

Composite well-being indicators

The synthetic well-being indicators developed by the FPB concern three dimensions of sustainable development: the development of society and well-being of the current generation in Belgium ("Here and now"), the well-being of future generations ("Later") and the impact of Belgian society on the well-being of the population of other countries ("Elsewhere"). Only the composite indicators of the "Here and now" and "Later" dimensions are evaluated for the period up to and including 2020, depending on data availability. Assessments of the recent situation have been made more complex as the health crisis has made it harder to gather the relevant data.

Current well-being between 2005 and 2019

The composite indicator devised for the "Well-being here and now" dimensions (W_{HN}) gauges trends in current well-being in Belgium and aims to capture any changes as adequately as possible. Between 2005 and 2019, this indicator recorded a major drop (see FPB, 2021 Report), attributable to a steeper deterioration in the population's general state of health – the key determinant of well-being in Belgium – relative to improvements at the social and economic levels (unemployment rate, severe material deprivation and school drop-out). Refining the analysis by category of the population, the decline in well-being is found to be statistically significant for men, the 16-24 and 50-64 age groups and the middle class (third income quintile). Only the indicator for those aged 65 and over rose significantly between 2005 and 2019.

The impact of the pandemic on well-being in 2020

On FPB projections in its 2021 report, Belgians' average well-being – already very low in 2019 – clearly deteriorated in 2020 and hit its lowest level since reporting started. In fact, in its last report, the FPB decided not to update the underlying indicators for measuring the composite well-being in 2020, as the indicators' comparability for these successive years was impacted by the pandemic, which has disrupted the collection of traditionally collected data. Instead, the FPB used *ad-hoc* surveys conducted over the course of the pandemic, in which respondents were asked about their life satisfaction, general health and mental health.

In terms of life satisfaction, these surveys point in the same direction, i.e. that satisfaction has been falling relative to past perceptions since March 2020, with variations depending on the societal health background (satisfaction went up when the pandemic slowed in the summer). Satisfaction rates remained lower than before 2020 – and by a very wide margin for some categories of people, such as women, young people, single people, students, unemployed or disabled people.

The pandemic also hit the key determinant of well-being: health. Belgians' perception of their state of health deteriorated and changed in tandem with the epidemiological situation. COVID-19 turns out to have affected the health of nearly one-third of Belgians, more particularly those in the 30-49 age group. The pandemic also damaged the mental health of the Belgian population, which had not been robust even before 2020, and caused psychological problems of varying intensity depending on people's situations during the health crisis. Anxiety and depression disorders remain at significantly higher levels than previously, affecting primarily women, young people and people who were already facing psychological difficulties even before the pandemic.

It is imperative for the future health condition of Belgians to be monitored, especially as so many treatments were postponed. The absence of any data on the pandemic's impact on children – who do

not feature in the surveys reviewed – is another point of concern, as well-being during one's childhood years impacts well-being as an adult.

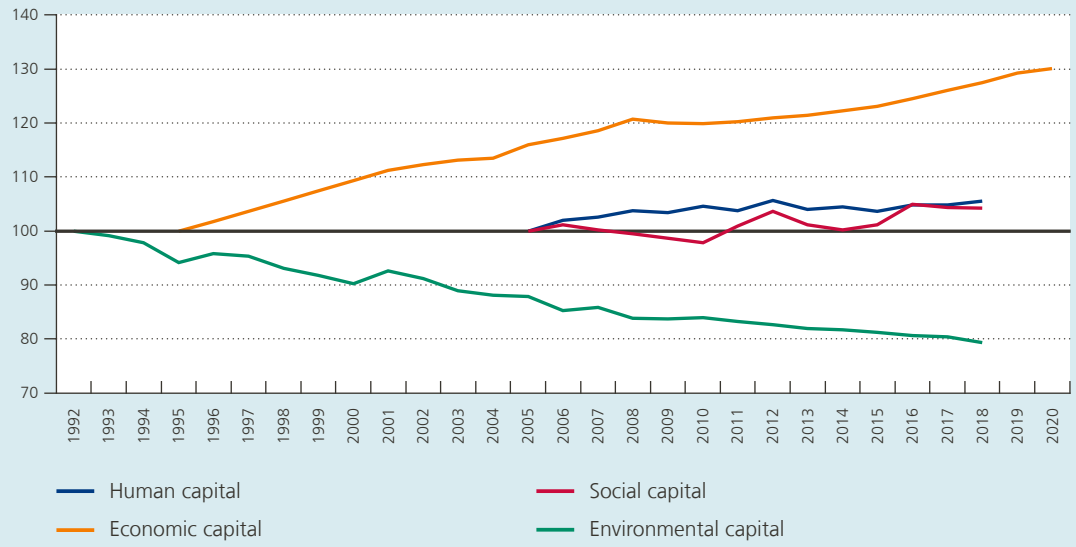
The well-being of future generations is eroded by environmental capital deterioration

A society's sustainable development implies that the lifestyle of the current generation should not come at the expense of the ability of future generations to meet their own needs. As it is impossible to predict what will constitute well-being for later generations or how such well-being will be achieved, the FPB uses an approach based on capital stocks to gauge this future well-being ("Later" dimension). This approach involves measuring changes in the stocks of resources necessary to create well-being for future generations and considers that a society is developing sustainably if it ensures that future generations can enjoy stocks of capital at least equivalent to the current level. In the conceptual framework used in this report, development is sustainable if it at least maintains all capital stocks at the same time.

Any assessment of the situation in 2020 is hampered by the limited availability of statistical data. Only the "economic capital" indicator, which captures all economic assets, could be updated. This indicator has surged since 1995 and reached an all-time high in 2020, with both physical stocks and knowledge capital contributing. The "human capital" indicator reflects individual health as well as qualifications and skills that contribute to employability and improved labour incomes. This gauge has significantly improved since 2005, thanks to the growing number of higher education graduates; by contrast, the

Composite indicators to measure sustainability of well-being

(100 = reference year[1])



Source: FPB.

1 Indicators have been standardised at 100 for the baseline year coinciding with the first year for which all components of the composite indicator are available. Capital types are not collated into a single indicator, as they are not interchangeable.

literacy and healthy life expectancy indicators have worsened. "Social capital" concerns the quality of relationships between people, at the level of both individuals and the community. It remained fairly stable in the 2005-2018 period. "Environmental capital" breaks down into air, water, land and biodiversity, all four of which contributed to the indicator's steep fall. This deterioration does not match the previously discussed favourable evaluation of the indicators for sustainable development's environment component. The assessment of progress made on the SDGs reflects a variety of indicators of favourably performing flow variables – such as the reduction in annual greenhouse gas emissions – and positive environmental policy effects, but these were not enough to halt the worsening picture in terms of environmental capital (environmental capital stock).

Based on these indicators and taking account of the deteriorating indicator for environmental capital, the FPB "Sustainable development indicators" report shows Belgium's current development to be not viable in the longer term, all the more so as other components of future well-being are liable to be adversely affected by the recent deterioration of various components of current well-being, such as education and healthy life expectancy.

7.2 Getting and keeping more people in the labour market

Structural tensions in Belgium's labour market

Every year, the country's regional public employment services review vacancies that are harder to fill and that require a lengthier recruitment process, known as bottleneck occupations. Jobs in technology, health care, trade and education are proving hard to fill across the country, but the three different Belgian Regions have their own peculiarities. In Brussels, Actiris has flagged specific recruitment issues for administrative posts, but also for ICT and technical positions. For the Flemish public employment service VDAB and its counterpart Forem in Wallonia, the greatest pressure is on professions in construction and industry.

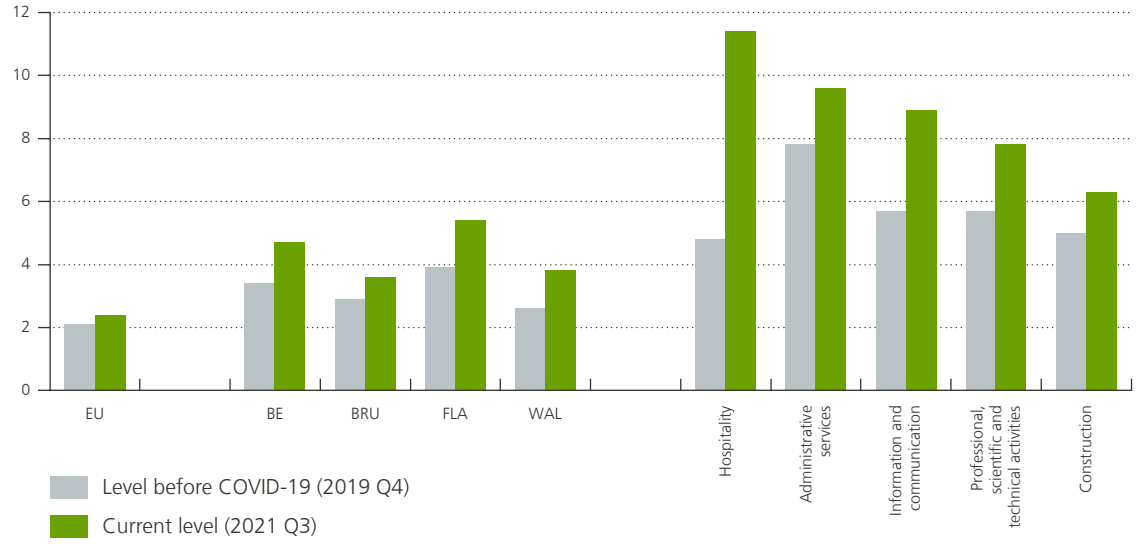
In the third quarter of 2021, a total of 196 000 jobs in Belgium were unfilled, adding up to an exceptionally high vacancy rate of 4.7 %, nearly double the EU average (2.4 %).

In Flanders, tensions are at their worst, resulting in a vacancy rate of 5.4 %, followed by Wallonia (3.8 %) and Brussels (3.6 %). Not all sectors are facing the same recruitment problems. The hospitality industry,

Chart 7.6

Exceptionally high vacancy rate [1]

(in %, seasonally adjusted data)



Source: Eurostat.

1 Ratio between the number of vacancies and the total number of filled and unfilled positions.

which lost a lot of people during the crisis and is now grappling with major recruitment issues, recorded the highest vacancy rate, at 11.4 %. Meanwhile, vacancy rates are also significant in administrative services (including agency work), information and communication, professional, scientific and technical activities, and in construction.

There are currently nearly 196 000 vacancies

The indicator's structurally high levels show up both quantitative and qualitative imbalances between the supply and demand of labour.

