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DE STABILITÉITS-PROGRAMM

Stability and Growth Programme of the Grand-Duchy of Luxembourg 2021 > 2025

THE GOVERNMENT
OF THE GRAND-DUCHY OF LUXEMBOURG
Ministry of Finance

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I. Overall policy framework and budgetary objectives

One year after the outbreak of the COVID-19 pandemic, the Stability and Growth Programme of the Grand Duchy of Luxembourg for 2021, hereafter the "SGP 2021", resumes its regular format and provides an overview of medium-term economic and budgetary forecasts for Luxembourg from 2021 to 2025.

Independently of the uncertainties and risks involved in any forecasts, recent developments in the health crisis in Luxembourg and the resilience of the Luxembourg economy and public finances provide us with hope and allow for an improved outlook.

As a result of the development of effective vaccines in late 2020 and the launching of mass vaccination campaigns worldwide, the European economy, having fallen by -7.1% of its GDP in 2020, should see an upturn of around +4.2% in 2021 with the gradual lifting of lockdown measures. The recovery however will be incomplete, insofar as economic activity in the euro zone will only return to pre-crisis levels in 2022.

According to initial estimates by STATEC based on the national accounts, Luxembourg ended 2020 with a contraction in its real GDP of only -1.3%, placing the Grand Duchy among the countries in the euro zone and the EU where the impact of the crisis has been best managed.

These preliminary results from STATEC bear witness to the robust foundations of the Grand Duchy's economy, which features a resilient and diverse socio-economic fabric that has adapted quickly to new working conditions, through widespread teleworking and other adaptive measures.

The contraction, less significant than initially envisaged (SGP 2020 forecasted a contraction of -6.0% in 2020) also confirms the well-founded nature of the Government's various choices in terms of health and socio-economic matters.

With the experience acquired over the last few months, and thanks to existing infrastructures, as well as recently deployed modern and efficient ICT infrastructures, especially in the field of health, and the implementation of support measures that is historically unprecedented in this country, the Government has succeeded in achieving the right balance in the fight against COVID-19.

The implementation of restrictions needed to avoid an overloading of hospital infrastructures and curb the spread of the SARS-CoV-2 coronavirus on the one hand, and seeking appropriate flexibility for and extent of reopening to allow citizens and businesses to resume some normality on the other, have at all times guided the authorities in their decision-making.

The results observed in health and socio-economic terms show that the Government's choices were appropriate and well-adapted to a very difficult and unprecedented situation.

For 2021 and 2022, the Luxembourg economy is thus expected to return to dynamic activity with growth rates of +4.0%. In the medium term, GDP growth should return to a level of +2.6%.

In line with a less pronounced decline of the economy in 2020 than expected, , Luxembourg public finances also proved to be resilient. Despite a record general government deficit[1] of -€2,620 million, or -4.1% of GDP, the final accounts for the whole year are considerably better than the SGP 2020's initial forecasts, which estimated a deficit of -€5,024 million (-8.5% of GDP) in 2020.

The central government alone has a deficit of -€3,338 million, or -5.2% of GDP (the SGP 2020 estimate was -€4,993 million, or -8.3% of GDP). This deficit, better than expected, is promising while representing a historical order of magnitude. The deficit is the reflection of the Government's extensive deployment of support and recovery measures, fully maintaining its ambitious investment policy, and the action of automatic stabilizers such as unemployment and other social security benefits.

With the lowest public debt in the euro zone after Estonia, and with a triple-A rating across all credit rating agencies, Luxembourg was able to take action forcefully and with equanimity thanks to its favourable budgetary position. The central government accounts in the fiscal years 2018 and 2019 were balanced, and even showed a surplus, for the first time since the 2008 financial crisis. This excellent financial situation was the fruit of the consolidating efforts undertaken from late 2013 onwards (including in particular the modernization programme "*Zukunftspak*" which entered into force in 2015) and the Government's budgetary discipline since it took office in late 2013.

In order to meet the socio-economic challenges of the pandemic, the Government first put in place an extensive stability programme ("*Stabiliséirungspak*"), supporting both citizens and businesses, followed by a recovery programme entitled "*Neistart Lëtzebuerg*" comprising, *inter alia*, a recovery and solidarity fund "*Fonds de relance et de solidarité*".

[1] Under the European System of Accounts (ESA), general government figures include the central government, local government and social security funds.

Support from the Government also included other temporary and targeted measures, and extensions to certain flagship measures, including the furlough scheme, , making the most of the flexibility offered by the European Commission in terms of State aid and the Stability and Growth Pact.

As a whole, the budgets made available, including financial guarantees, totalled €11 billion – i.e. around 18.6% of the GDP estimated in 2020 – making the Luxembourg measures one of the most generous support packages in Europe.

As at 31 March 2021, Luxembourg had paid out a total of €2,201 million in direct budgetary measures to citizens and businesses and granted time to pay tax and social security contributions, as well as tax relief amounting to €614 million.

To finance this assuredly counter-cyclical budgetary policy, Luxembourg raised further funds on international capital markets in an amount of €2.5 billion in March 2020, taking advantage of historically low and even negative interest rates. This further cushioned State liquidities to deal with the crisis and deploy all of the support measures necessary.

In parallel, Luxembourg was the first European sovereign issuer to put in place a "Sustainability Bond Framework[2]" aimed at financing ecological and social investments, and the related bond issue, a total of €1.5 billion, took place in September 2020, also at negative rates.

Despite these new loans made necessary on the one hand by efforts undertaken to combat the socio-economic effects of the crisis, and on the other by Government action to promote the green transition and social inclusion, the increase in Luxembourg's public debt in 2020 was the lowest in Europe, bearing witness to the robustness of the State's financial position. In late 2020, public debt reached €15,941 million, or 24.9% of GDP, thus well below the benchmark of 30% of GDP included in the Coalition programme, representing an increase of 2.8 percentage points with respect to late 2019, when public debt was 22.0% of GDP.

From 2021, Luxembourg aims to return to a deficit below the 3% of GDP threshold as laid down by the European Treaties, despite the fact that the European Commission announced in autumn 2020 that the general escape clause of the Stability and Growth Pact was to remain in force for the budget year 2021.

Indeed, the said clause, enabling EU Member States to temporarily stray from the requirements of European budgetary rules, is likely to be extended to 2022. Indeed, on 3

[2] Link: https://te.public.lu/fr/finance-durable.html

March 2021, the European Commission issued new budgetary guidelines, calling upon Member States to a premature withdrawal of support and recovery efforts and granting the necessary flexibility for 2022 as well.

According to the European Commission's communication in March 2021, the general escape clause will most probably be deactivated as from the fiscal year 2023, once the EU's GDP has reached pre-crisis levels – namely those of 2019. By assumption, the rules of the Stability and Growth Pact would then come into play as from 2023.

It is thus in the light of the general guidelines issued by the European Commission that Luxembourg is continuing its efforts in 2021 to foster the dual green and digital transition, whilst promoting social inclusion.

At the same time, updated budgetary forecasts are higher than the estimates established under the budget law of 19 December 2020.

The general government deficit in 2021 is estimated to improve to -€1,359 million, or -2.0% of GDP, and that of the central government to -€2,095 million, or -3.1% of GDP. In the medium term, Luxembourg's public finances will see an ongoing improvement as a result of a gradual recovery in public income and controlled public spending. Government will once again have a balanced budget as from 2024.

The structural balance goes from -2.4% of GDP in 2020 to +0.3% of GDP in 2023, enabling Luxembourg to comply with the medium-term budgetary objective ("MTO") when the rules of the Stability and Growth Pact are once again in force[3]. As one of the only countries that has always complied with the rules of the Pact, Luxembourg will thus continue to maintain its commitment entered into as part of the coalition agreement for 2018 to 2023.

Public debt is expected to increase over the forecasting period of this SGP, given that the central government will still be in deficit. Public debt should reach its height in 2023 with a debt/GDP ratio of 28.4% and then start to decrease slightly. In line with the figures of the SGP 2021, the ceiling of 30% of GDP in terms of public debt -which forms the second pillar of the undertaking in the coalition agreement for 2018–2023 and represents half of the 60% ceiling of GDP laid down by European Treaties- would be complied with at all times.

Taking into account the considerable uncertainties around epidemiological developments, the macroeconomic and budgetary forecasts and observations included in this SGP must,

[3] Taking into account the margin of 0.25 percentage points that the European Commission applies overall in assessing compliance with the MTO.

however, be weighed up carefully and subsequent revisions will be made as new data becomes available.

Through the SGP 2021, Luxembourg reasserts in any event its commitment to promote sustainably healthy and balanced public finances. It will continue, in 2021 and beyond, to ensure that its budgetary policy is scrupulously directed at fostering qualitative growth and job creation, innovation and social inclusion, and giving the greatest priority to investments that enable the challenges of the dual ecological and digital transition to be met.

It is with the same aims that Luxembourg has drafted, in parallel to the SGP 2021, its National Reform Programme ("NRP") for 2021 and its Recovery and Resilience Plan ("RRP"). These three documents form a consistent and concerted package of government action under the European Semester 2021.

Summary table

PUBLIC FINANCES	2020			2021			2022			2023			2024			2025		
	in bn euros	in % of GDP	rate of change, in %	in bn euros	in % of GDP	rate of change, in %	in bn euros	in % of GDP	rate of change, in %	in bn euros	in % of GDP	rate of change, in %	in bn euros	in % of GDP	rate of change, in %	in bn euros	in % of GDP	rate of change, in %
TOTAL REVENUE	**28.033**	**43.7**	**-1.2**	**29.678**	**43.5**	**+5.9**	**31.126**	**43.6**	**+4.9**	**32.889**	**44.3**	**+5.7**	**34.431**	**44.5**	**+4.7**	**36.054**	**44.7**	**+4.7**
of which:																		
Taxes on production and imports ("indirect" taxes)	7.070	11.0	-1.4	7.815	11.5	+10.5	8.233	11.5	+5.3	8.657	11.6	+5.2	9.055	11.7	+4.6	9.412	11.7	+4.0
Current taxes on income, wealth, etc. ("direct" taxes)	10.043	15.7	-4.5	10.375	15.2	+3.3	10.935	15.3	+5.4	11.751	15.8	+7.5	12.424	16.0	+5.7	13.134	16.3	+5.7
Social contributions	8.116	12.7	+5.2	8.349	12.2	+2.9	8.771	12.3	+5.1	9.172	12.3	+4.6	9.569	12.4	+4.3	10.028	12.4	+4.8
TOTAL EXPENDITURE	**30.654**	**47.8**	**+14.1**	**31.037**	**45.5**	**+1.3**	**32.049**	**44.9**	**+3.3**	**33.164**	**44.6**	**+3.5**	**34.398**	**44.4**	**+3.7**	**35.761**	**44.3**	**+4.0**
of which:																		
*Public Investment**	2.922	4.6	+14.0	3.046	4.5	+4.3	3.258	4.6	+6.9	3.388	4.6	+4.0	3.502	4.5	+3.4	3.578	4.4	+2.2
Additional public investment linked to COVID-19	0.109	0.2		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Social payments	13.429	20.9	+16.4	13.327	19.5	-0.8	13.671	19.1	+2.6	14.275	19.2	+4.4	14.903	19.2	+4.4	15.663	19.4	+5.1
Intermediate consumption	2.888	4.5	+8.2	2.979	4.4	+3.2	3.034	4.2	+1.9	3.116	4.2	+2.7	3.199	4.1	+2.7	3.285	4.1	+2.7
Compensation of employees	6.942	10.8	+9.8	7.255	10.6	+4.5	7.648	10.7	+5.4	7.976	10.7	+4.3	8.331	10.8	+4.5	8.717	10.8	+4.6
NET LENDING/BORROWING OF GENERAL GOVERNMENT	**-2.620**	**-4.1**		**-1.359**	**-2.0**		**-0.923**	**-1.3**		**-0.274**	**-0.4**		**0.033**	**0.0**		**0.293**	**0.4**	
Net lending/borrowing of central government	-3.338	-5.2		-2.095	-3.1		-1.695	-2.4		-1.106	-1.5		-0.747	-1.0		-0.422	-0.5	
Net lending/borrowing of local government	-0.122	-0.2		0.002	0.0		0.025	0.0		0.081	0.1		0.079	0.1		0.117	0.1	
Net lending/borrowing of social security funds	0.840	1.3		0.735	1.1		0.747	1.0		0.751	1.0		0.701	0.9		0.598	0.7	
STRUCTURAL BALANCE		**-2.4**			**-0.7**			**-0.3**			**0.3**			**0.4**			**0.4**	
GROSS DEBT	**15.941**	**24.9**		**18.322**	**26.9**		**20.017**	**28.0**		**21.123**	**28.4**		**21.870**	**28.2**		**22.292**	**27.6**	
GROSS DEBT excluding COVID-19 borrowing	**13.441**	**21.0**		**15.322**	**22.5**		**17.017**	**23.8**		**18.123**	**24.4**		**18.870**	**24.4**		**19.292**	**23.9**	

MACROECONOMIC INDICATORS	2020	2021	2022	2023	2024	2025
GROWTH						
Real GDP (in %)	-1.3	4.0	4.0	2.7	2.6	2.6
Nominal GDP (in %)	1.0	6.3	4.7	4.1	4.2	4.2
Nominal GDP (levels, in bn euros)	64.143	68.207	71.416	74.320	77.452	80.717
PRICE DEVELOPMENTS						
Inflation NICP (in %)	0.8	1.7	1.8	1.9	1.9	2.0
EMPLOYMENT						
Employment (growth, in %)	2.0	1.7	2.8	2.4	2.2	2.2
Unemployment rate (ADEM definition, in %)	6.3	6.8	6.4	6.6	7.0	7.5

* : Public investment excluding COVID-19 crisis-related capital transfers and the accounting impact related to the acquisition of the military aircraft. The accounting impact of 200 million EUR related to the acquisition of the military aircraft is included in total expenditure and the balances.

Source: Ministry of Finance, STATEC.