Too few workers who are immediately employable

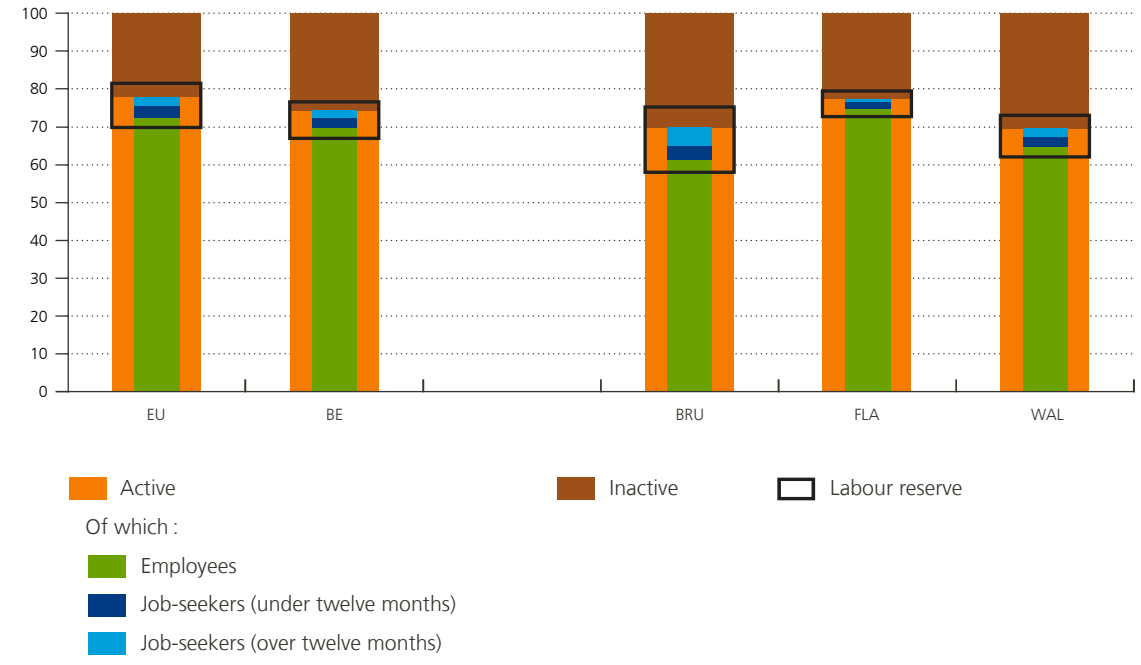
In quantitative terms and according to the International Labour Office definition, Belgium had an average of 332 000 job-seekers in the first two quarters of 2021 and its unemployment rate is therefore relatively low, at 6.5 % of the labour force compared with the European average of 7.4 %. Theoretically, if all these people could be put to work, the problem would be solved as there would be nearly two people for every job opening. However, 41 % of job-seekers have been out of work for 12 months or longer and are considered less easily employable. What is more, not all of them have the skills that today's labour market demands.

The number of people able to meet the demand for workers is not limited to these job-seekers alone, of course, as the definition of available workers can be expanded to include part-time workers that would like to work more, people who are available to work but not actively looking, and people looking for work who are not immediately available. All these people add up to the concept of the labour reserve that the Commission uses to gauge the so-called labour market slack. In the course of the first half of 2021 this

Chart 7.7

Few workers rapidly employable in Belgium, particularly in Flanders

(breakdown of the population aged 20-64 by socio-economic status, in %, average of the first two quarters of 2021 for the EU and Belgium, 2020 for the three Regions)



Source : Eurostat.

was 646 000 people in Belgium, i.e. 12.6 % of the extended labour force, which is below the EU average of 14.3 %.

The situation is not the same in all three Regions of the country. In the first two quarters of 2021, joblessness in Flanders averaged 4.1 %, virtually equal to the floor of frictional unemployment, whereas Wallonia and Brussels are still dealing with massive joblessness of 9 % and 12.4 % respectively. Allowing for the extended labour reserve, the labour market slack was at 8.8 % in Flanders in 2020, at 15.2 % in Wallonia and at 23.1 % in Brussels.

It is important that this labour reserve is matched with vacancies so as to lessen the tensions in the Belgian labour market. To a degree, this may be achieved by encouraging Brussels and Walloon job-seekers to apply for vacancies in Flanders – an essential action point in the mobility policies of the public employment services, which share vacancies and ensure basic language training. All that said, just getting job-seekers into work will not be enough.

Matching labour supply and demand must be improved if Belgium is to contribute to European employment targets[1] and, most of all, if the federal government's employment rate of 80 % by 2030 is to be achieved. This means that an additional 660 000 or so people in the 20-64 age group will need to find work.

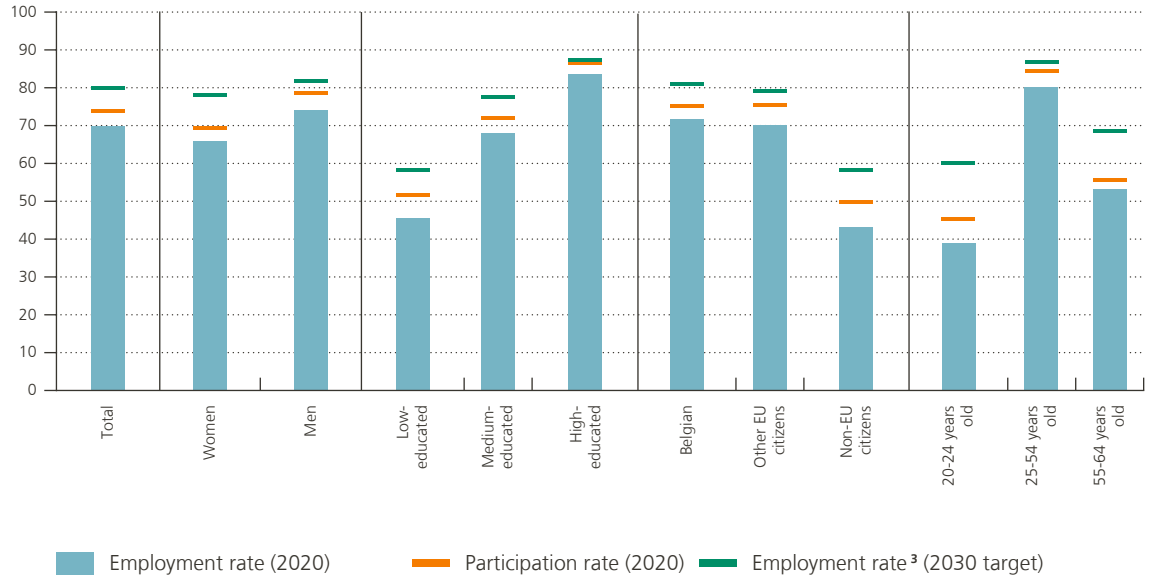
The 80 % target can only be met if the number of people in work increases for all categories of the population. An exercise by the High Council for Employment (HCE) suggests that the employment rate of particularly the 20-24 and the 55-64 age groups,

1 The European Pillar of Social Rights Action Plan envisages an employment target of 78 % for the 20-64 age group by 2030. To make an adequate contribution to this overall target, the Commission reckons that Belgium should achieve an employment target of 76.5 %.

Chart 7.8

To achieve the 80 % employment target in 2030, Belgium will also have to raise its participation rate

(employment rate[1] and participation rate[2] of 20-64 age group, in %)

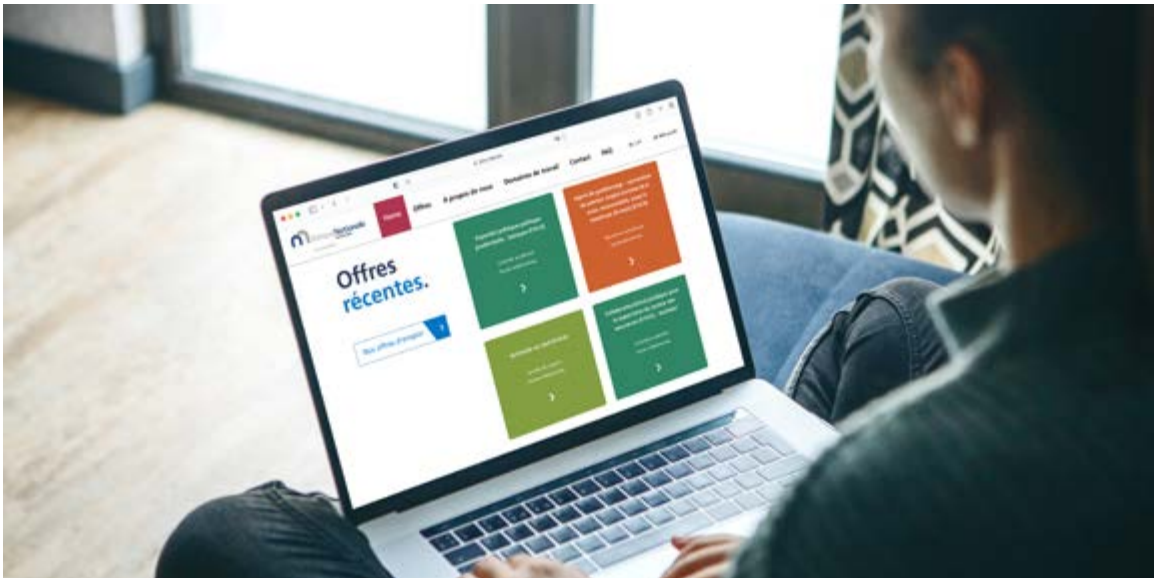


Sources : Eurostat, HCE.

1 People in work as a % of the working-age population between 20 and 64.

2 Labour force, i.e. people in work plus job-seekers, in % of the working-age population between 20 and 64.

3 Target per population group needed to achieve overall employment rate of 80 % for 20-64 age group, based on an HCE exercise.



as well as that of non-EU citizens, the low-educated and women will have to go up very sharply indeed[1]. Of course, there are different ways to achieve the target but less of an increase in one category must then be offset by bigger ones in others.

Women could help boost Belgium's employment numbers significantly. Although their employment rate has been rising for years now, it is still below that for men, even if their levels of education are typically higher on average. The gap is even wider if the employment rate is considered in full-time equivalents (FTEs). A recent analysis[2] shows that becoming a mother still has a negative impact on female employment and increases women's tendency to work part-time.

Even before the federal target was set, the various regional authorities had been on a mission to raise their employment rates. The Flemish government agreement, for instance, also set its target at 80 % by 2030, while Wallonia is aiming for 68.7 % by 2025. With regional employment rates widely different at this point in time – 75.1 % in Flanders, 64.7 % in Wallonia and 61.5 % in Brussels – the Regions with the lowest ratios will have to make the biggest efforts, even if all three of them will have to achieve a major advance if targets are to be met.

Incidentally, if it is to achieve its 80 % target, Belgium will also have to sharply push up labour market participation. The HCE exercise clearly showed that all sections of the population would have to see their employment target exceed current participation rates by 2030, often by a wide margin, meaning that the target is unachievable even if all the unemployed were to step into jobs. What this boils down to, then, is that a significant proportion of the currently inactive working-age population needs to be mobilised – and that goes for all the Regions, even in Flanders, which has the lowest proportion of inactive people.

The inactive will also have to be mobilised if the shortage of workers is to be addressed

A mismatch between required and acquired skills

In qualitative terms, one of Belgium's key advantages is its very highly educated population. Between 2000 and 2020, the proportion of low-educated people fell to 20 % among the 20-64 age group, from 39 %. Meanwhile, the proportion of highly-educated rose in the same period, to 41 % from 26 %.

1 The exercise compared Belgium's employment rate for all sections of the population with the figures for Germany, France, the Netherlands, Denmark, Sweden and Finland. This scenario saw the employment gap between men and women in Belgium halve and saw some of the difference with the employment rate of the best-performing reference country erased for all groups, taking the country's total employment rate to 80 % (HCE, 2021).

2 See Nautet M. and C. Piton (2021), "How does parenthood affect the careers of women and men?", NBB, Economic Review, December.

Higher levels of education typically also mean higher labour market participation: not only are the highly-educated more frequently active, their integration in the workforce also tends to stick more. Diploma levels are not everything, though: it is the choice of fields of study that determines matching between the demand and supply of workers. In Belgium, STEM studies attract relatively few students, while there is massive labour market demand for graduates in these fields. Meanwhile, hardly 2 % of graduates opted for ICT, compared with an average 4 % in the EU. This may explain why no less than 11 % of Belgian companies report having difficulty recruiting such experts – the highest percentage in the EU, where the average is below 5 %.

Digitalisation and the greening of the economy are also impacting labour markets. Some professions are disappearing, new positions are emerging and most if not all jobs are changing. The changes are causing businesses to look for different skillsets – not merely new technical skills, the so-called hard skills, that these new types of jobs require, but increasingly also soft skills, such as relationship competences and communication skills, innovation capabilities and adaptability.

First lever: activation

To meet workers' needs and create an inclusive growth dynamic, it is not enough just to keep people in work, as happened during the health crisis. The country also requires an efficient system of activation and reallocation of resources based on recruitment incentives, assistance when seeking jobs and training programmes for frequently sought positions and bottleneck occupations.

When drawing up the 2022 budget, the government took a wide range of measures aimed at greater activation of workers, by aiming to make work financially more attractive and encouraging lifelong learning (see below), but also by addressing labour shortages, reintegrating people in disability schemes and facilitating greater flexibility in terms of working time.

Belgium's recently approved National Recovery and Resilience Plan also includes activation measures. These longer-term reforms are looking to encourage a combination of part-time work and unemployment payments or integration income, stamp out discrimination and provide better assistance and guidance to job-seekers from vulnerable groups. For many of these reforms, including the announced overhaul of the pensions system, the actual impact on the labour market will greatly depend on real-world implementation.

All that said, any such measures are very welcome indeed, as the Belgian labour market is excessively rigid, with a range of structural rigidity factors also getting in the way of any optimum allocation or reallocation of resources – e.g. the lack of occupational and geographical mobility, too strong a link between wages and seniority instead of productivity, high taxes on wages and financial unemployment traps, to name but a few.

Second lever: making work more financially attractive

Accepting a job should always be financially more attractive than joblessness or inactivity. Gross wages, social charges and tax on earned income are not the only factors that come into play, so does the fact that social advantages such as unemployment benefits or integration income cease when people move into work. Despite a wide range of reforms in recent years – including the introduction of a social and fiscal employment bonus, tapering unemployment payments and the 2016-2020 tax shift – unemployment or inactivity traps continue to exist, making it non-viable for some people to work. With the lowest benefit payments in Belgium below poverty level, an undesirable course of action would be to cut benefits further just to make work more attractive. In fact, to combat poverty, the federal government started to raise a number of social benefits in 2021, including integration income[1]. The lowest benefits will be ratcheted up further up to and including 2024, with such increases coming on top of indexation and through the allocation of the so-called "welfare envelope". Such adjustments, although advisable from a societal perspective, do increase the danger of the low-educated on low wages stumbling into a joblessness or inactivity trap. To get and keep these people active, financial incentives must be adequate, for instance by way of higher gross wages or less of a fiscal and/or parafiscal burden on labour.

1 Including indexation and the welfare adjustment, integrated income was raised by 4.7 % on 1 January 2021, followed by a further increase of 8.9 % on 1 January 2022.

The 2021 agreement by the social partners on a phased increase in the average guaranteed minimum monthly income should make work more financially attractive even for the lowest-paid jobs. The increase, which is on top of automatic indexation, will be the first real such raise of the national minimum wage since the 2007-2008 inter-professional agreement. In real-world terms, the minimum wage should go up in 2022, 2024 and 2026, while a further 2028 raise is a possibility based on a comparison with Belgium's neighbouring countries[1]. To ensure that higher national gross minimum wages also lead to higher net wages, cut-off amounts for the social and fiscal employment bonuses will go up as well. Employers will be compensated for higher wage bills through an adjustment of their structural contribution reductions for low wages.

Work must be made more (financially) attractive to mobilise the labour force

The number of employees with wages close to the national minimum wage is small in Belgium. In fact, the proportion of employees on wages that outstrip the national minimum wage by up to 5 % came down from 3 % in 2000 to 2.1 % in 2015[2]. All that said, a higher minimum wage should at least

1 The average guaranteed minimum monthly income currently stands at € 1 691 a month for an 18-year-old without any seniority in a company. In April 2022, that will go up by € 76 gross a month, and by further increments of € 35 in both April 2024 and April 2026.

2 See Vandekerckhove S., Desiere S. and K. Lenaerts (2020), Minimum wages and wage compression in Belgian industries, NBB Working Paper Research 387, July.

Chart 7.9

The financial advantages of being in work remain small in Belgium and tax on labour quickly rises

(in %, 2020, for a single person with no children)

Source : OECD.

1 This indicator captures the degree to which net income goes up when an unemployed person or beneficiary of integration income finds work, factoring in tax on labour and loss of benefits payment. Calculations based on the assumption that annual income consists of twelve times the payment of wages and, in the event of joblessness, that the new wage equals the last income earned.

contribute to the relative attraction of work, as the absolute floor for wages in Belgium will go up as a result and the risk of unemployment or inactivity traps become slighter.

Lastly, fiscal and parafiscal levies are the key determinants of whether being in work is worthwhile, as any decision to work is not based on gross but on net wages. The 2016-2020 tax shift has reduced tax on labour in Belgium for all wage levels in recent years, with the contraction the highest at the lower wage end. Despite this, fiscal and parafiscal levies on labour remain significantly higher in Belgium than in its three main neighbouring countries. What is more, tax on labour rapidly rises when gross wages go up, which is related in particular to personal income tax and employee contributions to social security. This not only increases the chances of unemployment or inactivity traps, but may set up a promotion trap as well. In the latter case, a higher gross wage does not – or not sufficiently – translate into higher net wages, reducing the financial incentive to work more hours or to seek promotion.

Various Belgian authorities have devised measures to address this issue. The federal government, for one, is looking to reduce the special social security contribution percentage in 2022, helping employees to keep more in the way of net wages. As this contribution rises along with gross wages, this adjustment should also stem the risk of a promotion trap for people on low and average wages. Likewise, the Flemish authorities want to make work more attractive for people on low incomes by introducing an allowance in 2022 – the Flemish job bonus – of € 600 a year for the lowest of wages and steadily falling to zero for gross monthly wages in excess of € 2 500. Meanwhile, the federal government is also planning to introduce broad tax reform to help further reduce the tax burden on labour.

In this context, it should not be forgotten that any decision to actively join the labour market is not merely a matter of financial considerations, but also factors in working conditions, household situation, state of health and various other social and cultural considerations. To encourage labour market activity, government authorities should not focus their attention exclusively on financial aspects, but also consider these numerous other obstacles.

Government action is key to making work more attractive while at the same time combating the risk of poverty and preserving companies' competitiveness. However, this does come at a direct price for public finances, which can only be offset by a sustainably higher employment rate.

Third lever: education

Initial training and lifelong learning help to reduce qualitative mismatches in the labour market. As noted, students' choices of study or professions do not always match what companies need – and this does not just affect the highly educated. Numerous bottleneck occupations do not require high qualifications, and technical studies coupled with the system of apprenticeships ("alternative learning") offer countless employment opportunities and should therefore be encouraged. Addressing school drop-outs could reduce the problem of integration in the labour market and the need to learn new professional skills in later life. In 2020, 8 % of Belgium's young left school without a secondary school diploma or the equivalent. Although better than the EU average (10 %), the percentages differ between the Regions: 7 % in Flanders, while Wallonia and Brussels both report 10 %.

More training is needed to better align skills with requirements

Lifelong learning means that workers remain employable throughout their careers and allows them, where appropriate, to expand or adapt their skills to developments on the labour market.

The latest available Eurostat survey findings about adult education (AES, 2016) revealed that, despite a whole range of measures and resources, only 54 % of employees in Belgium had taken part in any kind of lifelong learning in the preceding year, a slightly higher ratio than the EU average of 52 %. Participation in lifelong learning tends to be lower for job-seekers, but in Belgium this still worked out at 42 %, compared with an average 28 % in the EU, thanks to a very comprehensive training offering from the country's public employment services. The situation is less favourable for the inactive, with involvement in lifelong learning amounting to 20 %, compared with 22 % in the EU.

EU agency Cedefop noted that 40 % of Belgian employees require training to stay in work or to be able

to reorient professionally. This group primarily but not exclusively comprises the low-educated. Medium-educated and high educated people with weak digital skills or who lack selected general competencies – such as communication and organisational skills or personal resilience – would likewise benefit from such training.

People do not sufficiently grasp the necessity and purpose of lifelong learning, and the 2016 AES survey found that four out of ten adults have no desire to do any training whatsoever, mostly because they feel they do not need it. Practical obstacles are also cited, including lack of time, distance, scheduling of training programmes, health and cost.

Participation in lifelong learning diverges widely, with the low-educated and over-55s the least involved.

All that said, the vast majority of Belgian companies (84 %, as against an average 71 % in the EU) are facilitating education and training for their employees, even if strategies differ per sector. Some sectors are trailing behind – such as the hospitality industry and retail – while others are ahead of the pack, such as financial services. Company size is a key determinant of training intensity. On average, small businesses offer less in the way of education and training, although efforts in this area vary hugely depending on the company's activities. It has also been observed that more productive companies also boast the highest training intensity, without this necessarily being a matter of cause and effect.

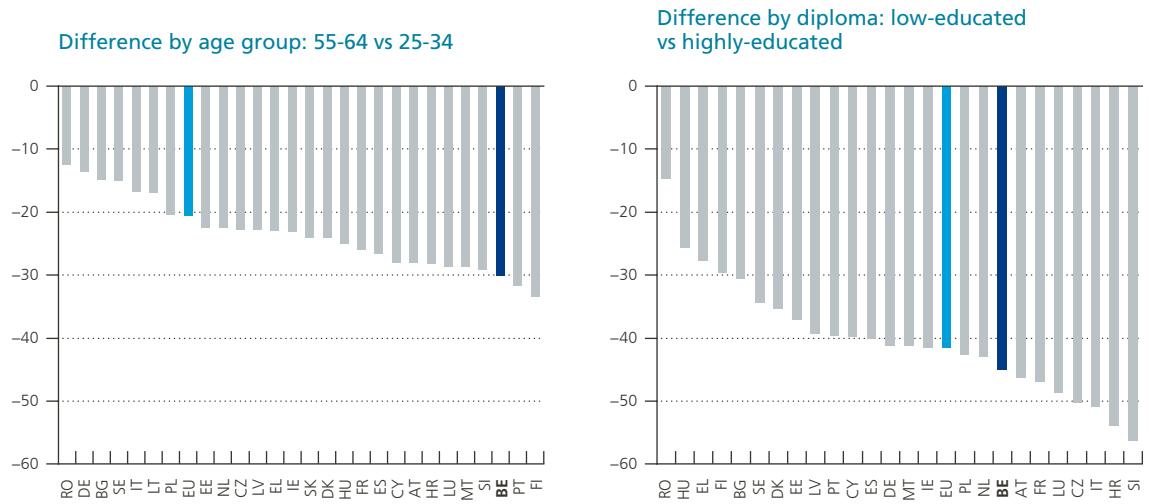
The lifelong learning system has many players from the public and private sectors, as well as associations. The country's federal structure and the division of authorities between the various policy levels do make it more complex to arrive at a comprehensive policy of lifelong learning. Having dedicated its 2021 report to lifelong learning, the HCE[1] has drawn up a series

1 HCE (2021), *Lifelong learning for employees: investing in the future*, November.

Chart 7.10

Low-educated and over-55s less involved in lifelong learning

(differences in rates of participation in formal and non-formal training over a period of one year, in percentage points, 2016)



Source: Eurostat.

of recommendations relating to (1) coordinating the various players and simplifying the system, (2) as well as to the necessity for a forward-looking vision and to match training and education with labour market needs and (3) increase the participation of underrepresented groups, and (4) to the importance of better statistics and an evaluation of policies.

7.3 The climate challenge and the energy transition

Global warming is a very serious long-term risk for economic activity and for life on Earth. For Belgium, too, its consequences may be very significant indeed, as was visible from the devastation caused by the floods in July. To limit climate warming to 1.5 degrees Celsius, as set out in the 2015 Paris Climate Agreement, global emissions of greenhouse gases must be cut swiftly and significantly[1]. However, the current trend is still clearly upwards: following a slight fall in 2020 in the wake of the COVID-19 crisis, worldwide emissions went right back up in 2021.