II. Economic situation and macroeconomic forecasts

The macroeconomic forecasts underlying the SGP 2021 were prepared on an independent basis by STATEC and were published, for 2021 to 2024, on 1 March 2020. The year 2025 results from a technical extension of the forecast horizon for the purposes of the SGP 2021.

II.1 The macroeconomic environment at European and international levels

The outbreak of the COVID-19 pandemic in 2020 has been an additional blow to the euro zone economy, which had already shown signs of slowdown in recent years due to trade tensions between China and the United States and Brexit-related risks.

The spread of COVID-19 in 2020 strongly affected the euro zone economy. The health crisis in many European countries led to necessary lockdowns in 2020. Moreover, the new surge in infections and the reinforcement of containment measures at the end of the year partially offset the strong recovery in economic activity as a result of the lifting of lockdown measures in the third quarter. Despite unprecedented budgetary support from the European Union's Member States, GDP in the euro zone for 2020 fell by -7.1%, as compared with the -5.1% forecast in the SGP 2020.

In 2021, while the development of effective vaccines increased optimism, the pace of vaccine distribution, slower than first planned, and the emergence of new variants of the virus slowed down enthusiasm. Nonetheless, the basic scenario underlying the macroeconomic forecasts supposes that vaccine distribution will facilitate more targeted and localized restrictions around mid-2021 and prevent a further global epidemic wave.

World trade has absorbed the shock of the pandemic relatively well as compared with the financial crisis (-5% in 2020 as against -13% in 2009), in particular thanks to a rapid and significant recovery in the second half of 2020. This expansion should continue to create a favourable context for the growth of internationally focused economies like Luxembourg.

The stock markets should also recover in 2021, which will have a positive impact on the Luxembourg economy. In 2021, the growth of the stock exchange index will be 8.9%, compared with an average of -4.7% in 2020. The financial sector continues to withstand the shock of the pandemic and it seems like the effects on certain sectors of the real economy have not spilled over to financial services, which have managed to adapt quickly to the new situation by turning to teleworking methods. Furthermore, the negative impact in 2020 has been less pronounced as anticipated owing to liquidity injections by central banks, government measures and the relatively short duration of the recession.

While recovery will go alongside positive changes in the European labour market marked by an ongoing reduction in the rate of unemployment over the forecast period, price changes on the other hand will still be affected by oil prices well below their pre-COVID-19 levels in 2021.

Based on the foregoing observations, real GDP growth for 2021 in the euro zone is estimated at +4.2%, and will converge towards +1.4% by 2025.

II.2 The macroeconomic situation in Luxembourg

At national level, 2020 stood clearly apart from the period between 2013 and 2019, during which Luxembourg had seen average real GDP growth of +3.4%. Like other European Union Member States, Luxembourg has been strongly affected by the COVID-19 crisis and went into a recession for the first time since 2012, the year of the euro zone debt crisis.

Compared to the European average, however, the economic impact of the health crisis has been less devastating in Luxembourg. While real GDP growth in the euro zone fell by -7.1% from 2019, Luxembourg saw a decline in growth of -1.3% in 2020. This performance places Luxembourg in third place in Europe, behind Ireland (+2.8%) and Lithuania (-0.8%)[4], and is strikingly different to STATEC's spring forecast of -6.0% (SGP 2020). It should be noted that nominal GDP even saw positive growth (+1.0%) in 2020.

There are three reasons behind the Luxembourg economy's remarkable resistance. First, the Government adopted a sizeable package of support measures for Luxembourg citizens and businesses amounting to 18.6% of estimated GDP in 2020, limiting economic damage from the health crisis. Next, the structure of its economy, heavily focused on services, facilitated teleworking by the majority of the labour force and minimized further disruptions to economic output. Lastly, careful and measured reopening in the third quarter led to a considerable bounce-back in the economy. After collapsing in the second quarter of 2020 (-7.3%), the Luxembourg economy thus saw a true V-shaped recovery in its real GDP growth from July to September (+9.3%). Although less pronounced, this positive trend continued in the fourth quarter, despite the introduction of increasingly restrictive measures by the Government as the months went on (+1.6%).

Driven mainly by ICT services as well as air freight, this performance contrasts with the downturn recorded in other European Union countries in the fourth quarter following enforced lockdowns (-0.7%)[5]. Furthermore, this bears witness to the fundamental robustness of the Luxembourg economy, which, in the absence of the health crisis, would most probably have seen significant growth.

Thanks to progress in the vaccination campaign and the resulting prospect of the gradual reopening of the economy, Luxembourg will return to positive growth in 2021. Since the recession was less serious than initially envisaged in 2020, recovery will be slower than

[4] *Conjoncture Flash* March 2021, STATEC, March 2021.
[5] *Idem.*

forecast. At the time of drafting this SGP, STATEC expects real growth at +4.0% instead of +7.0%, as announced in spring 2020.

The Luxembourg economy will benefit from favourable prospects on financial markets –a Eurostoxx growth rate of 8.9% in 2021 is expected – and surveys also show encouraging confidence levels in the industry and construction sectors[6]. Limited by preventive health measures in 2020, domestic demand will once again become the driving force of the Luxembourg economy. Private consumption is thus expected to grow by 8.4% compared to the previous year. While similar levels of real GDP growth will be reached in 2022, growth will gradually level off in the medium term and stand at 2.6% in 2025[7].

The Luxembourg labour market will not be able to benefit immediately from the economic recovery. Based on experience from the financial crisis, the negative effects of the current crisis are likely to be staggered. Job creation will thus probably pick up only slowly (+1.7% in 2021, compared to +2.0% in 2020). After reaching a peak in 2022 (+2.8%), it will subsequently slow down. This trajectory reflects a slowdown in economic activity after 2022. According to STATEC's forecast, national employment will not close the gap created by the crisis to return to the trajectory it was on pre-crisis.

A similar trend can be discerned if we look at the unemployment rate, which will increase further in 2021 to reach 6.8%. Reflecting the underlying trend of domestic employment, the rate of unemployment will fall slightly in 2022 (6.4%) before increasing gradually to 7.5% of the active population by the end of the period in question. Given the economic climate, STATEC posits that owing to Luxembourg's unique features, such as a large part of the labour force coming from the Greater Region, Luxembourg requires a certain annual job creation rate in order to reduce domestic unemployment. In the face of slower growth of domestic employment in the medium term, this rate will not be reached, and unemployment is likely to not decline. These figures thus reflect some persisting effects of the crisis on the labour market, which will probably not return to the positive pre-crisis situation within the next five years.

Because its economy is very open, and due to the exposure of the logistics and transport sector, inflation in Luxembourg is strongly influenced by oil prices. It is thus no surprise that prices were impacted by the oil price crash in the first part of 2020. As a result of the

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[6] *Conjoncture Flash* March 2021, STATEC, March 2021.
[7] Given that the STATEC macroeconometric model extends only to 2024, the 2025 growth rates in this SGP correspond precisely to those of the previous year so as to maintain the usual timeframe for Luxembourg SGPs.

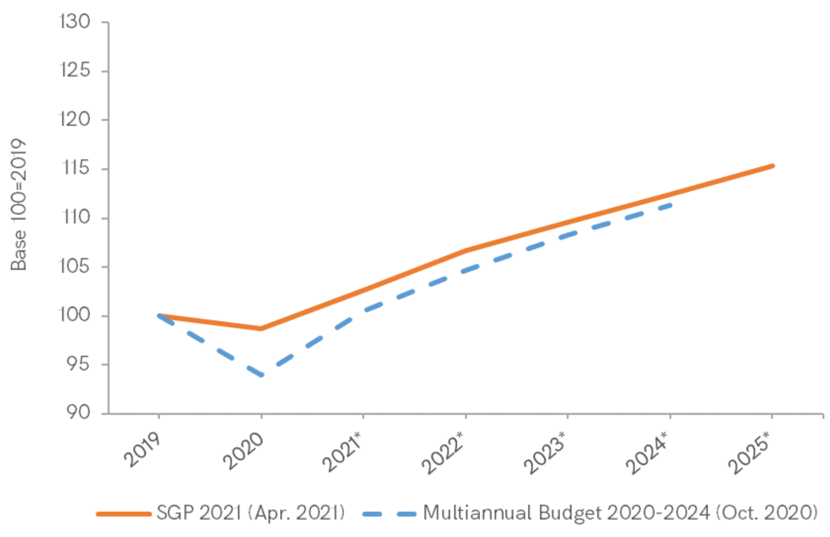
lockdowns implemented in spring 2020, the price of crude oil fell dramatically to a low of $10/barrel in April 2020[8].

Alongside free public transport, which came into force in March 2020, and pressure on demand for goods and services following COVID-19 health measures, the fall in oil prices entailed a rate of growth in prices below 1% in 2020. This dynamic was somewhat slowed down by the reduction in supply in turn engendered by said measures, which resulted in an annual inflation rate of 0.8%.

With economic recovery on the horizon, STATEC expects that inflation will rise in the next few years. Driven in particular by the increase in oil prices, the rate of inflation in Luxembourg, as measured by the IPCN, is likely to amount to 1.8% in 2021. By 2025, the rate of inflation will gradually reach the objective set by the European Central Bank, which aims at an inflation rate of close to, but under, 2% in the medium term. Based on this trajectory, the next indexation is expected to be triggered for 2022.

Chart 1: Real GDP in Luxembourg

Base 100 = 2019

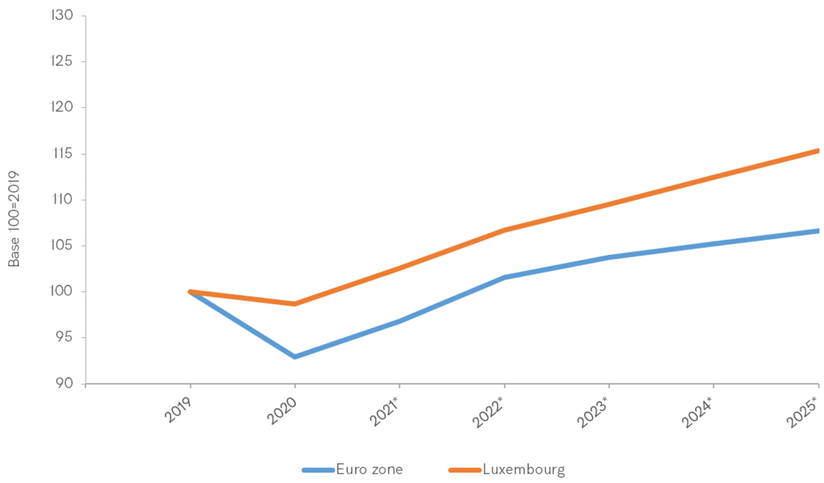


Source: STATEC, calculations Ministry of Finance.

[8] *Conjoncture Flash* March 2021, STATEC, March 2021.

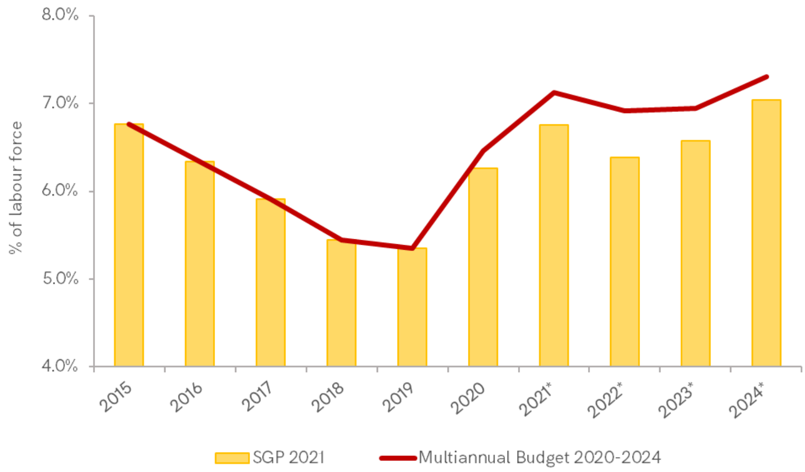
Chart 2: Real GDP in Luxembourg and in the euro zone

Base 100 = 2019



Source: STATEC, calculations Ministry of Finance.

Chart 3: Rate of unemployment in Luxembourg (2015-2024)



Source: ADEM, STATEC.

II.3 Risks and uncertainties

One year after the onset of the COVID-19 crisis, the world continues to face serious economic uncertainty. While uncertainties were related to possible extended or further lockdowns during the preparation of the SGP 2020, economic developments in 2021 will mainly depend on the effectiveness of vaccination campaigns.

Additional delays in deploying vaccination campaigns due to delivery issues, and even the emergence of new vaccine-resistant COVID-19 variants, may hamper the economic recovery.

The measures taken by governmental authorities worldwide have played a key role in combating the detrimental effects of the health crisis, and the substantial recovery packages adopted in Europe and in the United States will prepare the ground for a sustainable economic growth. There are some risks of economic overheating through price and interest rate increases in the United States and in Europe. A rise in interest rates could, potentially, spark a reaction from financial markets, which could in turn affect the Luxembourg economy. Such a rise would also go against the ECB's expansionist monetary policy, and could force it to take even more accommodative measures.

At this stage, no COVID-19 related structural damage to Luxembourg's output, which could have serious consequences for long-term growth potential, is foreseen, although STATEC does consider that some effects may turn out be permanent.

In addition to the risks directly or indirectly linked to the COVID-19 crisis, pre-existing structural trends will be further heightened by the crisis, such as for instance the automation of the economy. In the light of its impact on the labour market, the digitalization of economies is a trend that should be supported by policies fostering innovation and improving the skills and qualifications of the labour force. The Government recognized the opportunities of digitalization long ago and took measures to prepare the Luxembourg economy to face the related challenges and prepare the labour force to meet employers' needs in tomorrow's labour market.

It is also for this reason that the Government has made the digital transition one of the pillars of its Recovery and Resilience Plan that will be submitted at the same time as this SGP.

Lastly, international developments concerning international corporation tax, including digital taxation and the OECD BEPS Action Plan, which received a new impetus with the election of the Biden Administration in the United States, represent both a challenge and an opportunity for the Luxembourg economy and public finances.