Against this backdrop, the European Union has committed to cut emissions hard. The Commission launched its "Fit for 55" package in July 2021, whose purpose is to achieve climate neutrality by 2050. Its interim target for 2030, meanwhile, has been set at a 55 % reduction in greenhouse gas emissions when compared with 1990. These targets still have to be translated into reduction figures for the EU's various Member States, but even without knowing the precise arrangements it will undoubtedly be a major challenge to cut Belgian greenhouse gas emissions sufficiently. After all, the Belgian economy emits more greenhouse gases than other European countries per euro of value added created, and household consumer patterns also cause more emissions per head of the population.

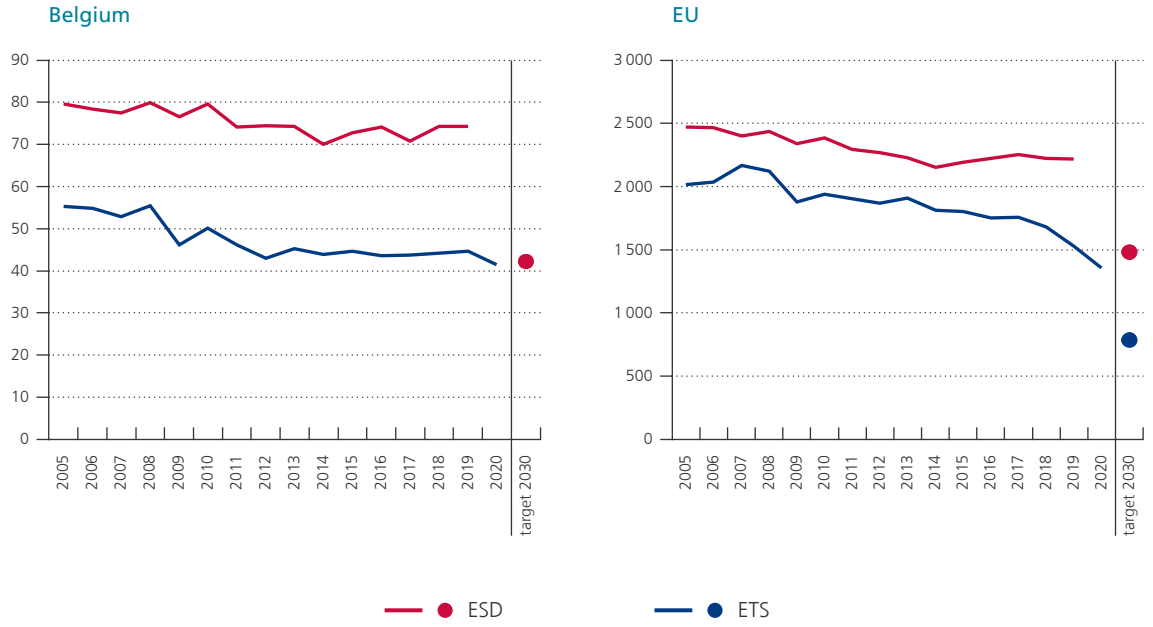
The EU has opted for a two-pronged approach to emissions. Emissions by highly energy-intensive companies in selected sectors – such as power generation, oil refining, the steel, cement and metals industries, chemicals and aviation within Europe – are regulated by the EU Emissions Trading System (EU-ETS). The system (see box 8), which covers around 40 % of emissions in the EU, operates fully within the European sphere, and ETS sectors are governed by

1 Swift emission reductions are imperative, as the planet heats up from the total amounts of greenhouse gases emitted into the atmosphere and as these diminish only very slowly.

Chart 7.11

Ambitious emission reduction targets [1]

(emissions of greenhouse gases, in million tonnes CO_2 equivalent)



Sources: EC, EEA.

1 The EU Emissions Trading System (ETS) governs the emissions of the EU's most energy-intensive businesses, while the effort-sharing decision (ESD) scheme governs all emissions that are not part of ETS.

European targets. All other emissions [1] are subject to the effort-sharing decision (ESD) arrangement, which sees an EU-set emission target translated into goals at the level of the Member States, which then have to take necessary measures to achieve the targeted reduction.

The Commission has translated the total targeted emissions reduction goal of 55 % into separate targets for ETS and ESD sectors, with emissions of greenhouse gases expected to be, respectively, 61 % and 40 % below their 2005 numbers by 2030. Compared with 2019 – the most recent year for which available data are not distorted by the coronavirus crisis – this means that emissions will have to come down by around half and one-third respectively. To help get ESD sectors emissions down by 40 % at the European level, the Commission proposes that this reduction should be pegged at 47 % for Belgium. In view of the very minor cuts Belgium has achieved since 2005, this implies that emissions must come down by 43 % compared with 2019.

A clear price signal for all greenhouse gas emissions would be useful

In view of the little time that remains, these targets are highly ambitious. In keeping with the allocation of responsibilities in Belgium, it is mostly left to the Regions to take the requisite measures. Unlike ETS, for which a price signal was chosen – more precisely, the implicit carbon price arising from trading a limited and diminishing number of emission allowances – the various Belgian authorities have, to date, mostly opted to regulate in order to cut ESD sectors' emissions, for instance by imposing minimum insulation requirements for housing or gradual phase-outs of cars driving on fossil fuels. But even for these sectors, a price signal would be useful. Taxation levied based on the carbon content of the type of energy would make fossil fuels relatively more expensive

1 With the exception of "land use, land-use changes and forestry". In net terms, this sector does not emit carbon in Belgium but rather (slightly) absorbs it (around 1 % of total emissions in 2019).

than renewable energy sources. Provided the future development of such taxation is announced in a timely fashion, such carbon prices could strongly steer businesses and households towards the most cost-efficient way to help achieve the target. Also, a carbon tax, announced well ahead of time, would result in much less price volatility, in contrast to ETS, which pins down the quantity of emission allowances.

Even if the authorities in Belgium decided not to go down the carbon tax route in the non-ETS sector, a whole range of fiscal instruments still result in an indirect tax on emissions. That said, the implicit carbon prices these reveal are very wide-ranging indeed. For example, the effective carbon rate is currently close to zero for heating family homes while company cars enjoy very favourable tax treatment, which means that – particularly coupled with fuel cards supplied by companies – the pollution costs of these cars are not shouldered by users[1]. In contrast, emissions by other road users is relatively highly taxed, with implicit prices much higher than current ETS prices for Belgian industrial companies. Belgium could massively improve the efficiency of carbon taxation by making these levies more emission-neutral, with such a tax shift actually encouraging the most efficient emission-reducing technologies[2].

Taxing fossil fuels means that gas, oil and gas and oil-derived products and services become more expensive. Such policies do not, however, imply an instant repeat of the 2021 energy crisis, when energy suddenly became much more expensive. For one thing, that particular surge was not driven by taxation related to climate policies, but by steeply higher prices for the energy component itself. As energy commodities are largely imported, these higher prices flew out of the country and impoverished the Belgian economy. A carbon tax, by contrast, generates additional tax revenues that may be invested in the economy, or redistributed to absorb some of the consequences for more vulnerable groups. Secondly, energy price increases in 2021 were brutal and unexpected, while an optimum carbon tax should tick up gradually and in keeping with a previously communicated trajectory, allowing all actors to adapt their investment decisions accordingly and fostering a permanent change in behaviour. Note that predictability and a sufficiently long transition period are just as important for other climate-related measures – such as regulation – to guide choices in the right direction. In fact, 2021's high energy prices are not needed to make investing in green energy financially attractive, as alternative energy sources are already competitive and viable at notably less steep prices for fossil fuels, and will be even more so if and when the cost of green technologies declines further.

Carbon prices do not imply a repeat of the 2021 energy crisis

Technological progress and economies of scale at wind and solar energy facilities have pushed down the average levelised cost of electricity (LCOE) for the relevant technologies. According to a study commissioned by the EC, in 2018, these costs for plants operational in the EU were estimated at € 59 and € 84 per MWh for onshore and offshore wind energy, € 87 per MWh for large-scale solar photovoltaic (PV) energy projects and € 133 per MWh for individual solar PV installations. Various options, in fact, have levelised costs that are below those for combined cycle gas turbines (€ 98 per MWh) and well below electricity prices observed in the markets in the final quarter of 2021, i.e. around € 152 per MWh for delivery in 2022. That said, such estimates do not take into account the cost arising from the intermittent nature of these power generation options. But these cost levels suggest that electricity prices following the transition would still be lower than levels observed at the end of 2021.

All things considered, the transition to a low-carbon economy would involve a smaller[3] and more gradual rise in energy costs than in 2021, making it easier for households and businesses to change their behaviour.

Appropriate climate-related policies also require devising an intelligent accompanying energy policy to help integrate intermittent renewable sources in an efficient way. Abruptly higher prices as in 2021 and dependence on the rest of the world could be limited that way as well.

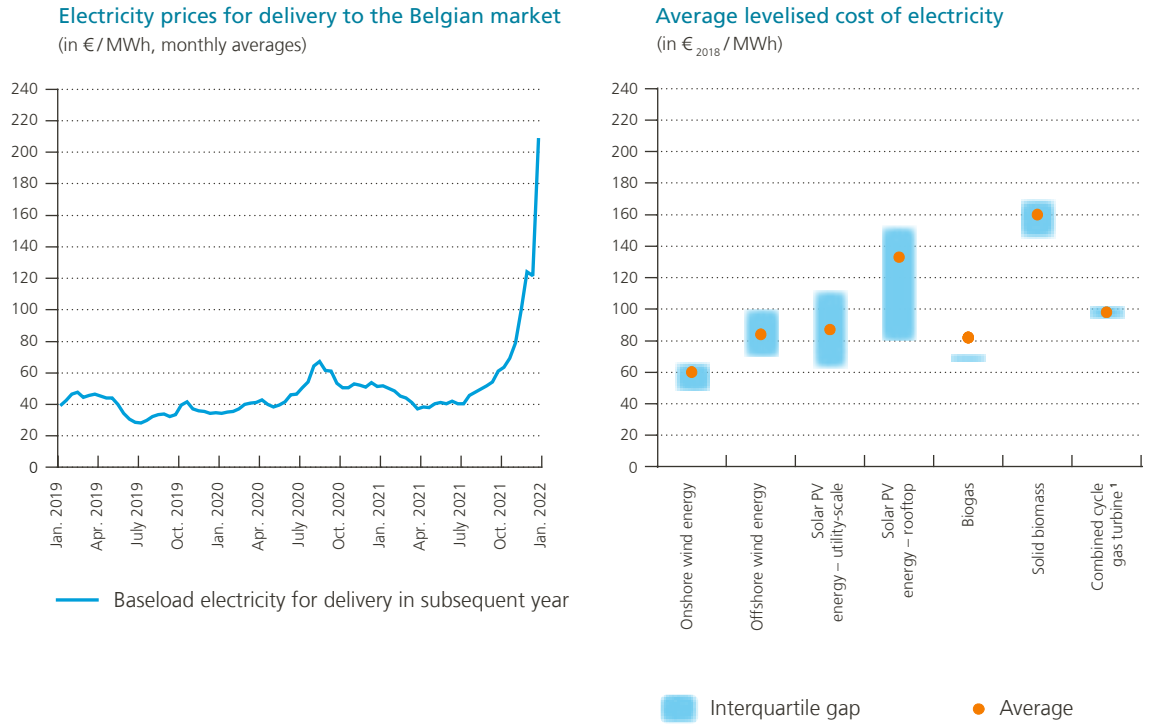
1 As discussed later in this chapter, the federal government has decided to wind down the favourable tax treatment for company vehicles running on fossil fuels.

2 For more details, see Cornille D., R. Schoonackers, P. Stinglhamber and S. Van Parys (2021), "Fiscal policy instruments to mitigate climate change – A Belgian perspective", NBB, Economic Review, December.

3 See, for instance, EC (2021), "Impact assessment report", Commission Staff Working Document.

Chart 7.12

Production costs for green electricity increasingly competitive



Sources: Refinitiv (an LSEG company) – own calculations; Altmann M., T. Badouard, D. Moreira de Oliveira, P. Torres and J. Yearwood (2020), Final Report – Cost of Energy (LCOE): Energy costs, taxes and the impact of government interventions on investments.

1 Based on fuel costs for natural gas of € 2018 25/MWh in 2019 to around € 2018 40/MWh in 2040.

BOX 8

The case for carbon pricing

Some choices by economic actors cause environmental costs that do not automatically show up in fossil energy sources' market prices. These costs may be internalised in the shape of a carbon price that forces economic actors to always include the cost of their ecological footprint when deciding on their consumption and investment. To achieve the capital spending inherently needed in the transition, and particularly on energy projects, it is essential that uncertainty is reduced by providing a clear, predictable and credible view of the medium- and long-term developments in this price.

Carbon prices may come about either by imposing them via a carbon tax or by setting an emission allowance that will then throw up an implicit price through a market-based mechanism. In the European arena, the choice was made in 2005 to implement indirect carbon pricing in selected high-emitting sectors. To this end, a limited number of greenhouse gas emission allowances is allocated that may be traded on a European-wide market, essentially curbing the emission amounts permitted to the relevant sectors. The system imposes an ever-lower ceiling on the emissions of these sectors and emission allowances in the amount of this maximum are allocated via auctions. A limited proportion is allocated free of charge to sectors competing outside the EU-ETS. Emission allowances can then be traded between companies with excess allowances and companies that emit more than the allowances they hold – so-called cap-and-trade system that is designed to leverage planned scarcity of allowances. This approach actually pinpoints the sectors' emission volumes and emission prices are determined endogenously in the markets. Over the short term, then, this type of carbon price can be highly volatile.

EU-ETS has been expanded at various stages. Up until March 2018, carbon prices under the scheme were at € 10 per tonne of CO_2 – not exactly a price level that promotes investment in the technologies needed to work efficiently towards reducing emissions in the long term, especially as these still require a great deal of innovation. However, EU-ETS prices have been advancing steadily in the past three years and nudged an average € 69/tonne CO_2 in the final quarter of 2021.

Prices for EU-ETS emission allowances

(in € per tonne CO_2 equivalent)

Source: Refinitiv (an LSEG company).

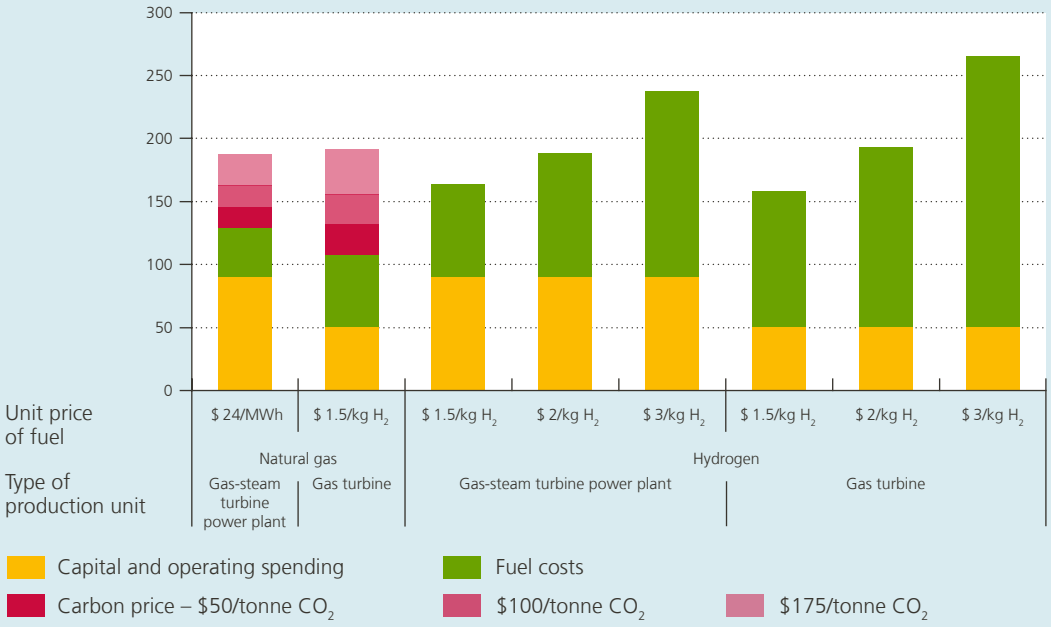
Following the EU's more ambitious climate-related commitments, the Commission tabled a proposal in July 2021 to overhaul EU-ETS in order to accelerate the emission reduction efforts of the relevant sectors. The Commission would be looking to recalibrate various components of the scheme, including a steeper reduction of the ceiling on emission allowances by 2030 – by 61 % compared with 2005, instead of the previously envisaged 43 % – by speeding up annual cuts to 4.2 % from 2.2 %. Free allowances would also be cut back and allocated on the basis of more restrictive criteria, while the system would be expanded to include shipping, buildings and road transport. New conditions for the use of the income from the auctions would be put in place to encourage innovation and to address the redistribution effects, so as not to endanger the societal acceptance of these ambitious commitments. And lastly, the Commission proposes the introduction of a carbon border adjustment mechanism (CBAM) to factor in carbon content in imported goods prices, so as to prevent leakage of polluting activities to countries outside the EU.

By tightening up the European market for emission allowances, the authorities are sending a clear signal of rising carbon prices in the years ahead, which should encourage investment in low-carbon options as well as the development of innovative technologies. Technologies such as carbon capture and storage, the production of green hydrogen through electrolysis and power from renewable energy sources should all benefit from higher carbon prices. With higher costs for projects using fossil energy sources, carbon-free technologies – which are currently not very profitable – should become sufficiently viable in technical and economic terms to be permanently adopted.

Hydrogen could replace fossil fuels in a range of processes. Usage of local electrolysis units, for instance, could help support the flexibility of the electricity system – i.e. power generation for load balancing and peak load generation. Data from the International Energy Agency (IEA) suggest that, at natural gas prices of $ 24/MWh – comparable to average prices in the 2010s – a price of $ 100/tonne of CO_2 would be needed to make the technology competitive if the hydrogen price is at $ 1.5/kg. The profitability

Levelised electricity generation costs for load balancing with natural gas or hydrogen[1]

(in $ per MWh)



Source: IEA (2019), *The Future of Hydrogen*. All rights reserved; adapted by NBB.

1 Average levelised electricity generation costs focused on load balancing – at a load factor of 15 % – according to various fuel cost scenarios: for a natural gas price of $ 7/MBtu, i.e. $ 24/MWh, and for hydrogen prices of $ 1.5, $ 2 and $ 3/kg respectively. For information on the scenarios underpinning the chart, see IEA (2019), The Future of Hydrogen.

threshold increases in tandem with the price of hydrogen: at a hydrogen price of $ 2/kg the price of a tonne CO_2 should go up to $ 175. That said, hydrogen-based production units should be competitive at the current cost of carbon and hydrogen ($ 3/kg) in view of the natural gas prices being charged in the final quarter of 2021 ($ 73/MWh for delivery to the European market in 2022).

Safeguarding reliable and affordable low-carbon power supply

The transition to a low-carbon energy system requires adaptation to new environmental requirements for both demand and supply of energy.

For energy demand, such adaptation implies greater energy efficiency and more electrification of applications. After all, if consumption is better managed by measures for rational energy use and energy-efficient equipment, this helps to reduce energy costs, boosts security of supply and reduces emissions of greenhouse gases in the proportion of power in the electricity mix that is still generated using fossil fuels. How the demand for electricity develops also depends on the pace of electrification of applications. Electricity is likely to replace fossil energy sources in both transport (electric vehicles), the heating of buildings (heat pumps) and even in some industrial processes.

In Belgium electrification is supported by government measures such as limiting access to a growing number of city centres for cars with internal combustion engines, or, more broadly, promoting electric vehicles through a greener tax system: Flanders has scrapped registration and road tax for electric vehicles, while Wallonia and Brussels have sharply cut these levies. At the federal level, tax relief will gradually be phased out for corporate cars with internal combustion engines, currently at 50 % to 100 % depending on carbon emissions and the type of fuel; such relief will no longer apply to any new cars bought from 2026. For cars not emitting carbon, relief will initially be kept at 100 % and from 2027 reduced to 67.5 % in 2031.

Tax incentives – applicable for three years and subject to conditions – were put in place on 1 September 2021 for private individuals and companies installing smart charging points: a tax cut of up to € 1 500 for private individuals and a higher deduction of investment costs for companies if the charging point is publicly accessible. The three Regions are also looking to install more public charging points – a necessity if the sale of cars with internal combustion engines is prohibited from 2035, as proposed by the Commission.

Evolution and (r)evolution in electricity demand

In terms of energy supply, the change must be supported by electricity production that is as neutral as possible in terms of greenhouse gas emissions. At this point, Belgium's electricity system is largely underpinned by gas and nuclear power plants. Power generated by solar and wind energy is on the rise – as is appropriate for a transition to low-carbon energy – but the government's decision to get out of nuclear power will require a fast and deep adjustment of the country's electricity system. After all, nuclear energy still accounts for nearly 40 % of electricity generation.

Guaranteeing affordable low-carbon power supply

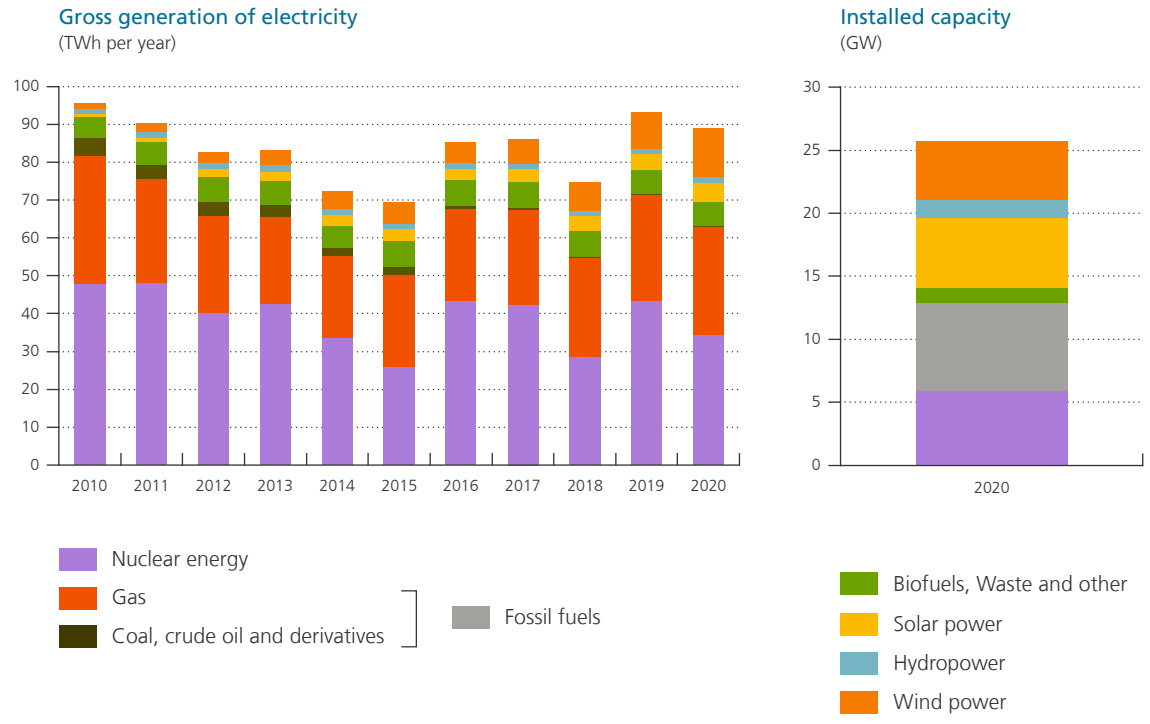
This change should not come at the expense of the security of energy supply needed to keep the economy attractive and guarantee the comfort of households. The federal government has committed to both by guaranteeing a sustainable and affordable supply.