The economic situation as described in the previous subsections is based on a baseline scenario outlined by STATEC in which positive and negative risks balance each other out. To take into account the uncertainties around the current economic situation and to obtain an indicative estimate of the impact of certain risks, Chapter III.6 contains a sensitivity analysis. As part of said analysis, two scenarios prepared by Oxford Economics have been simulated, namely one favourable scenario which foresees faster return to normal than forecast owing to successful vaccination campaigns, and an unfavourable scenario based on the hypothesis of a "second global wave". In addition, an interest rate shock has also been simulated.

III. Budgetary position and public debt

To cushion the shock of the pandemic in 2020, all EU Member States responded rapidly to the crisis with extensive budgetary support. In order to apply the lessons learnt during the 2007–2009 global financial crisis, the public authorities recognized the importance of maintaining a resolutely expansive budgetary stance.

From the start of the crisis, the Government made every effort to protect citizens and businesses from negative consequences. In 2020, the Government thus deployed all of the leverage needed, thanks to the favourable budgetary and financial situation that current and previous governments have established in recent years.

The 2021 financial year will mark the start of a gradual return to sound public finances. Nevertheless, the Luxembourg Government remains vigilant as regards developments of the pandemic and is maintaining public investments at high levels to enable the Luxembourg economy to fully embark on the path to recovery. Effective vaccination of the Luxembourg population, targeted budgetary support, high levels of public investment and incentives to encourage private investment form an integral part of the 2021 budgetary strategy, which consolidates economic recovery and fosters the digital and green transition.

Thanks to broad-based Government support deployed since the start of the pandemic, the structure of the Luxembourg economy, and the rapid adaptation to new working methods, Luxembourg public finances have withstood the consequences of the health crisis very well. Vigilance in budgetary implementation remains nonetheless essential due to the many uncertainties surrounding potential developments of the pandemic.

III.1 General guidelines of the budgetary policy

The European framework

On 20 March 2020, the European Commission proposed to trigger the general escape clause for the first time in the history of the Stability and Growth Pact. The European Ministers of Finance deemed, on 23 March, that the conditions had been met for the activation of said clause in order to step up emergency budgetary measures.

By activating said clause, the Commission maintained its undertaking to use all of the economic policy instruments at its disposal to help Member States protect their citizens and mitigate the negative socio-economic consequences of the pandemic. The clause authorizes Member States to diverge from their budgetary trajectory or to exceed debt thresholds (60% of GDP) and deficit thresholds (-3% of GDP).

On 3 March 2021, one year after the outbreak of the pandemic, the European Commission issued an update of its general budgetary policy guidelines for Member States in 2021 and 2022. In 2021, the Commission recommends pursuing accommodative budgetary policies whilst maintaining public investment at high levels. The Commission also proposes a framework for the deactivation of the clause on the basis of quantitative criteria, i.e. reaching pre-crisis GDP levels (2019).

The national framework

The activation of the general escape clause at European level in 2020 went hand in hand with the invocation of the "exceptional circumstances clause" of Article 6(1) of the amended Act of 12 July 2014 on the coordination and governance of public finances.

This national clause suspends the obligation to action "*measures to re-establish the trajectory as foreseen in the multiannual financial programming law*" if there is a significant deviation with respect to the MTO. In parallel to the prospects offered by the European Commission, the national clause thus remains in force for 2021 and probably also for 2022.

Budgetary guidelines

The Government's budgetary policy described in this SGP is based on the strategy presented in the annual and multiannual draft budgets tabled in December 2020, which aim to prepare the country resolutely for the challenges of the future. The Government's aims are fully in line with the budgetary guidelines set out in the Communication from the European Commission of 3 March 2021.

In keeping with a forward-looking budgetary policy and in order to maintain its "AAA" rating with credit rating agencies, the Government maintains its ambitious budgetary targets, despite the crisis.

The updated budgetary projections suggest that the deficit will return to below -3% of GDP as early as 2021 and that public debt will be maintained at a level below 30% of GDP, whilst pursuing an investment policy fostering a greener and digital economy. The Government's five priorities in 2021 are to maintain high levels of investment; to ensure solidarity in civil society; to promote affordable housing; to enhance the country's competitiveness; and to promote a sustainable economy. This budgetary strategy will not only prepare the country for future challenges, but also support a sustainable recovery.

Discretionary measures to combat COVID-19

Since the start of the pandemic, the Government has been forced to take rapid and important decisions to combat the spread of COVID-19 and to minimize consequences at socio-economic level. The health and economic situation is monitored constantly, and an ongoing dialogue with the real sector ensures that a targeted and efficient response to the crisis can be provided. All support measures implemented have strict eligibility criteria and applications are examined carefully (ex-ante and ex-post).

In March 2020, the Government adopted a first package of measures aimed at safeguarding the country's production apparatus, protecting the financial resources of all sizes of businesses including the self-employed, keeping jobs and maintaining households' purchasing power.

Then, in a second phase, those measures were supplemented by a second package known as "*Neistart Lëtzebuerg*" which aimed to prepare the economic recovery.

The total volume of these two packages of Government measures amounts to approximately €11 billion, i.e. 18.6% of the estimated 2020 GDP.[9]

The second wave of the pandemic in autumn 2020 led to some measures being extended and new targeted measures have been put in place for sectors in difficulty, including the HORECA sector, which was hardest hit by the pandemic.

[9] It should be noted that the 18.6% is based on the nominal 2020 GDP presented in the multi-annual Budget law.

Although the figures for the 2020 budget year are not yet final, amounts disbursed for COVID-19 measures amount to approximately 4.2% of GDP (excluding guarantees) as at 31 March 2021.

For 2021, the cost of COVID-19 measures is estimated at €575 million, i.e. approximately 1% of GDP. In addition, the maximum amount unlocked for COVID-19 measures in 2020 has not been exhausted, and Luxembourg retains a sufficient budgetary margin to respond to the crisis in 2021, should it persist. Moreover, all recovery measures adopted are aligned with the Government's green, social and digital objectives.

The COVID-19 measures that will apply in 2021 are set out below. The measures are then regrouped in Tables 1 and 2, which show the disbursed and incurred amounts as at 31 March 2021, as well as the amounts anticipated for 2021.

Direct support measures for businesses

In order to tackle the consequences of the crisis for businesses, the Government has put in place a multitude of measures that have enabled businesses of every size to meet their cash flow needs. During 2020, a series of measures were extended, in particular (i) a fixed grant of €5,000 to SMEs, (ii) an additional fixed grant of €5,000 to SMEs, (iii) a fixed grant of €12,500 to SMEs, (iv) a fixed grant of €2,500 for the self-employed, and (v) an additional fixed grant of €3,000–€4,000 for the self-employed. These measures were significant in responding to businesses' immediate cash flow needs.

As the economy recovered from the second quarter onwards, the Government decided to transition from stability support to preparing the recovery of the economy. This course of action is being followed in 2021 and businesses can apply for targeted Government support directed at recovery.

A key instrument in meeting this objective is the ***Recovery and Solidarity Fund*** (FRS) for businesses. With the creation of the fund, the Government seeks to foster and protect jobs, particularly by supporting businesses in sectors most affected by the health crisis (tourism, events, HORECA, culture, entertainment).

Currently, the FRS is financing four different aid that will be explained in more detail below: (i) the FRS aid (June-November 2020); (ii) the recovery aid (December 2020–June 2021); (iii) the aid for costs not covered (November 2020–June 2021); and (iv) the 2021 aid for the self-employed (January 2021–May 2021). In 2021, a total of €145 million will be made available under the FRS. However, it should be noted that the Government stands ready to step up the aid if necessary.

FRS Aid

FRS Aid for the period June–November 2020 may be applied for until 15 May 2021 by any business in the sectors listed in the previous paragraph that has suffered a loss in turnover of at least 25% with respect to the same period in 2019. The monthly aid is calculated on the basis of the total number of employees and self-employed individuals working for the company and varies between €1,250 per employee still in service and €250 per employee in a short-time work scheme. A new application must be made for each month and the maximum aid is 85% of the monthly turnover.

Recovery aid

The new recovery aid applies from December 2020 to June 2021. In practice, it is an extension of the FRS aid (€1,250 per employee still in service and €250 per employee in a short-time work scheme). It is important to note that the recovery aid and the aid for costs not covered are mutually exclusive due to the identical potential beneficiaries.

Aid for costs not covered

The aid for costs not covered is aimed at businesses in the tourism, HORECA, events, culture, entertainment, and retail sectors, including personal care, and vocational training providers. It is intended to cover a loss of 40% or more of turnover. The amount of the grant for microenterprises and small businesses (fewer than 50 employees) is 90% of the eligible amount and for medium-sized and large businesses (50 employees or more), it is 70% of the eligible amount.

Certified emergency aid (2021) for the self-employed (€3,000, €3,500 or €4,000)

To provide the self-employed with ongoing support throughout the crisis, the Government introduced a third emergency grant for the self-employed in an amount of €3,000, €3,500 or €4,000 depending on their income bracket.

Reimbursable advances for businesses

The aid for businesses in temporary financial difficulty, under which businesses can obtain repayable advances, put in place in April 2020, was extended until December 2021, in line with the extension of the European State aid Temporary State aid framework. This aid is a measure, which supplements the set of direct support measures described above.

Promotion of R&D, innovation and investments

In accordance with the Government objective of supporting start-ups and stepping up activities and infrastructures in research and innovation, many of the aforementioned discretionary measures have also been extended to businesses set up in the fiscal years 2019 or 2020. In this regard, it should be noted that in early 2020 the Government launched the initiative "StartupVsCOVID-19" to support the start-up ecosystem and enable fledgling firms to weather the crisis.

The Government increased the maximum rate of co-funding from 50% to at least 70% for any new aid granted to innovative start-up businesses. This new rate applies from July 2020 to June 2021.

As part of the recovery strategy, a new strategic innovation programme called "Fit4Resilience" has been introduced (May 2020–December 2021). It is a coaching tool to help businesses reinvent themselves post-COVID-19 and relaunch their operations in a more resilient way, incorporating a more digital, circular and regional approach.

Moreover, the fragility of value chains and the shortage of some essential products led to the decision to prioritize investment projects that manufacture crisis-relevant products (masks, hand sanitizer, etc.). Furthermore, various initiatives have been taken to promote research and development supporting both industrial research projects and investment projects.

Indeed, the Government had already recognized the importance of investments for a sustainable economic recovery at the very start of the crisis. The investment support schemes put in place in 2020 have thus been reinforced with a supplementary budgetary envelope of €35 million for 2021. It aims to stimulate private investment in the COVID-19 era in order to encourage businesses, through subsidies, to carry out economic development, digitalization or environmental protection projects.

We should reiterate that the Government has consistently adopted a prudent approach when devising COVID-19 discretionary measures so as not to threaten the sustainability of its public finances. By including financial aid and purchase incentives for energy renovation expenses, the promotion of heating systems based on renewable energies, and electromobility in its recovery programme "*Neistart Lëtzebuerg*", the Government has also seized the opportunity of the crisis to accelerate its efforts to foster the green transition.

<u>Measures related to jobs and social security</u>

Short-time work scheme and structural unemployment

The impact of the crisis has also had far-reaching socio-economic effects. As a result, it has been very important for the Government to ensure that citizens and employees in Luxembourg receive appropriate support.

The labour market was the first to suffer the consequences of the pandemic. The Government quickly understood that jobs should be maintained and businesses encouraged not to lay off staff to reduce their expenditure. First, an accelerated short-time work scheme procedure was put in place. Then, the various short-time work schemes were continually adapted to best reflect the health and economic situation. Until June 2021, the *Fonds pour l'emploi* will cover up to 80% of wages, and even 100% of minimum wages. The reimbursement is limited to 250% of the minimum wage for unskilled workers aged 18 or over.

The modalities of the short-time work schemes were introduced specifically to manage the impact of the crisis, and the Luxembourg short-time work scheme is among the most generous at European level. The rapid and effective deployment has prevented a dramatic rise in total unemployment. Moreover, as the economy recovers, the authorities expect a downward trend in all sectors. For 2021, the budgetary impact of the furlough scheme is thus estimated at approximately €275 million.

Other

A number of additional measures have been implemented to support employees, including the neutralisation of incapacity for work due to illness in the calculation of the limit of 78 weeks and the recognition of the right to leave for extraordinary family reasons. In the same vein, the Government has put in place paid family support leave.

Furthermore, as a result of the public health situation, many cross-border workers had to work from home for longer periods of time. Luxembourg reached an agreement with the Belgian, French and German authorities on a more flexible arrangement during the pandemic, enabling cross-border workers to work from home without that remuneration is being taxed in their country of residence. In the same spirit, the three neighbouring countries agreed not to take into account COVID-19-related teleworking days for the purpose of social security legislation. Hence, all cross-border workers continue to be affiliated to the Luxembourg social security system even if they exceed the 25% threshold laid down in European legislation.

These measures are currently in force until 30 June 2021, but an extension will be considered, depending on the health crisis.

To further support low-income workers that have been seriously affected by partial unemployment, the cost-of-living allowance has been doubled for 2020 and extended for 2021 to enable those residents most severely affected by the crisis to receive targeted support.

Since 1 January 2021, subsidies to help increase the minimum wage (January 2021–September 2021) have been added to the social support measures. A grant of €500 per employee has been awarded to the tourism, events, HORECA, culture, and entertainment sectors and to retail businesses, in order to address the tangible repercussions of the crisis on businesses' operations and their employees' lives.

Lastly, these crisis measures are accompanied by training programmes, for example the "Future Skills" or "Digital Skills" programme that seek to facilitate the professional reintegration of the unemployed into the labour market by focusing on the transversal skills employers require. Although these are not measures directly related to the crisis, the rapid implementation of these initiatives will be relevant in particular in the wake of the crisis.

Payment deferrals for tax and social security contributions

Tax payment deferrals

In order to improve businesses' cash flow, several measures had been put in place to lighten the tax burden for natural persons and legal entities in these times of crisis, including the opportunity to cancel some quarterly advances for the first and second quarters of 2020, or to postpone tax payments.