To offset the dismantling between 2022 and 2025 of 5.9 GW in nuclear power, the government has introduced a capacity remuneration mechanism (CRM) with the aim to spark replacement capacity until the country has enough renewable energy sources and flexibility mechanisms, i.e. demand-side management solutions and/or storage capacity. Under this mechanism, the government pays remuneration for the maintenance of production capacity – as well as for the energy produced – to suppliers selected on the basis of two auctions, held four years and one year before the year of actual supply.

At the first auction for supply in 2025-26, capacity to the tune of around 4 450 MW was selected, at a cost price of € 141 million. Eligible bids to a large extent involved existing generation units – 56 % of capacity on offer, including mostly existing gas power plants – plus demand-side management installations and some new storage capacity. Two new gas power plants – in Vilvoorde and Les Awirs, each around 800 MW – were also qualified. Their licence applications are being processed.

Chart 7.13

The electricity mix must change in the years ahead



Sources: Eurostat, FPS Economy.

In 2024, a second auction will be held for the same term to help refine contractual volumes and ensure a wide diversity of available technologies, and it will also be open to non-Belgian capacity. When approving the procedure and the regulatory framework, the government paid very close attention to the CRM cost management to ensure this would not result in additional charges for citizens and companies.

The federal government is also aiming for more production from renewable energy sources by further developing wind farms in the North Sea. It is aiming to grant a new concession for 3.2–3.5 GW in additional wind energy capacity by 2030, taking total offshore wind energy capacity to between 5.4 and 5.8 GW.

Under Belgium's National Recovery and Resilience Plan, this will be supplemented with the construction of an offshore energy island that will be hooked up to other offshore production zones, as recently started with Denmark. Belgium's rather limited offshore production potential will be boosted by integration into the European network of offshore connections.

Similar aspirations are visible in proposed infrastructure for onshore transport (Boucle du Hainaut and the Ventilus projects), which should enhance the high-voltage grid to transport the power so generated to consumption centres in Belgium and the EU. Distribution networks will also have to be adapted to the ever higher share of decentralised renewable energy sources and to demand-side management solutions, requiring bi-directional flows and increased digitalisation of equipment.

A coherent and credible energy policy to attract the requisite investment

By better matching the profiles of electricity consumption and generation, it should be possible to use the generation potential through renewable energy sources, despite their higher variability, as well as to limit the need for back-up capacity. It is not enough to encourage consumers to display appropriate behaviour – both through awareness and information campaigns and through pricing that encourage active participation – it is also essential to develop the infrastructure and energy services that enable them to make the most suitable choices. The platform for the exchange of information between distribution network operators, suppliers and regulators, which came on stream in November 2021, is an important step in creating an environment better adjusted to developments in the market, such as the use of smart meters, the ongoing integration of prosumers (i.e. those who both consume and produce) and dynamic pricing.

Ensuring adequate supply that meets long-term targets requires efforts from both private actors and the political authorities. The government should establish a stable and credible regulatory framework for the energy market without delay, to reduce uncertainty and thus support much-needed private investment. Realisation of such investment is underpinned by rules devised and enforced by the various levels of government. A coherent approach and efficient coordination between the various authorities are thus absolutely essential to facilitate as affordable a transition as possible for both citizens and companies.

7.4 Ensuring the sustainability of public debt

No prosperity without sustainable public debt

Even though government debt can make economic and societal sense, certain boundaries should not be overstepped. After all, the smooth operation of the financial system is based on the confidence of lenders that borrowers are able to meet their obligations – in their solvency, in other words. In the case of governments, solvency implies that they are able to meet their current and future financial commitments, without resorting to dire economic or socially untenable policy measures. If they were incapable of doing so, lenders would charge insurmountable risk premiums or even discontinue their lending.

The pandemic and the floods have proven the need for fiscal buffers

The likelihood of a government losing control of debt dynamics increases the higher public debt gets. To be safe, the government's debt ratio must be sufficiently low for negative shocks to be able to be absorbed and the government to be able to keep control of debt dynamics. The coronavirus crisis and the floods have proven the need for fiscal buffers to handle crises. Structural challenges, such as an ageing population and climate risks, are also easier to address when public debt is lower.

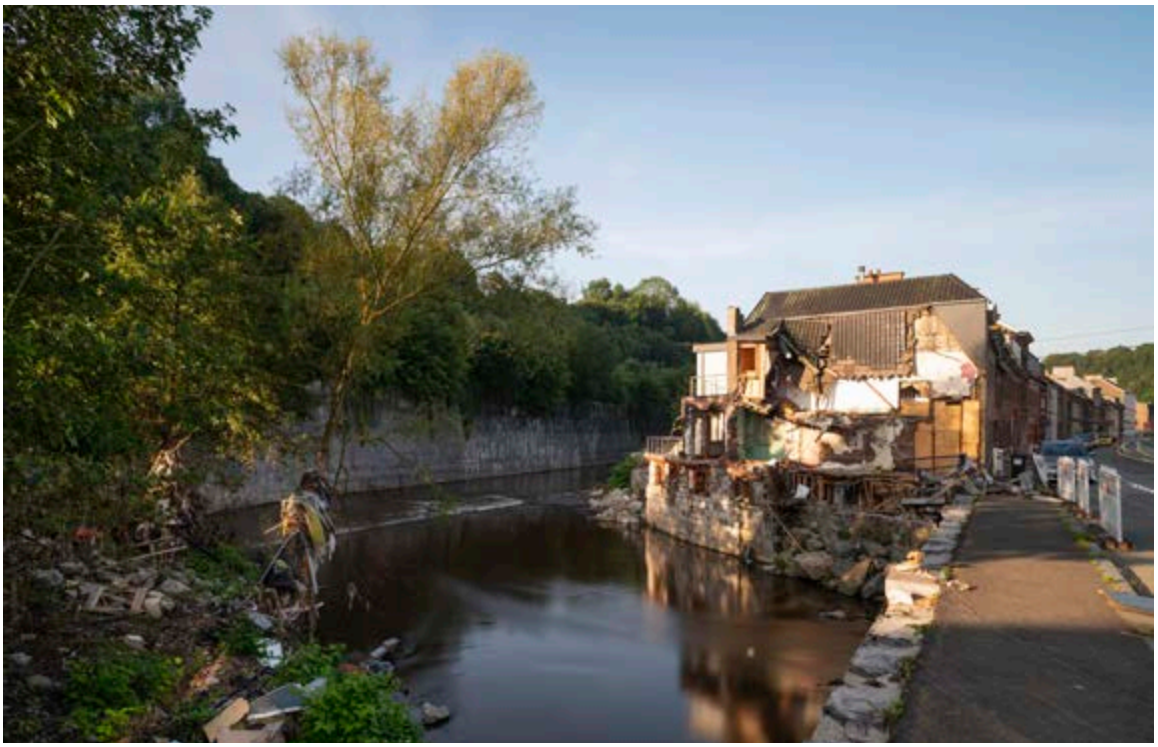
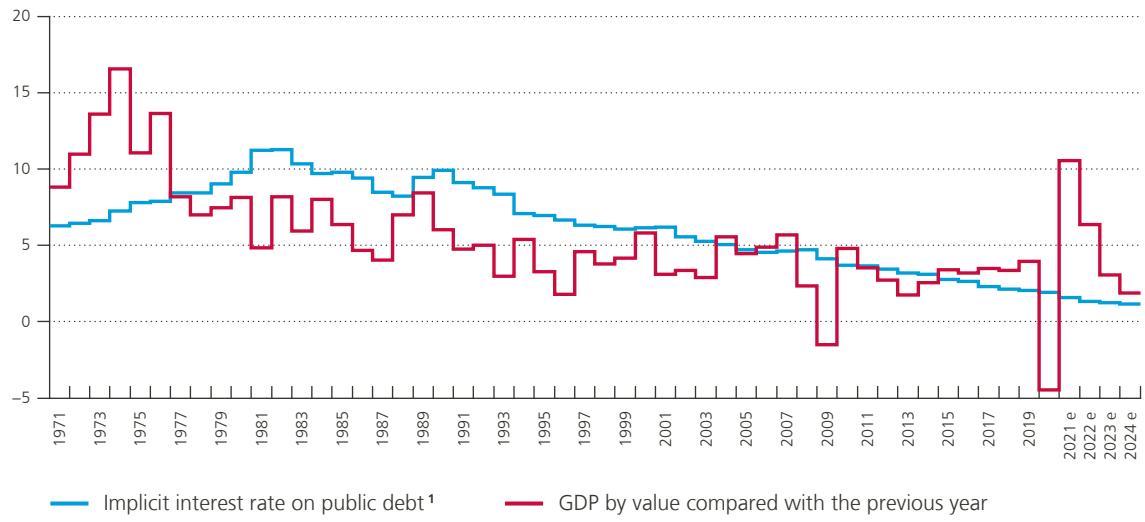


Chart 7.14

Favourable interest growth dynamic: a recent phenomenon in Belgium

(in %)



Sources: NAI, NBB.

1 Ratio between interest charges in the current year and debt at the end of the previous year.

To keep the development of public debt under control, the government must keep a tight rein on the budget balance at any interest rate level. That is less of a challenge when economic activity is growing fast and interest rates are low. After all, when GDP growth exceeds interest rates – as has been the case for a while now – a minor primary deficit [1] will not cause an increase in the public debt ratio. However, when interest rates exceed GDP growth – a more familiar phenomenon in the past – a primary deficit causes the public debt ratio to explode and primary surpluses are needed to stabilise the debt ratio.

Although current market funding conditions are enabling the government to take on deficits needed to manage the coronavirus crisis, it is unwise to consistently keep deficits high, as favourable conditions are never forever. History suggests that interest hikes can suddenly be triggered by risk premiums and that low interest rates offer no protection against debt crises, even if they last for a long time.

1 The primary budget balance is the balance excluding interest charges.

The sustainability of individual countries' public finances sets the tone for the euro area's financial stability and price stability: what therefore matters is how strong the weakest link is. And whereas monetary policy has been unified, budgetary policies remain the exclusive remit of the Member States and only they are responsible for the sustainability of their public debt.

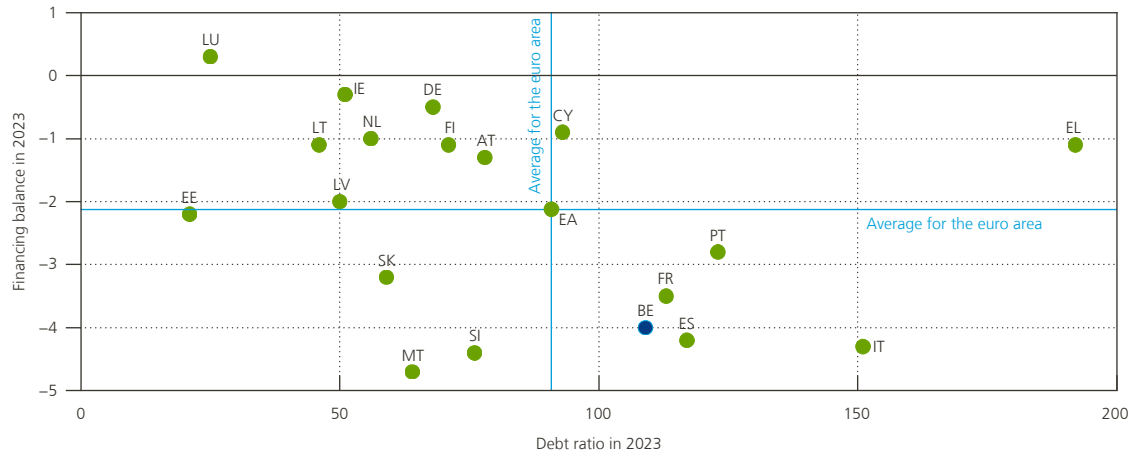
High and growing public debt jeopardises sustainability of public finances

Fiscal policy undoubtedly proved its use during the COVID-19 crisis, but it also left its mark in the shape of an exceedingly steep debt ratio and more heterogeneity between euro area Member States. Even before the pandemic, Belgium had been among the group of countries with high debt ratios and it was one of the Member States that saw their public debt rise the steepest. Extremely worryingly, the Belgian debt ratio is set to continue on this upward path, on the Bank's autumn projections, despite historically very favourable interest growth dynamics. This state of affairs reflects a significant

Chart 7.15

Public debt ratio and deficit structurally high in Belgium

(in % of GDP)



Sources: EC, ESCB, NBB.

budget deficit, which, in the absence of a change in policy, will remain systematically above 4 % of GDP in the years ahead.