As regards direct taxes, additional measures have been taken in 2021. It has thus been decided that businesses and the self-employed in the hotel and restaurant sector can request that their quarterly local income tax and business tax advance payments for the 3rd and 4th quarters of 2020 and for the 1st and 2nd quarters of 2021 be cancelled. Moreover, taxpayers not covered by this measure can also obtain a reduction in their advance payments or an extension of the payment deadline upon substantiated request.

Guarantees

State guarantee scheme

After an extension until 30 June 2021, a draft bill has been tabled aimed at further extending the State guarantee scheme until the end of 2021. Under this scheme, which was announced on 25 March 2020 as part of the economic stabilisation package and introduced by the Law of 18 April 2020, the State will guarantee bank loans granted to businesses of up to €2.5 billion. In all, participating banks can thus grant guaranteed loans to businesses affected by the crisis up to €2.94 billion (85% x 2.94 = €2.5 billion).

Of course, this is only a brief glimpse of the measures deployed by the Luxembourg Government to fight the crisis and support the recovery. Moreover, the figures for 2021 are only an estimate and remain subject to evolution of the crisis.

The Government monitors the situation at all times and remains in close contact with the various sectors to understand their needs and to provide a targeted and effective response. It is also important to note that, in the face of the multitude of support measures, the administrative support by the Luxembourg authorities has been very important. Each application is assessed and discussed carefully, so as to ensure that businesses receive the support they need.

When preparing the various support packages in 2020, the Government adopted a very conservative approach in estimating the support required. If the measures to support businesses and citizens are exceptionally generous, this was only possible thanks to the balanced budgetary policy of the past years. The general good health of the Luxembourg economy and the rapid response at the onset of the crisis also explain the lower than expected take-up of the COVID-19 support. The rather encouraging economic and budgetary developments are thus a sign that the Government's COVID-19 measures in 2020 were effective and appropriate. The Government will maintain this proactive and accountable crisis management strategy in 2021 as Luxembourg moves along the road to recovery.

Table 1: Discretionary measures in response to the COVID-19 pandemic

List of measures	Description	Sub-Category	Amounts disbursed (Budgetary year 2020)		Amounts planned (Budgetary year 2021)		Amounts reimbursed/ recovered in 2020	
			in millions EUR	% of GDP	in millions EUR	% of GDP	in millions EUR	% of GDP
			Additional expenditure					
Health and crisis management measures	***Procurement of medical tools, medication and infrastructure in the fight against COVID-19***	AC	***221***	***0.4%***	***86***	***0.1%***		
Reimbursable advance for companies	***Repayable advances of up to EUR 1.800.000***	AC	***152***	***0.2%***				
Direct Aids to businesses	***Various direct aids for SMEs and the self-employed***	AC	***105***	***0.2%***	***20***	***<0.1%***		
	Financial and immediate non-refundable aid of EUR 5 000 (Stabilitéitspak)	AC	32	0.1%				
	Additional certified emergency compensation of EUR 5 000 (Stabilitéitspak)	AC	37	0.1%				
	Aid for companies (10 to 20 people) of EUR 12 500 (Stabilitéitspak)	AC	8	<0.1%				
	Emergency allowance of EUR 2 500 for the self-employed (Stabilitéitspak)	AC	6	<0.1%				
	Additional aid of EUR 3 000 - 4 000 for the self-employed (Stabilitéitspak)	AC	13	<0.1%				
	Restart aid for retail stores (Neistart)	AC	9	<0.1%				
Recovery and Solidarity Fund	***Direct monthly aid of EUR 1 250 per working employee and EUR 250 per employee on short-time working scheme to support the sectors most affected by the crisis COVID-19 (Neistart) and other support measures***	AC	***52***	***0.1%***	***145***	***0.2%***		
	of which: RSF aid	AC	49	0.1%	6	<0.1%		
	of which: Aid for costs not covered	AC	3	<0.1%	19	<0.1%		
	of which: Aid for self-employed 2021	AC			13	<0.1%		
Measures to support investments	***Aid to encourage companies, through particularly favourable subsidy levels to make investments***	AC	***2***	***<0.1%***	***35***	***0.1%***		
Different sectoral aids	***Financial support for culture, sport, tourism and agriculture***	AC	***21***	***<0.1%***	***14***	***<0.1%***		
Measures to support a green and sustainable recovery	***Financial aid and purchase premiums for energy renovation, promotion of heating systems based on renewable energies and electromobility***	AC	***1***	***<0.1%***				
Measures to maintain employment	***Short-time working scheme for all sectors affected by the crisis***	AC	***995***	***1.5%***	***275***	***0.4%***	***-366***	***-0.6%***
Measures in favour of the educational system	***Aid to ensure the school rotation system, and education and care services***	AC	***47***	***0.1%***				
Social support schemes	***Cost-of-living allowance doubles for the year 2020 and financial aid for higher education extended***	AC	***41***	***0.1%***				
Sickness leave payments	***CNS coverage from the first day of incapacity for work and freezing of the 78-week limit for incapacity for work***	SS	***146***	***0.2%***				
Special leave for family reasons	***Special leave for family reasons due to school closures and family support leave to care for disabled and elderly people***	SS	***238***	***0.4%***				
Subtotal (Additional expenditure)			***2021***	***3.2%***	***575***	***0.8%***		
			Deferral of payments					
Direct Taxes	***Cancellation of tax advances and deferral of payment***	AC	***232***	***0.4%***				
	Cancellation of the 1^{st} and 2^{nd} advance in 2020	AC	162	0.3%				
	Cancellation of the 3^{rd} and 4^{th} advance payment in 2020 and the 1^{st} and 2^{nd} advance in 2021 (HORECA)	AC						
	Deferral of payments without penality	AC	70	0.1%				
Indirect Taxes	***Administrative tolerance for VAT, and reimbursement of outstanding VAT credit balances < EUR 10 000***	AC	***204***	***0.3%***				
Social contributions	***Deferral of social security contributions without interest or penalties. Suspension until 31 Dec. 2020 of default interest on contributions not paid on time***	SS	***178***	***0.3%***			***-78***	***-0.1%***
Subtotal (Deferral of payments)			***614***	***1.0%***				
TOTAL			***2635***	***4.5%***	***575***	***0.8%***		

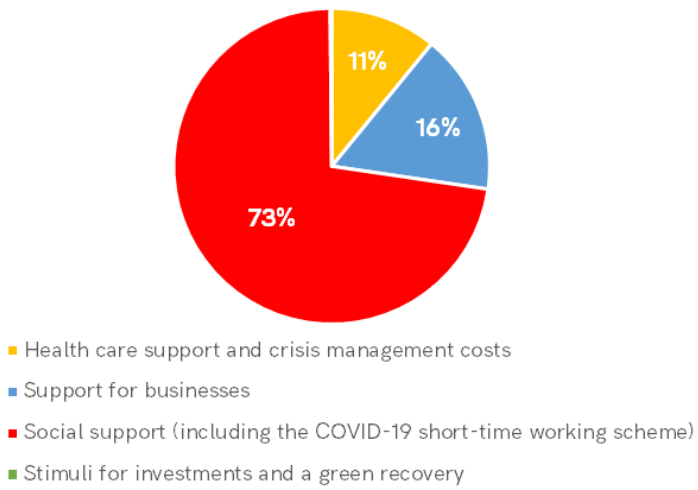
AC = Central government ; SS = Social security funds

Table 2: Guarantees/Loans in response to the COVID-19 pandemic

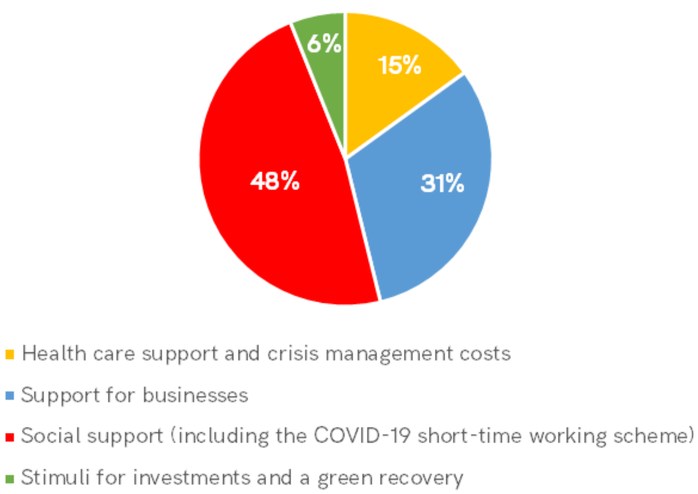
List of measures	*Description*	*Guaranteed amounts to this date*	
		in millions EUR	*% of GDP*
State guarantee scheme	State guarantee for new loans granted by credit institutions. Extension of the state guarantee scheme until 30 June 2021	149	0.2%
Office du Ducroire	Provide support to companies that export internationally, including to markets affected by COVID-19	104	0.2%
TOTAL		253	0.4%

Graph 4: Overview of discretionary measures in the fight against COVID-19

Amounts disbursed in 2020



Planned for 2021



Source: IGF, Ministry of Finance calculations.

III.2 Medium-term budgetary objective

The Stability and Growth Pact is composed of a set of rules, both preventive and corrective, which aim at framing EU Member States' budgetary policies and thereby avoiding slippages in European public finances.

As a response to the 2008 economic and financial crisis, these provisions were supplemented by the Treaty on Stability, Coordination and Governance in the Economic and Monetary Union (TSCG), also known as the "Budgetary Treaty" or "Fiscal Compact" which aims at preserving economic and financial stability in the euro zone.

Framing Member States' budgetary policies is key to ensuring budgetary discipline and avoiding excessive deficits, thereby contributing to the stability of the Economic and Monetary Union as a whole.

The "Budgetary Treaty" and the so-called "preventive" arm of the Stability and Growth Pact are mainly organized around compliance with a budgetary objective referred to as "medium-term budgetary objective ("MTO") which is specific to each country.

MTOs are defined so as to guarantee compliance with objectives on deficit, whilst retaining a margin for budgetary manoeuvre and ensuring that public finances are sustainable in the medium and long term.

MTOs are expressed in "structural" terms, i.e. adjusted for fluctuations in the economic cycle and any exceptional events, thus taking into account diverging economic situations in Member States.

In order to take into consideration the most recent forecasts on the long-term sustainability of public finances, MTOs are redefined every three years. The MTO must comply with a minimum benchmark value ("minimum MTO") established by the European Commission according to a harmonized methodology[10]. This takes into account changes in budgetary costs related to population ageing and the public debt objective of 60% of GDP that is included in the Treaties[11].

New long-term ageing-related cost forecasts will be presented in 2021 in the "*Ageing Report 2021*" by the European working group on ageing, and the SGP 2021 contains a preview of the new forecasts for Luxembourg in Table 7 of the Statistical Appendix. This report covers the

[10] The European Commission calculates *minimum* benchmark values, which does not prevent a Member State from setting a more ambitious MTO.
[11] For a more detailed description, readers are referred to Chapter 1.2 of the European Commission's "*Vade Mecum on the Stability & Growth Pact*": https://ec.europa.eu/info/sites/info/files/economy-finance/ip075_en.pdf .

period up to 2070 and takes into consideration updated demographic forecasts by Eurostat (EUROPOP2019). For Luxembourg, the update will lead to a reduction in ageing-related expenditure between now and 2070 with respect to the 2018 edition of the "Ageing Report".

The minimum benchmark value for the MTO on which Luxembourg's current MTO is established, as calculated by the European Commission, is based on the "Ageing Report 2018" and stands at +0.5% of GDP for 2020–2022.

By virtue of its obligations arising out of the Budgetary Treaty and the Stability and Growth Pact, Luxembourg has aligned itself to the minimum calculated by the European Commission, and in 2019 set the MTO to +0.5% of GDP for the period 2020–2022.

Finally, it should be noted that as a result of the implementation of the general escape clause of the Stability and Growth Pact in 2020, in 2021 and probably in 2022, non-compliance with the MTO has no impact in procedural terms at the present time. This allows EU Member States to deploy all means necessary to combat the socio-economic effects of the crisis and prepare the ground for a sustainable recovery in a context of very low or even negative interest rates.

III.3 The budget situation in 2020 and 2021

2020[12]

The COVID-19 crisis has taken a heavy toll on Luxembourg's public finances. The prudent budgetary policies of the past years have helped cushion the damage to the economy, following the implementation of containment measures and the significant cost of Government measures to protect the economy from the detrimental effects of the crisis. The cumulative effect of these elements has caused the government deficit to plunge to its lowest level in history (-€2,620 million, or -4.1% of GDP).

The very favourable starting position in which Luxembourg found itself in 2019, thanks to the prudent policy of the current and previous governments, enabled the Government to deploy all of the efforts needed to lessen the economic impact of the crisis. The less negative than expected growth of the economy (reduction in real GDP of -1.3% against an estimated -6.0% in April 2020) that ensued is reflected in the public finance figures. Indeed, the deficit of €2,620 million is a considerable improvement over the last SGP in which deficit was to reach €5,024 million (-8.5% of GDP). This performance is primarily driven by the reduction in the central government balance which amounts to -€3,338 million (-5.2% of GDP) instead of the -€4,933 million (-8.3% of GDP) announced in April last year. Revenue from the local government and the social security funds is also much better than estimated last spring. The balance for the local government is thus -€122 million (-0.2% of GDP), whereas more than three times that amount was expected in the last SGP (-€372 million, -0.6% of GDP). Despite having succeeded in maintaining its surplus from previous years, the social security balance has shrunk considerably in this year of crisis (€840 million, +1.3% of GDP) although the reduction has not been as substantial as forecast in April 2020 (€280 million, +0.5% of GDP).

While the negative evolution in public revenues was not as alarming as initially announced, they did fall by -1.2%. This change clearly illustrates the historic nature of the current crisis because growth in public revenues had never before entered negative territory – even during the last financial crisis. The origin of this fall can be found mainly in the under-performance of direct taxes, which suffered losses of around €500 million as compared with 2019[13]. While the crisis seems to have had less of an impact on indirect taxes (-€99 million with respect to 2019), the economic situation and the European Central Bank rules on bank dividends have affected property income (-€250 million). Generally speaking, the reduction in tax income

[12] The figures for 2020 are entirely based on data communicated to Eurostat in the EDP notification of April 2021.
[13] It should be noted that a certain fall in direct taxes, including in particular the corporate income tax and the municipal business tax, had been anticipated and budgeted for in the 2020 Budget following the fiscal gains engendered when automatic taxation was introduced during previous years.

stems mainly from the deteriorated macroeconomic climate. Thanks to the resilience of the Luxembourg economy, recourse to the budgetary measures put in place for businesses to support cash flow was less strong than predicted.

Public expenditure, on the other hand, was strongly affected by the Government's unprecedented measures to fight the health crisis and support the Luxembourg economy. It has thus increased by +14.1% with respect to 2019 and stands at €30,654 million. This rise comes directly from those expenditure categories which contain the main anti-COVID measures. Social security benefits have thus increased by approximately €1,895 million, in particular owing to the take-up of the short-time work scheme, which proved to be crucial in limiting economic and social damage from the crisis, and also to leave for extraordinary reasons and family support leave.

Despite the pandemic, the Government has not stinted on its efforts to invest in the country's future and prepare for the green and digital transition. Public investments reached a new record level in 2020 and total €3,231 million (€3,031 million excluding the military aircraft), including €109 million to fight against COVID-19, representing growth of +26.4% year-on-year. As regards compensation of employees, additional recruitment related to the fight against COVID-19 came on top of the Government's long-term aims to create a modern and efficient public administration, which explains the rise of around 9.8%.

2021

The less devastating outcome than initially envisaged for public finances bears witness to an economic recovery which was under way in 2020 already. Together with government measures to support the economic recovery and to protect jobs, vaccination campaigns will bolster this trend in 2021. During the first two or three months of 2021, a positive scissor effect between public expenditure and revenue has already manifested itself, which can be considered to be a first sign of a forthcoming slow, but certain recovery.

On this basis, the general government balance would amount to -€1,359 million or -2.0% of GDP in 2021. In this second year of the crisis, Luxembourg is thus already in a position to meet the deficit criterion of the Stability and Growth Pact, illustrating the appropriateness of the Government's support measures and reflecting the positive trend in the Luxembourg economy estimated by STATEC (+4.0% of real GDP). This upturn has its origin in the central government, which should see its balance increase to -€2,095 million, while the annual budget adopted in December 2020 was still expecting a deficit of €2,702 million. The positive scissor effect discerned is thus likely to intensify during the rest of the year. Driven by the gradual lifting of containment measures, public income will return to its pre-crisis growth momentum (+5.9%).

Improvements in the economic environment will lead to a reduction in some large categories of public spending with respect to the crisis year 2020. Recourse to support measures, including the short-time work scheme or leave for family reasons, will be reduced, with a positive impact on social security payments (-0.8%). Similarly, the local government will benefit from the favourable economic outlook and will achieve a surplus of around €2 million.

The Government is pursuing its ambitions and plans to invest 4.5% of GDP in 2021 in a green and digital economy. Indeed, the 2021 budget includes a wide range of measures to address the country's structural challenges and enhance social cohesion. In line with its commitments contained in the integrated national energy and climate plan (PNEC), the Government has put in place a CO_2 tax through which the price of energy products is increased. To mitigate the potential impact on people with low or average incomes, social compensation measures in the form of an increase in tax credits have been taken. In the same vein, the subscription tax on sustainable investments has been reduced to encourage private investors to contribute to the green transition and to fight climate change. In addition, an accelerated rate of amortization of 6% now applies to expenditure spent on energy renovation.

Compliance with the rules of the preventive arm of the Stability and Growth Pact

In view of the extension of the general escape clause of the Stability and Growth Pact in 2021, Luxembourg's non-compliance with the rules of the preventive arm of the Pact remains inconsequential in 2020 and 2021.

The guidelines on drafting the 2021 SGPs issued by the European Commission stipulate a return to the regular format of SGPs including the calculation of the various key variables of the Pact. The 2021 SGP thus includes an update of the Luxembourg's structural balance for the entire period covered.

In the short term, the situation is as follows:

- in 2020, the structural balance – calculated using the output gap estimated by STATEC according to the European methodology and without taking into account any measures that might be considered as one-offs – amounts to -2.4% of GDP; and
- in 2021, the structural balance ameliorates to -0.7% of GDP as a result of the improvement in the general government balance and the closure of the output gap.

III.4 The budget situation for 2022-2025

The medium-term trajectory of public finances is characterised, on the one hand, by the gradual recovery of the Luxembourg economy and, on the other hand, by the Government's firm determination to restore gradually the pre-COVID public finance situation, while addressing the country's structural challenges.

As in previous years, the Government aims to invest on average 4.5% of GDP per annum so as to lay the foundations for qualitative and sustainable growth. To that end, the Government will pursue the diversification of the economy through investments in research, innovation and digitalization.

To avoid long-term effects of the crisis on income disparity and social exclusion, the Government will also maintain its efforts to foster social cohesion through a fair tax policy and a social policy that prioritizes the disadvantaged.

2022 is the second year in a row which will profit from a dynamic growth of the economy (+4.0%), which is reflected in a reduction of the general government deficit to -€923 million (-1.3% of GDP). It is above all the central government deficit, which should drop by €400 million to reach €1,695 million, or -2.4% of GDP, that will be responsible for this positive trend.

Local government should also perform dynamically with a surplus of €250 million, while the social security balance will hardly increase and amount to €747 million as opposed to €735 million in 2021.

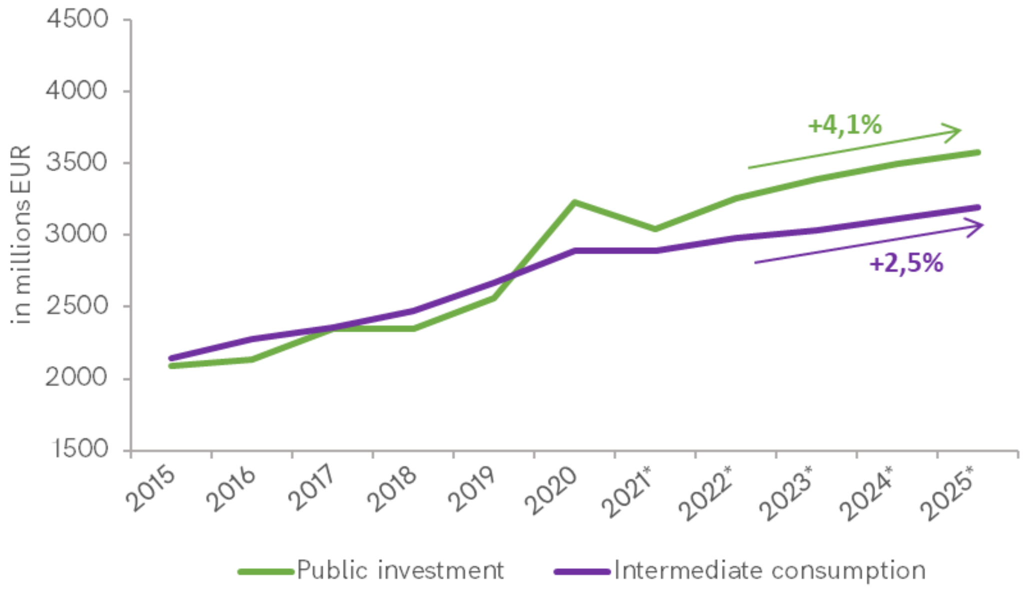
2022 will be the last year in which improvements in the public finance situation are the result of a favourable economic environment. Whilst remaining positive, economic growth will likely slow down in the period from 2023 to 2025.

Faithful to its aim to ensure the sustainability of public finances in the medium term and to prepare for the reactivation of the European budgetary rules in 2023 at the latest, the Government intends to pave the way forthwith for a gradual turnaround of Luxembourg public finances without neglecting the aforementioned priority policies.

To that end, the Government will monitor public spending on an ongoing basis and focus on high-quality investments whilst at the same time limiting increases in public consumption expenditure.

As a result, whilst maintaining average annual growth of public investments at +4.1% between 2022 and 2025, intermediate consumption will increase by only 2.5% over the same period, and public spending will be controlled, reaching an average rate of growth rate of 3.6% per annum. For its part, public revenue will benefit from the economic recovery and continue on the positive trajectory on which it embarked in 2021, displaying an average growth rate of 5.0% per year.

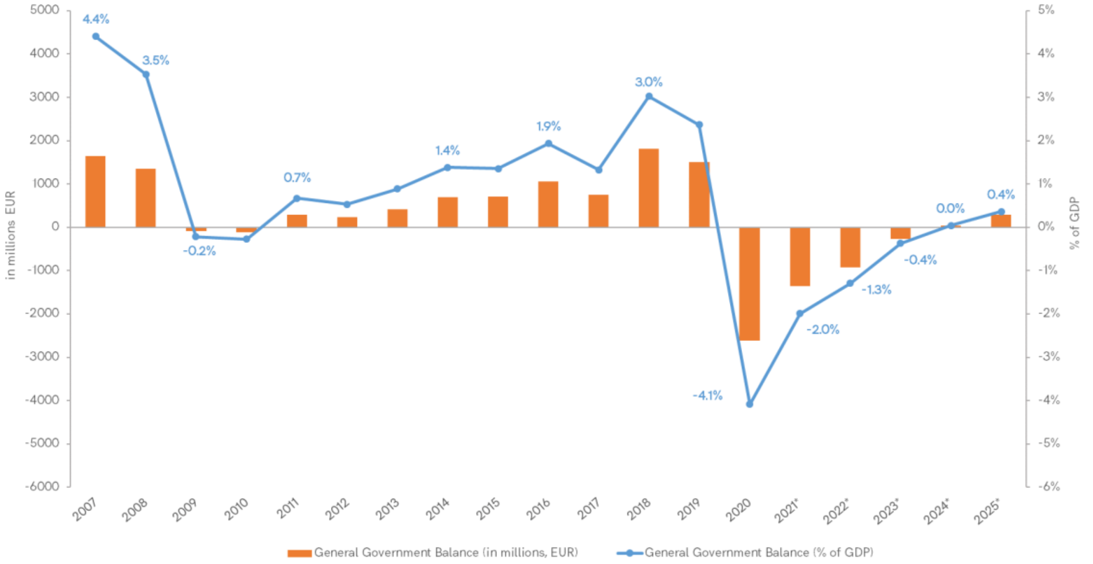
Chart 5: Trends in public investment and intermediate consumption



Source: Ministry of Finance, STATEC.

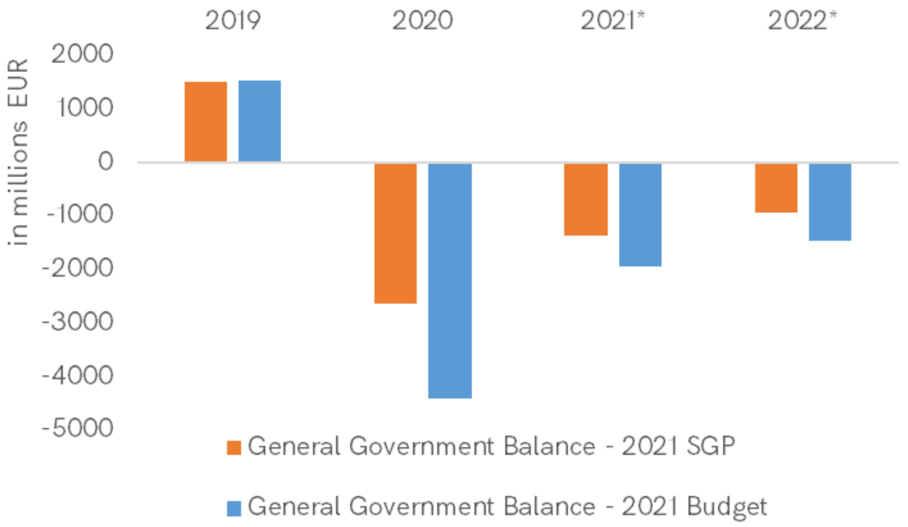
On this basis, the general government balance would continue its upward trend between 2022 and 2023, from a deficit of -€923 million to -€274 million, or -0.4% of GDP. After recording the first small surplus post-crisis in 2024 (€33 million), the general government balance will reach +€293 million (+0.4% of GDP) in 2025. The central government, which will see its balance go from a deficit of -1.5% of GDP or -€1,106 million in 2023 to a deficit of -0.5% of GDP or -€422 million in 2025, is the driving force behind this upturn. While the financial situation of the general pension scheme will enable the social security balance to remain positive throughout the period, the latter will gradually shrink as average expenditure growth (+5.2%) will exceed revenue growth (+4.6%) between 2023 and 2025.

Chart 6: Trends in the general government balance



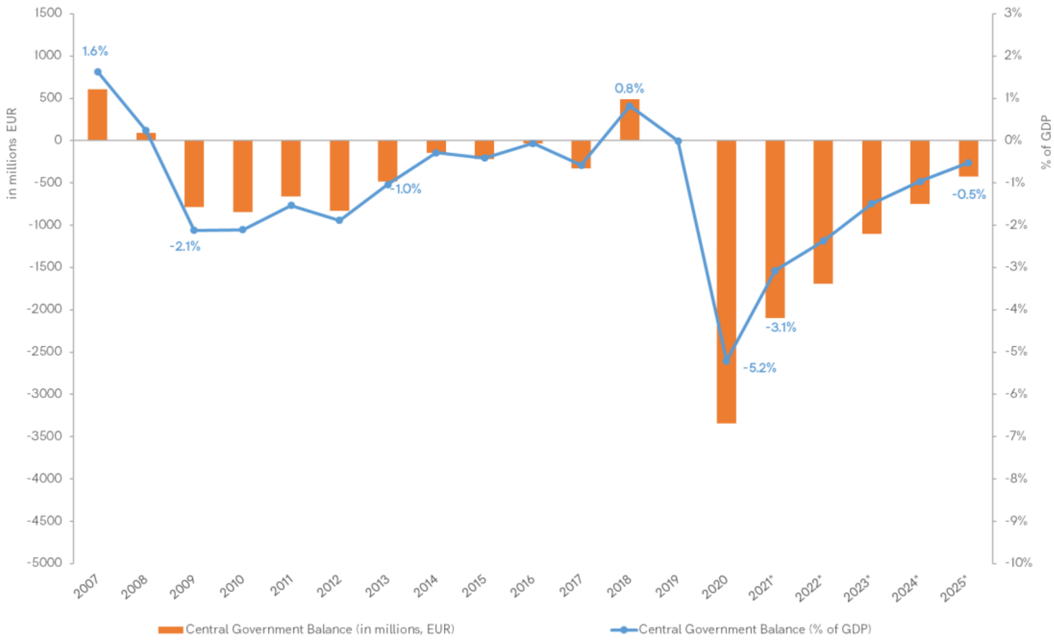
Source: Ministry of Finance, STATEC.