In a federal state such as Belgium, we should look at the sustainability of public debt for each of the government subsectors. Normally, public debt is expressed as a percentage of GDP, which serves as a good gauge for a country's potential tax base. However, a comparison of the sustainability of public debt between the various government subsectors requires a more specific indicator for the resilience of each subsector. The relationship between gross debt and revenues is a relevant measure of public debt. This ratio's denominator is consciously restricted to available revenues, i.e. less any transfers to other government subsectors, to prevent the same resources being allocated to various entities. This approach makes very plain the heterogeneity of the budgetary situations.

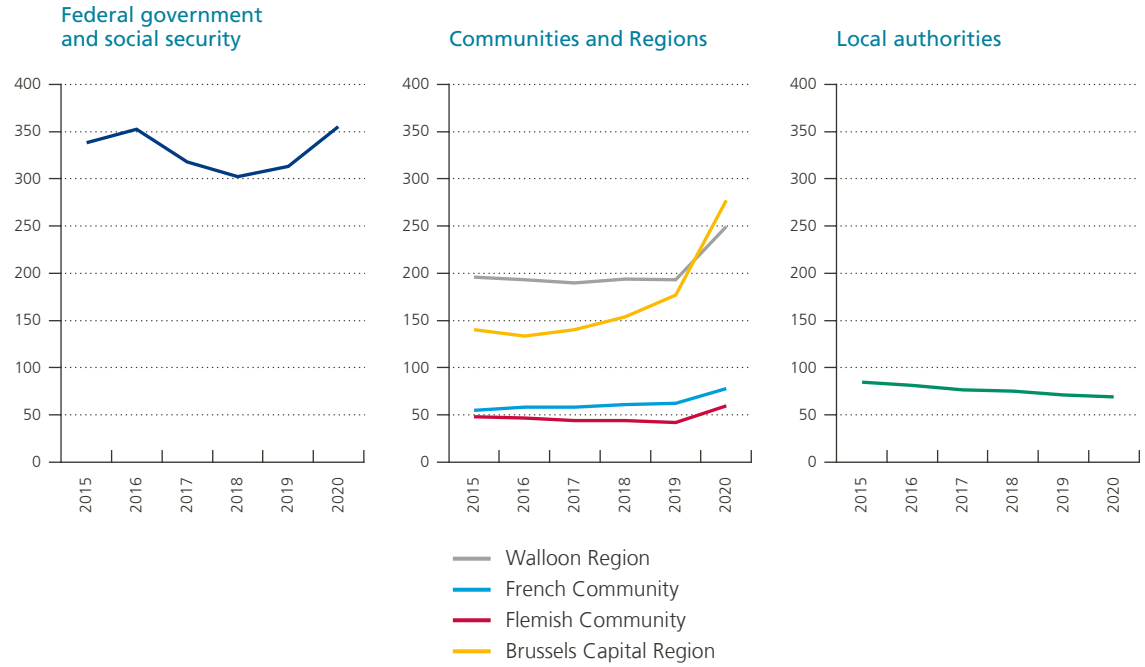
At the end of 2020, the public debt ratio of the federal government and social security together accounted for the highest level, at 3.5 times their annual revenues. However, the federal level has full fiscal autonomy, giving it a powerful lever to change its budget path when necessary. Within the Belgian institutional framework, the Regions have less scope in terms of revenues, as a large proportion is furnished in the shape of transfers from the federal government. This margin is insignificant for the communities, whose revenues derive almost exclusively from federal resources.

Among the federated entities, the Walloon Region is displaying worrying dynamics. Its public debt rose to 2.5 times its annual revenues in 2020. Walloon public finances had been in sizeable deficit even before the health crisis, but the aftermath of the crisis for revenues and spending, the budgetary consequences of the floods and Wallonia's highly ambitious recovery plan will conspire to sharply push up its public debt in the years ahead. The fiscal state of affairs in the Brussels Capital Region is equally disturbing. The Region has seen its budget balance deteriorate persistently in the past few years and it now has the dubious honour of having the highest debt ratio: 280 % of its revenues. Meanwhile, the French Community's sustainability of public debt (80 % of its revenues) would appear less problematic, but it has no sources of own revenues and relies almost completely on revenues provided by the federal government. At a little over half of its revenues, the public debt of the Flemish Community is less of a concern, provided it manages to halt the upward trend that started in 2020.

Chart 7.16

Level and dynamics of public debt worrying in some government sub-sectors

(gross debt in % of revenues less transfers to other government sub-sectors)



Sources: NAI, NBB.

To return public debt ratios to sustainable levels requires tremendous effort

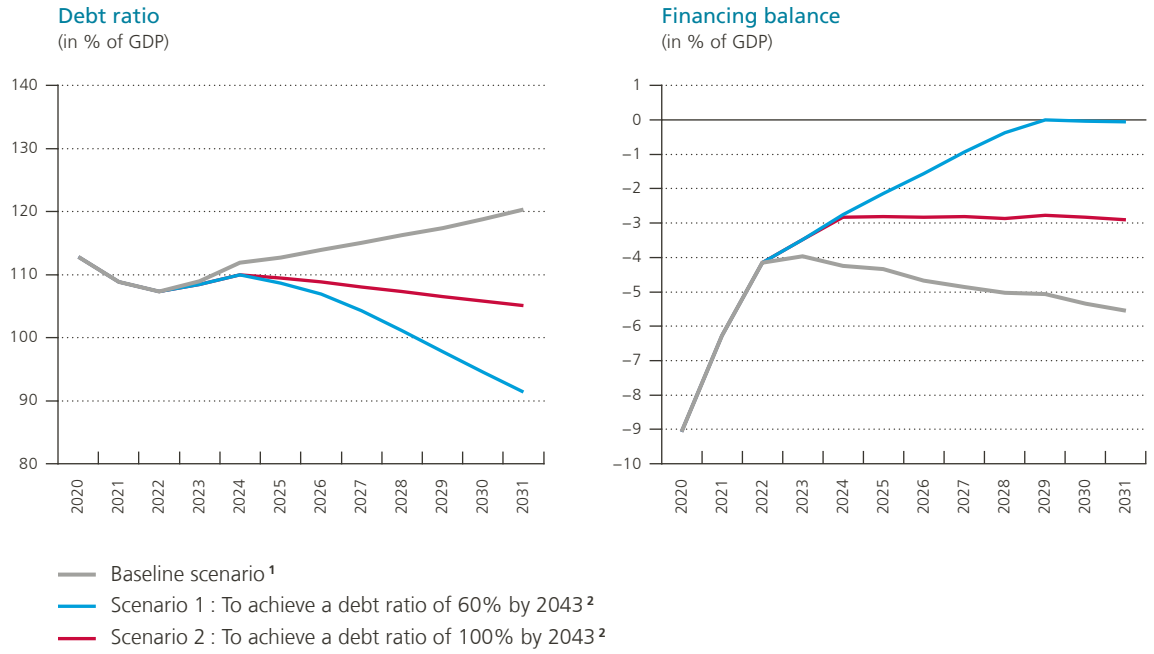
To get an idea of the sheer budgetary effort that will be required to turn around general government's public debt ratio, it is useful to simulate a range of scenarios for public debt and the financing balance. In the absence of any change in policy, the baseline scenario sees the budget deficit go up further, falling in with the Bank's December 2021 projections until 2024. Then, from 2025 onwards, assuming an average real GDP growth of 1.3 % per annum, the situation would deteriorate year-on-year in the wake of steadily rising population ageing costs (based on the latest report by the Study Committee on Ageing or SCA). Under this scenario, the deficit would widen to around 6 % of GDP by 2031, pushing the public debt ratio to above 120 % of GDP. This analysis does not take into account the possible occurrence of negative shocks nor their resulting budget balance deterioration.

The alternative scenarios envisage public finances being consolidated by linking the financing balance path to a target for the public debt ratio. A first scenario sees the financing balance improve from 2023 and, all other things being equal, achieve the targeted debt ratio of 60 % of GDP within a period of 20 years – the current debt criterion of the Stability and Growth Pact. In accordance with the guidelines of the Pact's preventive arm, the annual additional budget effort is pegged at up to 0.6 percentage point of GDP and continues until a deficit is achieved that meets the scenario target. Under this scenario, the balance should reach equilibrium from around 2028. Another, less demanding scenario applies the same mechanism to financing balance improvement to arrive at a debt ratio of 100 % of GDP within 20 years. At a normal rhythm, the deficit should then be reduced to a maximum of 2.8 % of GDP.

The analysis shows that achieving a debt ratio of 60 % of GDP in 20 years' time would require a significant and consistent effort to achieve a balanced budget.

Chart 7.17

Significant fiscal restructuring needed to reduce general government debt ratio



Sources: NAI, NBB.

1 The baseline scenario reflects the Bank's December 2021 macroeconomic projections, which ran until 2024. For the 2025-43 period, it is working on the 2024 primary balance and factoring in the ageing population costs and GDP hypotheses underpinning the July 2021 SCA report. Nominal interest rates reflect market expectations at the end of November 2021, with inflation – here the same as the GDP deflator – amounting to 2 % from 2025. Other hypotheses include the term to maturity of public debt remaining stable at an average ten years and the public debt ratio not being influenced by exogenous factors.

2 From 2023, the annual additional consolidation effort compared with the previous year is limited to 0.6 percentage point of GDP, until the deficit reaches the level required for the target.

This would be difficult to pull off in view of the rising costs of an ageing population and climate policy challenges. Such a scenario in keeping with current European fiscal rules appears very or even too ambitious and would become even more so if interest rates and growth were to develop less favourably than the baseline scenario envisages. In that case, the primary balance would have even more improving to do.

The more moderate scenario, which sees the public debt ratio first stabilise before very gradually reverting to 100 % of GDP, may be considered the minimum scenario for the sustainability of public debt. Even this scenario still requires a substantial consolidation effort to get the deficit at or just below 3 % of GDP. And here too, a negative economic shock could cause a further deterioration in the financing balance. To build margins that could help absorb such shocks or interest rate rises, a much lower deficit than the reference value of 3 % of GDP will be essential in the medium term.

Government spending should come down or economic growth should go up

Even before pandemic, in 2019, government spending in Belgium exceeded the euro area average. These relatively high levels have been recorded in Belgium for many decades.