Chart 7: Trends in the general government balance (2021 SGP vs 2021 Budget)



Source: Ministry of Finance, STATEC.

Chart 8: Trends in the central government balance



Source: Ministry of Finance, STATEC.

Compliance with the rules of the preventive arm of the Stability and Growth Pact

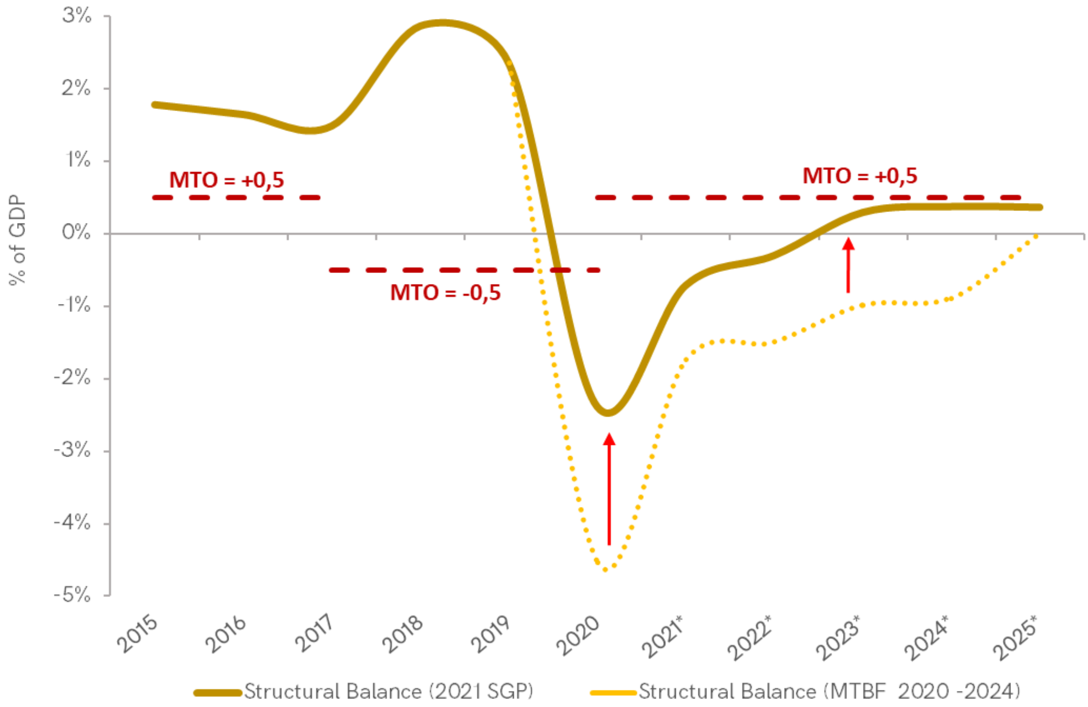
According to the European Commission's general guidelines of 3 March 2021, the preventive arm of the Stability and Growth Pact is likely to apply as from 2023.

Adversely affected by the crisis, the structural balance – calculated using STATEC figures based on the European methodology – is estimated to be below the MTO of +0.5% of GDP in 2022 (-0.3% of GDP), and meet it from 2023 onwards: +0.3% of GDP in 2023, +0.4% of GDP in 2024 and +0.4% in 2025.

Given the margin that the European Commission generally applies when assessing MTO compliance, Luxembourg would thus be in compliance with the Stability and Growth Pact from the moment onwards at which the rules will be applicable again.

The trajectory reflects the surplus trend in the general government balance as well as the steady growth in real GDP which gradually reaches potential GDP in the medium term.

Chart 9: Trends in the general government's structural balance



Source: Ministry of Finance, STAT

<u>Methodological Note: Structural balance and estimate of output gap</u>

The rules of the preventive arm of the Stability and Growth Pact are mainly based on compliance with (or gradual adjustments towards) a budgetary objective referred to as "medium term budgetary objective (MTO)".

The MTO is defined in "structural" terms, i.e. by making corrections for fluctuations in the economic cycle and the effects of exceptional budgetary measures and other temporary measures.

In order to calculate the structural balance, the impact of cyclic adjustments on government balances should be assessed by estimating the gap between real GDP and potential GDP to obtain the output gap. The formula to obtain the "structural" balance from the so-called "nominal" balance is expressed as follows:

Structural balance = Nominal balance – 0.462 x (Output Gap)

The output gap measures the difference between the "real" state of the economy and a "theoretical" state in which an economy would make the best use of its output factors (without creating tensions on prices and wages). The GDP emerging from this situation is referred to as "potential GDP".

In order to correct the nominal balance of cyclic adjustments, the above formula estimates the response of the nominal balance to the economic cycle represented by the output gap. Such responsiveness is taken into account by the semi-elasticity of the nominal balance with respect to changes in GDP. More specifically, it measures the nominal balance change in percentage points of GDP following an increase in GDP of 1.0%. The semi-elasticity of the nominal balance corresponds to the difference between the semi-elasticity of revenue and that of expenditure. These semi-elasticities are calculated by weighting the elasticities of the various categories of revenues by their proportion in total revenues. As for expenditure, the weight of unemployment benefit in total expenditure is used.

In accordance with the methodology and timetable agreed at European level, these semi-elastic features are reassessed every nine years by means of recalculating the individual elasticities of the various categories of revenue and expenditure. The weighting of the various categories of income and of unemployment benefit are reassessed every six years. In 2018, the European Commission recalculated these proportions, which led to semi-elasticities being updated for all Member States. Luxembourg's semi-elasticity thus rose from 0.445 to 0.462 and has been used for the purposes of European economic governance processes since 2019.

The following formula is used to determine the output gap:

Output gap

=

(Real GDP - Potential GDP) / (Potential GDP)

One of the main difficulties when calculating the output gap is that potential GDP and the output gap are two variables that cannot be observed and thus have to be estimated using statistical and econometric methods.

Moreover, due to increasing volatility and frequent revisions to GDP figures and hence forecasts in the case of Luxembourg, output gap estimates feature a very high degree of uncertainty , combined with the fact that there is a multitude of different methodologies for estimating potential GDP and the output gap.

Given that the assessment of the structural balance by the European Commission is based on a harmonised European methodology for all EU Member States, the Government has used this same method to calculate the structural balance since 2015.

In doing so, it relies on the expertise and data of STATEC, given the complexity of the calculations to be carried out, and the fact that the European Commission's forecast figures are not available when the SGP updates are finalized. For calculation purposes, STATEC uses the European Commission's methodology, whilst using data from its own medium-term macroeconomic forecasts.

Despite the "imperfect" nature of this methodology, and because of the unavailability of the European Commission's forecasts, the approach taken should in principle come close to the calculations produced by the European Commission.

Finally, it should be noted that STATEC’s research is ongoing to study and further refine output gap estimates. In this regard, and upon a joint initiative of the Ministry of Finance and STATEC, the European Commission recently agreed to adapt the European methodology to the specificities of the Luxembourg economy, to better take into account the employment of cross-border workers when calculating Luxembourg's output gap.

* * *

The calculation of the structural balance is thus based on the following elements:

	2019	***2020***	***2021***	***2022***	***2023***	***2024***	***2025***
Nominal balance	+2.4%	-4.1%	-2.0%	-1.3%	-0.4%	+0.0%	+0.4%
Real GDP* (in billion)	58.465	57.697	59.998	62.390	64.051	65.742	67.466
Potential GDP (in billion)	58.443	59.929	61.732	63.781	65.990	68.283	70.693
Output gap	+0.0%	-3.7%	-2.8%	-2.2%	-1.5%	-0.7%	0.0%
Structural balance	***+1.9%***	***-2.4%***	***-0.7%***	***-0.3%***	***+0.3%***	***+0.4%***	***+0.4%***

Source: Ministry of Finance, STATEC.
*This level comes out of the European Commission model used to calculate Luxembourg's structural balance and thus differs from the real GDP shown elsewhere in the document.

III.5 Public debt

Since 2013, the current and previous governments have had the objective of reversing the negative spiral of public debt and maintaining debt under 30% of GDP.

Before the current crisis, budgetary programming figures proved that the Government's policy had borne fruit. In late 2019, Luxembourg's public debt stood at €13,977 million, i.e. 22.0% of GDP or 1.7 percentage points less than in late 2013.

This positive trajectory came to an abrupt end with the outbreak of the COVID-19 pandemic. In 2020, the Government was thus obliged to tap the capital markets in order to find additional ways to bolster liquidity and be in a position to deploy all of the resources required to fight against the socio-economic effects of the pandemic.

In absolute terms, public debt increased from €13,977 million in 2019 to €15,941 million (+€1,964 million) in 2020, which represents the largest increase since the financial crisis in 2010, when the debt had grown by €2,126 million compared to the year before. The debt ratio increased by 2.8 percentage points to reach 24.9% of GDP, which is a record for Luxembourg.

Nonetheless, the increase in the debt, both in absolute terms and in % of GDP, was much lower than expected in the 2020 SGP (+€3,002 million, +6.6 percentage points). This outcome is due to a concurrent improvement in the central government balance, which reduced the borrowing requirements, and the nominal GDP, which even grew slightly during the first year of the crisis (+1.0%).

The forecast for 2021 takes into account the very favourable liquidity position, after a bond €2.5 billion bond was issued at a negative rate in March 2021. For the next few years, forecasts for public debt presuppose, in a purely mechanical way, that central government deficits will be financed by additional bonds or other loans over the forecast period 2022 to 2025.

In practice, borrowing requirements will nevertheless be dictated by developments in the State's liquidity position, the applicable market conditions, the choice of the refinancing instrument as well as budgetary developments and other measures that might affect borrowing requirements. This could result in a different debt profile than that calculated mechanically in the projections of public debt.

By virtue of the purely mechanical approach, public debt will increase until the end of the period under review and stand at €22,291 million in 2025. Whereas, with respect to GDP, public debt will reach a peak in 2023 of 28.4% before embarking on a downward trajectory to arrive at 27.6% of GDP in 2025.

The foregoing trend bears witness to the relevance of prudent Government policy throughout the forecasting period. Despite the resolute support measures undertaken by the Government to deal with the crisis, public debt is at all times below the threshold of 30% of GDP laid down in the 2018 government programme, and Luxembourg would retain a significant margin with respect to the European benchmark of 60% of GDP.

The resilience of the country's economy means that Luxembourg's sovereign debt continues to inspire confidence among investors, even in the midst of a crisis. Since the start of the crisis, Luxembourg has issued three bonds in the amount of €6.5 billion, including, in September 2020, the first sustainability bond of any European country. All of these issuances were very well received by investors and demand has always far exceeded supply, allowing Luxembourg to obtain its financing at negative rates.

The "AAA" credit rating with stable outlook issued by all major credit rating agencies will enable Luxembourg to obtain its financing at very favourable interest rates in the coming years.

The cost of public debt service (i.e. the interest burden) has decreased in absolute terms since 2013, from €245 million in 2013 to €149 million in 2020 and this downward trend should continue in the coming years to reach a level of €80 million by the end of the period, i.e. 0.1% of GDP. This compares favourably, moreover, at EU level, as only Estonia has a lower interest burden (see Chart 11).

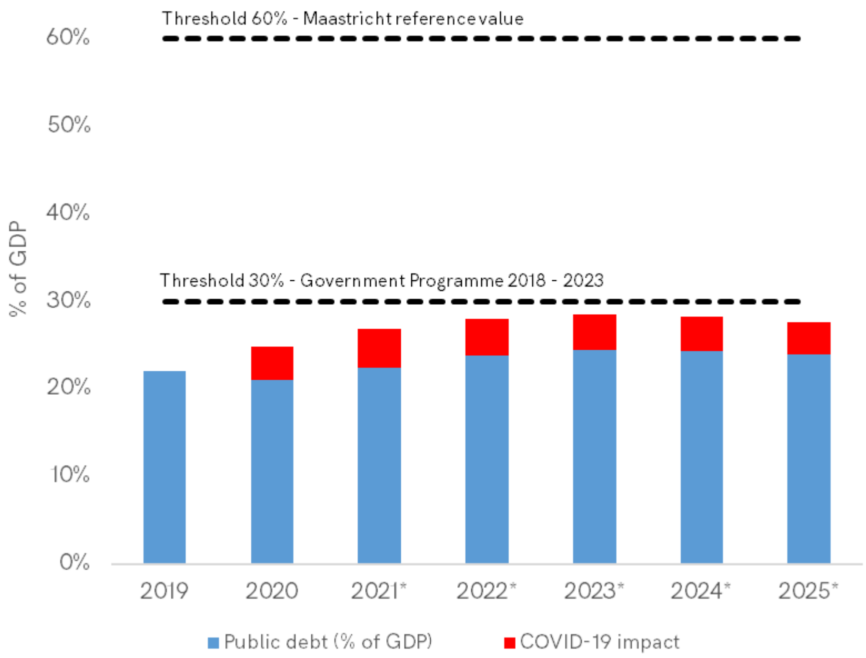
As for the composition of public debt, central government debt and, to a lesser extent, that of the local government are the main components of public debt. It also includes debt of public institutions as well as guarantees granted by the State in PPP contracts (Guarantee Act) and those granted in the context of debt issuances by the European Financial Stability Facility (EFSF).

As the balance of the pension scheme will continue to display a surplus, excess revenue will continue to be allocated to the *Fonds de compensation* so as to cover part of the costs of the pension scheme in the future. Said reserve reached around 37% of GDP as at 31 December 2020 and is at a higher level than public debt.

The Luxembourg State also holds stakes in commercial and non-commercial entities with a value estimated at approximately 10% of GDP and, since 2015, an inter-generational sovereign fund (FSIL) has been created to build up savings for future generations. FSIL assets now stand at around 0.6% of GDP.

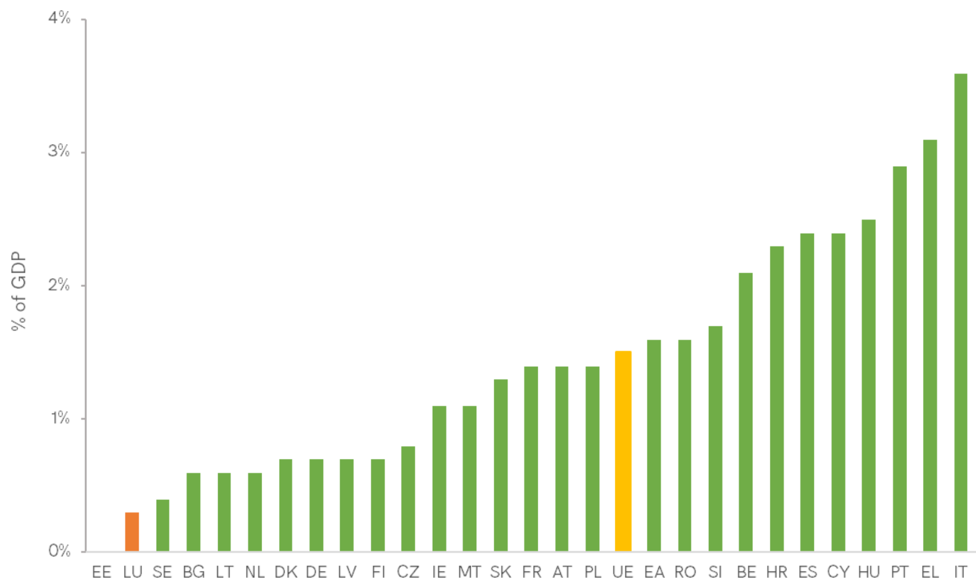
Luxembourg therefore holds financial assets totalling approximately 47.6% of GDP, i.e. almost twice its public debt.

Chart 10: Public debt



Source: Ministry of Finance, STATEC.

Chart 11: Interest burden within the EU in 2020



Source: European Commission (AMECO).

III.6 Sensitivity analysis

This sensitivity analysis allows alternative trajectories to be visualized for the purposes of the macroeconomic and public finance forecasts that underpin the stability and growth programme. The emergence of new COVID-19 infection waves and the progress of vaccination campaigns continue to create uncertainty. A sensitivity analysis allows alternative trajectories for growth and public finance to be visualized with respect to the baseline scenario, which forms the basis of this SGP. In particular, the analyses examine the effects of both positive and negative risks associated with the evolution of the pandemic.

The analysis below is based on the simulation of an unfavourable scenario assuming a new wave of infections leading to a global lockdown in early 2021. This new wave would result in an increase in risk aversion among households, businesses and investors and would lead to moderate growth in the medium term. On the other hand, the favourable scenario is based on the hypothesis that vaccine progress and US post-election recovery measures come together to foster recovery in the short term and allow longer-term economic repercussions to be avoided.

Simulation of favourable and unfavourable scenarios

These two scenarios are compared to the baseline scenario, considered to be the most probable, which assumes that growth remains constrained by social distancing in the short term, before the permanent easing of restrictions commences in mid-2021.

The unfavourable scenario: In this scenario, recovery is temporary due to a second wave of infections, which triggers the extension or re-imposition of restrictions. The initial shock to the baseline scenario cancels out around 70% of the recovery that had been initiated after the first wave, leading to an additional reduction in economic activity and a further deterioration in financial markets. The increased risk aversion of households and businesses leads to a sluggish economic recovery.

Thus, in the context of this theoretical exercise, the negative shock would lead to a fall of around 5.1 percentage points in the growth rate estimated for the euro zone in 2021. As for the Luxembourg economy, real growth should be around -0.6% for the same year. For 2022, the Luxembourg economy would see slightly stronger growth, but still below that of the baseline scenario before recording more moderate growth under the assumption of a recovery in the euro area over the period 2022–2023.

Public finances would deteriorate relative to the figures presented in the baseline scenario, sending the central government into deficit by €1,099 million in 2021. This deterioration compared to the baseline scenario would continue throughout the period under review. The public debt would thus amount to 43.6% of GDP by 2025, against 27.6% of GDP in the baseline scenario.

The favourable scenario: In this scenario, scientific progress facilitates a faster easing of public health restrictions and fewer concerns among investors, businesses and households. A more robust global recovery thereby results in the short term. Within two years, global GDP returns to levels envisaged prior to the COVID-19 pandemic. The scale of the recovery minimizes the pandemic's impact on the economy and ensures that global GDP in the medium term is not lower than forecast before the crisis.

The vaccination campaign progress and the easing of restrictions would mean that the euro area would see growth of 3.6 percentage points higher than in the baseline scenario in 2021. As for Luxembourg, the positive developments in the health situation would lead to a positive shock in terms of GDP growth, which would thus stand at 7.1% in 2021 and 4.4% in 2022. In the medium term, GDP growth would converge towards more moderate rates. The central government balance would be positive from 2023 onwards and would stand at €292 million for that year. The public debt would continue to fall until it reaches 17.7% by 2025.

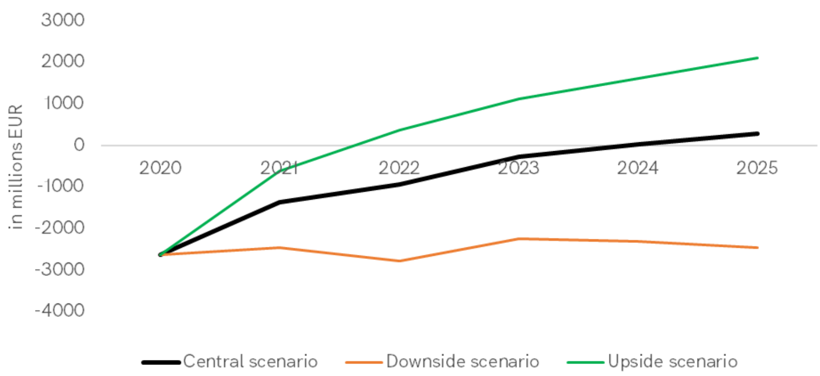
Table 3: Main macroeconomic variables

	2020	2021			2022			2023			2024			2025		
	Base	SC1	*Central*	SC2	SC1	*Central*	SC2	SC1	*Central*	*SC2*	SC1	*Central*	SC2	SC1	*Central*	SC2
Real GDP Euro Area (change in %)	*-7.1*	-0.9	*4.2*	7.8	5.6	*4.9*	4.3	2.3	*2.2*	1.9	1.3	*1.4*	1.2	1.3	*1.4*	1.2
Real GDP (change in %)	*-1.3*	-0.6	*4.0*	7.1	3.3	*4.0*	4.4	2.2	*2.7*	3.1	2.4	*2.6*	2.6	2.3	*2.6*	2.6
Nominal GDP (change in %)	*1.0*	-0.2	*6.3*	10.5	3.6	*4.7*	5.4	3.1	*4.1*	4.6	3.6	*4.2*	4.5	3.6	*4.2*	4.5
Employment level (change in %)	*2.0*	0.5	*1.7*	2.5	1.7	*2.8*	3.6	1.8	*2.4*	2.7	1.5	*2.2*	2.5	1.5	*2.2*	2.5
Unemployment rate, in % (ADEM definition)	*6.3*	7.3	*6.8*	6.4	7.8	*6.4*	5.6	8.3	*6.6*	5.7	8.6	*7.0*	6.4	8.9	*7.5*	7.2
Eurostoxx (change in %)	*-4.7*	-13.1	*8.9*	18.4	2.4	*0.8*	0.3	2.4	*0.7*	0.9	2.5	*0.7*	0.2	2.5	*0.7*	0.2

Table 4: Public finances

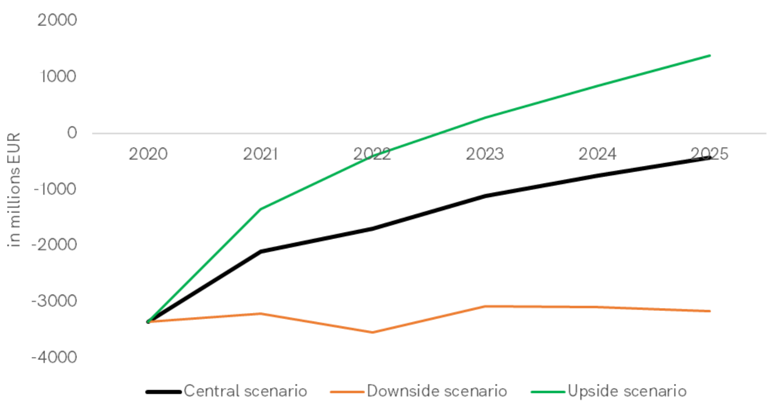
	2020	2021			2022			2023			2024			2025		
	Base	SC1	*Central*	SC2	SC1	*Central*	SC2	SC1	*Central*	*SC2*	SC1	*Central*	SC2	SC1	*Central*	SC2
General Government																
Nominal balance (in millions, EUR)	*-2 620*	-2 458	*-1 359*	-604	-2 768	*-923*	371	-2 236	*-274*	1 124	-2 304	*33*	1 632	-2 445	*293*	2 105
Nominal Balance (% of GDP)	*-4.1*	-3.8	*-2.0*	-0.9	-4.2	*-1.3*	0.5	-3.3	*-0.4*	1.4	-3.3	*0.0*	2.0	-3.3	*0.4*	2.5
Structural Balance (% of GDP)	*0.0*	-0.7	*-0.7*	-0.3	-1.4	*-0.3*	0.8	-1.4	*0.3*	1.7	-2.3	*0.4*	2.1	-3.3	*0.4*	2.5
Central Government																
Nominal balance (in millions, EUR)	*-3 341*	-3 195	*-2 095*	-1 340	-3 540	*-1 695*	-401	-3 068	*-1 106*	292	-3 084	*-747*	852	-3 159	*-422*	1 390
Nominal Balance (% of GDP)	*-5.2*	-5.0	*-3.1*	-1.9	-5.3	*-2.4*	-0.5	-4.5	*-1.5*	0.4	-4.4	*-1.0*	1.0	-4.3	*-0.5*	1.6
Public debt																
Public debt (in millions, EUR)	*15 941*	19 138	*18 322*	17 281	22 679	*20 017*	17 682	25 747	*21 123*	17 390	28 831	*21 870*	16 539	31 990	*22 292*	15 148
Public debt (% of GDP)	*24.9*	29.9	*26.9*	24.4	34.2	*28.0*	23.6	37.7	*28.4*	22.2	40.7	*28.2*	20.2	43.6	*27.6*	17.7

Chart 12: Shock simulation – general government balance



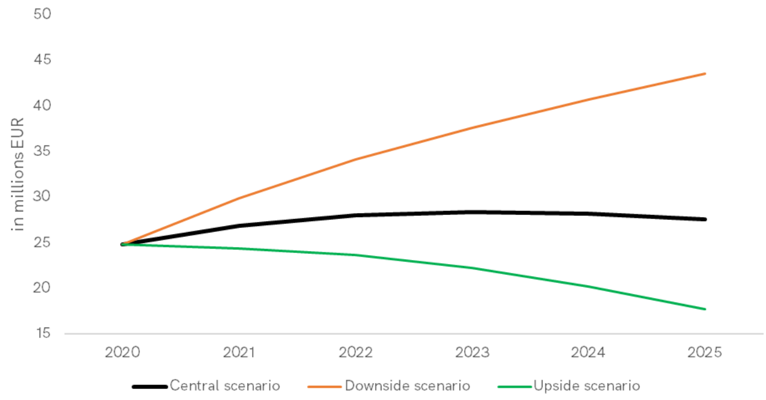
Source: Ministry of Finance, STATEC.

Chart 13: Shock simulation – central government balance



Source: Ministry of Finance, STATEC.

Chart 14: Shock simulation – Public debt



Source: Ministry of Finance, STATEC.

Simulation of an interest rate shock

The shock applied to the interest rates in the euro area simulates the potential shock on the economic and financial situation of Luxembourg compared to the central scenario.

It transpires that an annual increase in interest rates of 50 basis points with respect to the trajectory of the baseline scenario would have a relatively small impact on Luxembourg's real GDP growth. The baseline scenario is marked by uncertainties as regards developments in the health crisis, and therefore presupposes that a low-interest environment will be retained.

Luxembourg's GDP would thus decline only by 0.3 and 0.1 percentage points with respect to the baseline scenario in 2022 and 2023 respectively. For the rest of the period under review, GDP growth would remain stable. As for the labour market, the rate of unemployment would only be marginally affected and would be 0.1 percentage points below its level in the baseline scenario in 2021.

The impact of a shock on public finances would also be limited. The annual general government balances would be slightly (around 0.2% of GDP) below those in the baseline scenario. The public debt should thus amount to 28% of GDP by 2025.