A recent study[1] by the Bank, which compares government spending levels in Belgium with those in its neighbouring countries, showed that this higher spending chiefly relates to salaries and subsidies. Broken down by category, spending was found to be relatively high in "economic affairs", "education" and "general public services", even before the health crisis. In the "economic affairs" category the key item of concern is wage subsidies, which have surged since the early 2000s. Interest charges on public debt, which fall into the "general public services" category, have remained relatively high even despite some decline. As for education, the gap with the neighbouring countries' average is predominantly explained by spending on primary and secondary education; the differences are particularly marked on the cumulative wage bill. Lastly, social protection spending has gone up markedly. In 2001, there had still been a negative difference with the country's neighbours, but spending has shot up since, and the gap with neighbouring countries had disappeared by 2019.

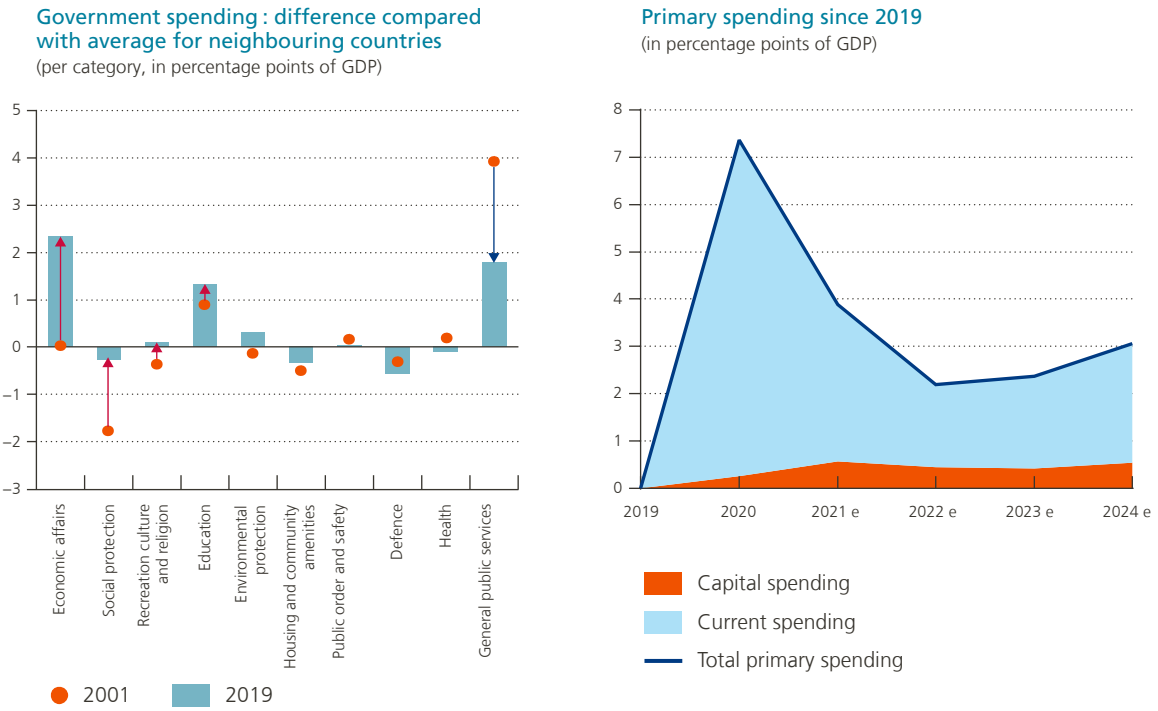
According to the Bank's economic autumn projections, primary spending – i.e. government spending excluding interest charges on public debt – as a percentage of GDP is likely to continue its upward trend in the years ahead, ending up at around 53 % of GDP by 2024 compared with 50 % in 2019.

The rise predicted by 2024 largely reflects higher current expenditure, a category comprising wages,

1 See Godefroid H., P. Stinglhamber and S. Van Parys (2021), "What kind of public expenditure is high in Belgium? A comparison with neighbouring countries", NBB, *Economic Review*, September.

Chart 7.18

Spending already high compared with neighbouring countries and set to rise further



Sources: EC, NAI, NBB.

subsidies and social benefits. The latter two will feed the post-pandemic advance but are not exactly the most economic growth-friendly type of spending for the longer term. By contrast, capital spending – consisting of government investment and investment subsidies to companies – has only a limited impact on rising primary spending.

To ensure the sustainability of public finances, government spending cannot keep rising in the next couple of years, while the spending mix must change to enhance the economy's growth potential and address future challenges, including the transition to a low-carbon economy and its digitalisation. Restructuring of government spending requires both managing current expenditure and creating margins to increase capital spending and, more particularly, economic growth-enhancing investment.

Expected rise in public spending mostly due to higher current expenditure

In the absence of any change in policy, current government spending looks set to expand in the decades ahead as the population ages. In its 2021 report, the SCA puts the peak in social benefits at 30.2 % of GDP in 2049, an increase by 3.7 percentage points of GDP compared with 2022. In fact, by 2070, the gap is forecast to still be at 3.3 percentage points of GDP. Between 2022 and 2027, these benefits are set to add an average 0.3 percentage point of GDP per year. Pension measures approved by the federal government at the end of 2020 have pushed up population ageing costs: higher minimum pensions, higher wage ceilings (for employees) and income ceilings (for the self-employed) towards pension calculations, and the abolition of the correction factor for the self-employed, which meant that only a proportion of their income qualified for the calculation of their pensions.

The federal government has yet to decide on pension systems reforms to help cut its fiscal cost over time. To ensure the financial sustainability of social security, it is counting on a broader economic base and an increased employment rate (with an employment target at 80 % in 2030, as discussed in section 7.2).

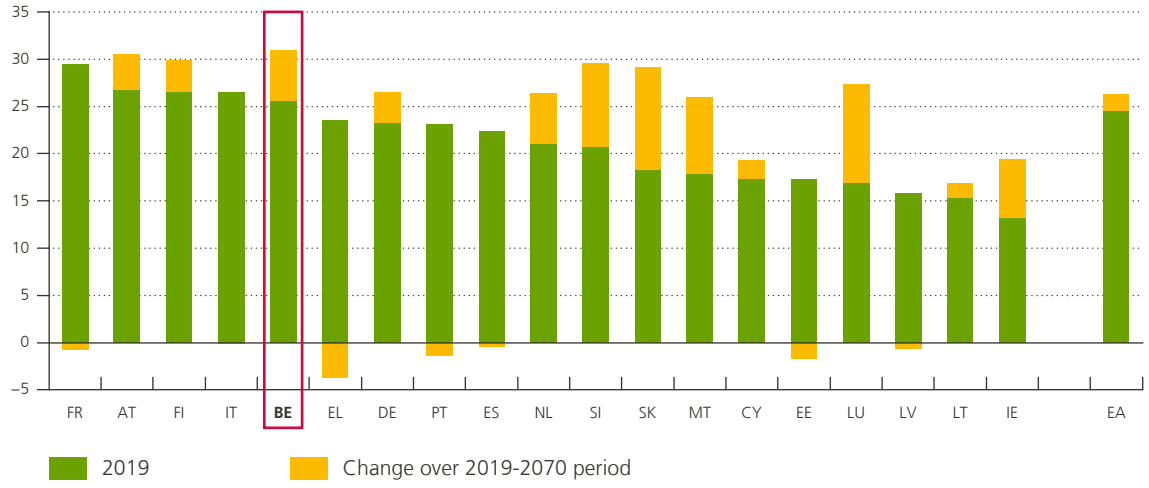
At the European level, the budgetary impact of population ageing is also the subject of projections, the outcomes of which are reported once every three years in the Ageing Report, the most recent of which was released in May 2021. Together, the Commission and EU Member States draw up long-term projections for age-related public expenditure, covering pensions, health care and education. These projections cannot be compared directly with those of Belgium's SCA, as data, methodologies and assumptions differ. That said, the report's coherent methodology does allow for a comparison between EU countries.

On the data provided by the most recent Ageing Report, in 2019 age-related public expenditure amounted to 24.6 % of GDP in the euro area as a whole, with major differences between the Member States. At 25.6 % of GDP, Belgium was among the Member States recording higher-than-average spending, while the expected spending increase by 5.4 percentage points of GDP in the 2019-2070 period – according to the reference simulation for Belgium – is among the highest of all countries. Steeply higher pensions spending is mostly to blame. As a result, Belgium's age-related public expenditure in 2070 would be at the very top of the euro area, at 30.9 % of GDP.

Chart 7.19

Age-related public expenditure is high in Belgium and looks set to grow more than in most other euro area countries

(in % of GDP)



Source: EC.

The Ageing Report figures underline that population ageing will be a key challenge for most euro area Member States when it comes to the sustainability of public finances in the long term. The Ecofin Council has called on Member States to address high age-related expenditure by raising employment rates and productivity, closing the gender gap in the labour markets and adapting pension and health care systems. This is all the more pertinent to Belgium, given the country's high age-related spending.

Credible European and Belgian fiscal frameworks are crucially important

A sound fiscal framework, covering the full range of procedures, institutions and fiscal rules, is an essential instrument to create a healthy fiscal policy. Such a framework exists at the European level in the shape of the Stability and Growth Pact (SGP), whose aim is to ensure the sustainability of Member States' public finances and encourage fiscal discipline. In its 2020 evaluation of the SGP, the Commission flagged up a number of weaknesses including the complexity of the rules, the lack of national ownership, the often procyclical nature of fiscal policy, persistently high public debt in some Member States and the lack of focus on public investment. Based on this evaluation, the Commission initiated a public debate on the reform of the European fiscal framework. Having been postponed in the wake of the coronavirus crisis, the debate was reopened in October 2021 and interested parties were invited to share their views. Drawing on their input, the Commission will attempt to arrive at a broad-based consensus view well before 2023. It is crucially important for Member States to have clarity on this new framework when preparing their budgets for 2023.

The European fiscal framework must be supported by robust and efficient national frameworks, as these should help improve compliance with the European framework and enhance national ownership. An analysis of the key elements of Belgium's fiscal framework and a comparison with best practices in other euro area countries reveals a number of areas for improvement in the Belgian framework[1].

It is highly recommended for all levels of the Belgian government to implement a multi-year budget plan,

1 For more details, see Bisciari P., H. Godefroid, W. Melyn, R. Schoonackers, P. Stinglhamber and L. Van Meensel (2020), "Belgium's fiscal framework: what is good and what could be better?", NBB, Economic Review, December.

as most budgetary measures have an impact beyond the fiscal year. Having such a framework in place should encourage timely planning and a closer observance of budgetary targets in the medium term. On a separate note, an expenditure rule might have a key role to play in such a multi-year budget. In fact, such a rule already exists at the European level, but is only applied after the fact, i.e. when the Commission evaluates the budget numbers. In a country such as Belgium, in particular, where government spending is high, an expenditure rule could serve as a key tool to increase visibility of selected trends and to implement medium-term targets. A number of technical exercises have already been started in this regard. For example, the Flemish authorities are working on a Flemish expenditure standard, while the Public Sector Borrowing Requirement section of Belgium's High Council of Finance has joined forces with the Commission and the OECD to develop an expenditure rule at the Belgian level.

Strongly recommended: multi-year budget planning at all levels of Belgian government

In addition, budget numbers put forward by governments must be a transparent reflection of all expenditures and revenues that influence their budget balances, in keeping with ESA accounting rules. This implies that the budget balance should not be creatively accounted by leaving out certain expenditure, even if it might pay back over time, as in the case of some investment spending.

Lastly, Belgium needs effective budget coordination between the various policy levels, as this contributes to general government fiscal discipline. The cooperation agreement of 13 December 2013 between the country's federal government, Communities and Regions provides a formal framework for budget coordination in Belgium. To date, the various authorities have never agreed on the breakdown of the general government budget path as envisaged in the stability programme. The High Council of Finance, the Commission and the Ecofin Council have repeatedly emphasised the necessity to fully implement the 13 December 2013 agreement.

It is important to forge ahead on these areas of concern, as the suggested further changes should help make public finances healthier, enhance the efficiency of government and thus ensure the sustainability of Belgian public finances in the long term.