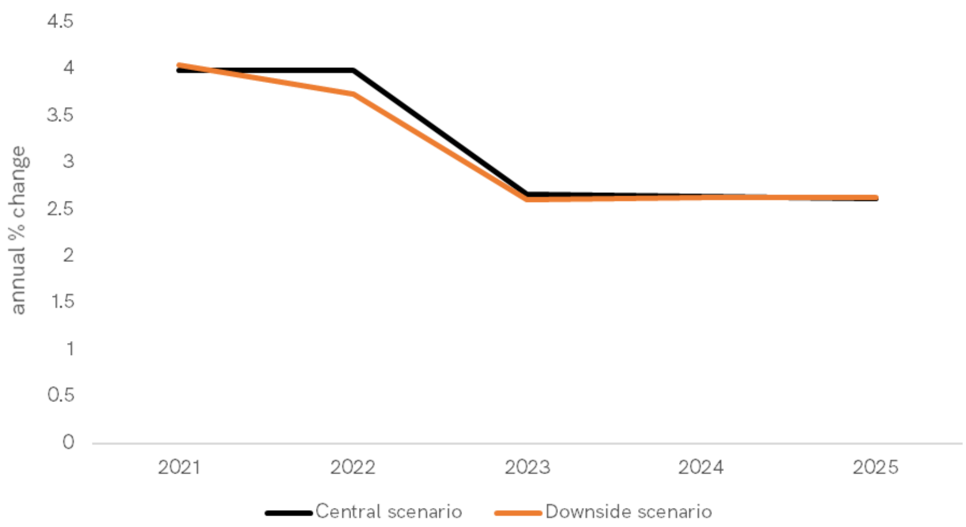
Table 5: Main macroeconomic variables

	2021		2022		2023		2024		2025	
	Shock -	*Central*	Shock -	*Central*	Shock -	*Central*	Shock -	*Central*	Shock -	*Central*
Short-term interest rate EUR (%)	-0.4	*-0.4*	0.0	*-0.5*	0.6	*-0.4*	1.1	*-0.4*	1.5	*-0.3*
Long-term interest rate EUR (%)		*0.1*		*-0.1*		*0.4*		*0.8*		*1.1*
Real GDP (change in %)	0.0	*0.0*	4.0	*4.0*	3.7	*4.0*	2.6	*2.7*	2.6	*2.6*
Employment (change in %)	0.0	*0.0*	1.8	*1.7*	2.7	*2.8*	2.3	*2.4*	2.1	*2.2*
Unemployment rate, in % (ADEM definition)	6.3	*6.3*	6.7	*6.8*	6.4	*6.4*	6.6	*6.6*	7.0	*7.0*
Eurostoxx (change in %)	0.0	*0.0*	6.3	*8.9*	0.9	*0.8*	-0.3	*0.7*	1.2	*0.7*

Table 6: Public finances

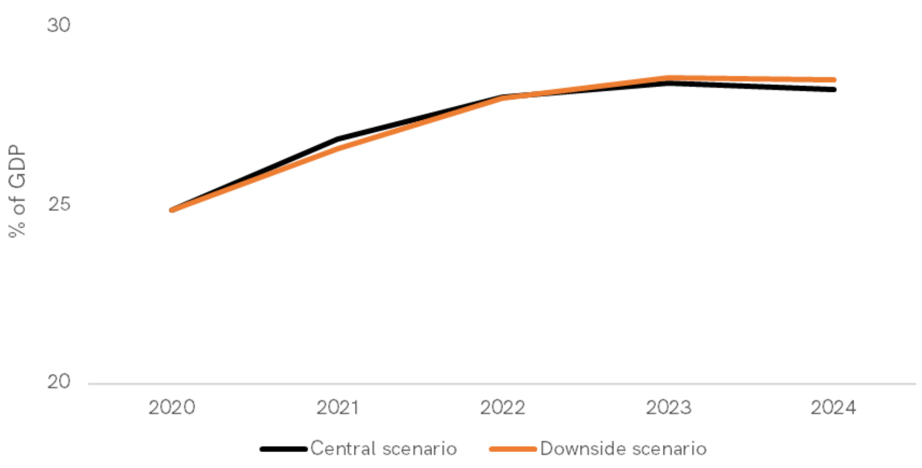
	2021		2022		2023		2024		2025	
General Government										
	Shock -	*Central*	Shock -	*Central*	Shock -	*Central*	Shock -	*Central*	Shock -	*Central*
Nominal balance (in millions, EUR)	-2620	*-2 620*	-1390	*-1 359*	-1080	*-923*	-428	*-274*	-128	*33*
Nominal Balance (% of GDP)	-4.1	*-4.08*	-2.0	*-2.0*	-1.5	*-1.3*	-0.6	*-0.4*	-0.2	*0.0*
Central Government										
Nominal balance (in millions, EUR)	-3 341	*-3 341*	-2 126	*-2 095*	-1 851	*-1 695*	-1 260	*-1 106*	-908	*-747*
Nominal Balance (% of GDP)	-5.2	*-5.2*	-3.1	*-3.1*	-2.6	*-2.4*	-1.7	*-1.5*	-1.2	*-1.0*
Public debt										
Public debt (in millions, EUR)	15 941	*15 941*	18 067	*18 322*	19 919	*20 017*	21 179	*21 123*	22 087	*21 870*
Public debt (% of GDP)	24.9	*24.9*	26.6	*26.9*	28.0	*28.0*	28.6	*28.4*	28.5	*28.2*

Chart 15: Interest rate shock – Real GDP



Source: Ministry of Finance, STATEC.

Chart 16: Interest rate shock – Public debt



Source: Ministry of Finance, STATEC.

III.7 Comparison with the Stability and Growth Programme 2020 and the Autumn 2020 Multiannual budget

A comparative analysis between the 2020 SGP and the 2021 SGP reveals the following observations:

1) The scale of the crisis was not as severe as forecast. Consequently, the mechanical rebound in real GDP in 2021 is also less substantial.
2) In parallel to the improved macroeconomic conditions, the projections for public finances are also revised upwards.
3) Since the 2020 SGP presented only projections for 2020 and 2021 only, no comparison between the two SGPs can be drawn over the medium term. A comparative analysis has nonetheless been carried out with respect to the estimates of the autumn 2020 multiannual budget.

As for the short term (see also Chapter III.3):

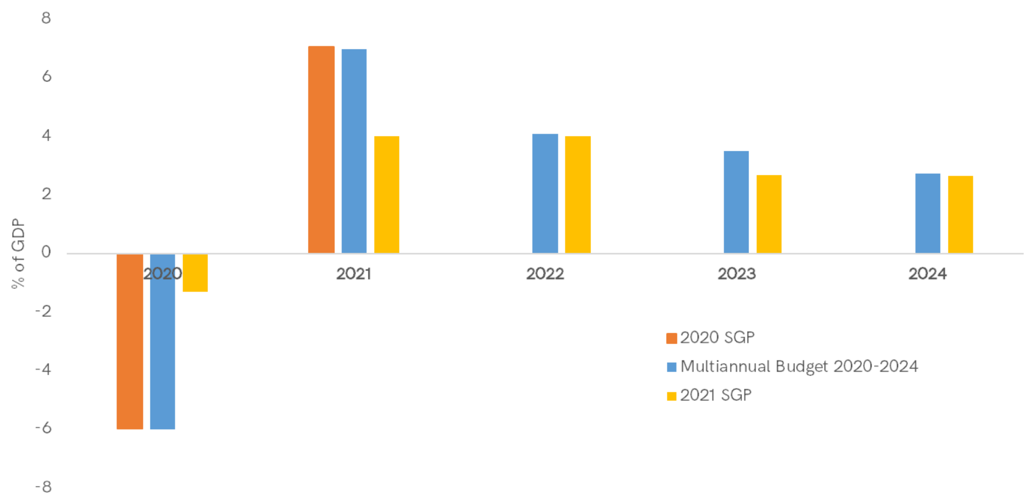
- For 2020, the general government balance improves considerably, from -8.5% to -4.1% of GDP. This revision is mainly attributable to the improvement in macroeconomic conditions, which can be explained *inter alia,* by the government measures implemented in 2020 which mitigated the impact of the pandemic on the economy.
- As regards 2021, the general government balance improves for the same reasons as in 2020, from -3.0% of GDP to -2.0% of GDP.
- In 2020, public debt amounts to €15.9 billion, i.e. 24.9% of GDP, a considerable drop with regard to the level envisaged in the 2020 SGP (-3.8 percentage points). A reduction in debt can also be observed with respect to the October 2020 forecast in the draft multiannual budget. These reductions reflect a better than predicted performance of public finances in 2020

As for the medium term 2022–2025 (see also Chapter III.4):

- The general government balance improves slightly compared to the 2020–2024 Multi-annual budget. The difference is +0.9 percentage points of GDP over the entire period, following the crisis period. Despite maintaining high levels of public investment, which is one of the cornerstones of the government programme, the general government balance is restored. This reflects an improvement of the quality of Luxembourg's public finances. Compared to the medium term presented in the 2020–2024 Multiannual budget, public expenditure is revised downwards by -1.8 percentage points on average, despite an average increase of +1.1 points in indirect investments. On the revenue side -very conservatively-, a reduction of -0.9 percentage points over the period 2022-2024 is estimated, mainly due to a drop in social security contributions.

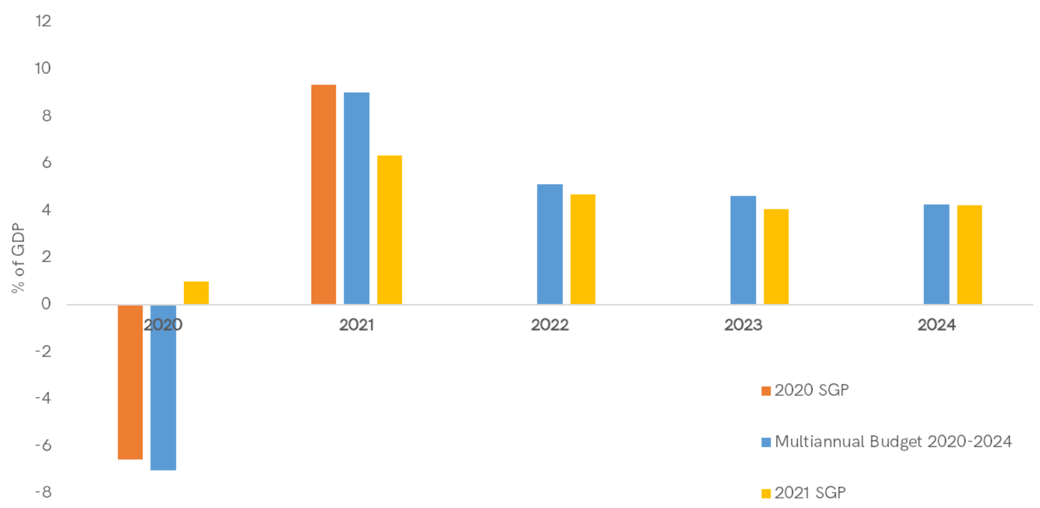
- In the medium term, public debt is well below the figure envisaged in October and will remain below the 30% threshold set by the Government. Public debt should continue its downward trajectory from 2024 onwards.

Chart 17: Comparison with respect to the previous update of the SGP and the Multi-annual budget – Real GDP (in %)



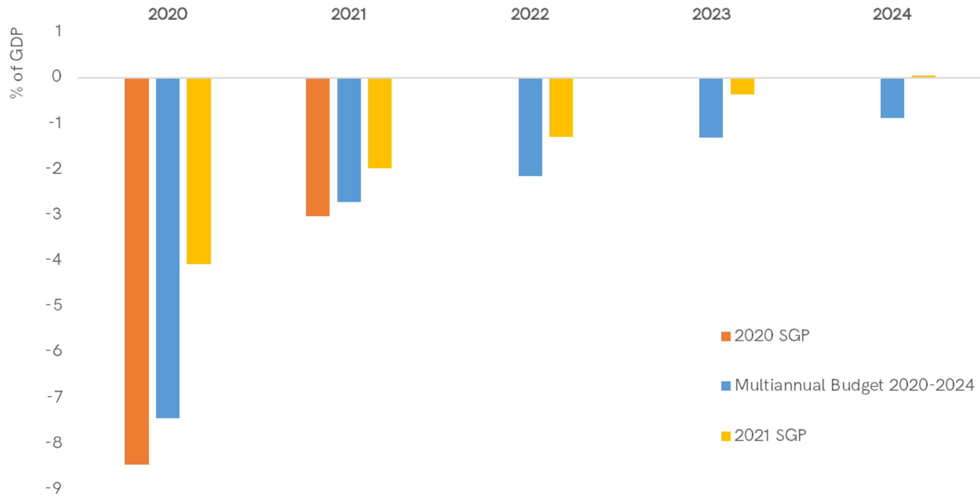
Source: Ministry of Finance, STATEC.

Chart 18: Comparison with respect to the previous update of the SGP and the Multi-annual budget – Nominal GDP (in %)



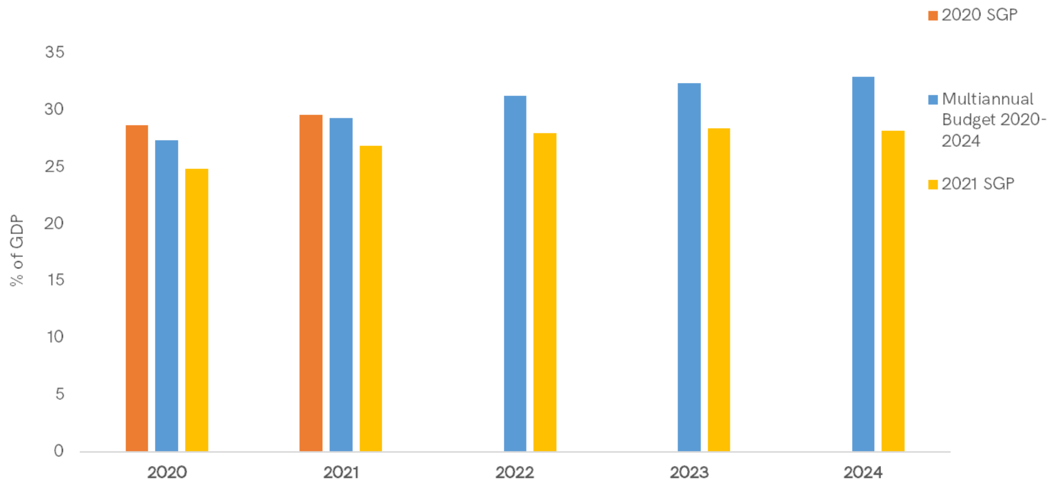
Source: Ministry of Finance, STATEC.

Chart 19: Comparison with respect to the previous update of the SGP and the Multi-annual budget – general government balance (in % of GDP)



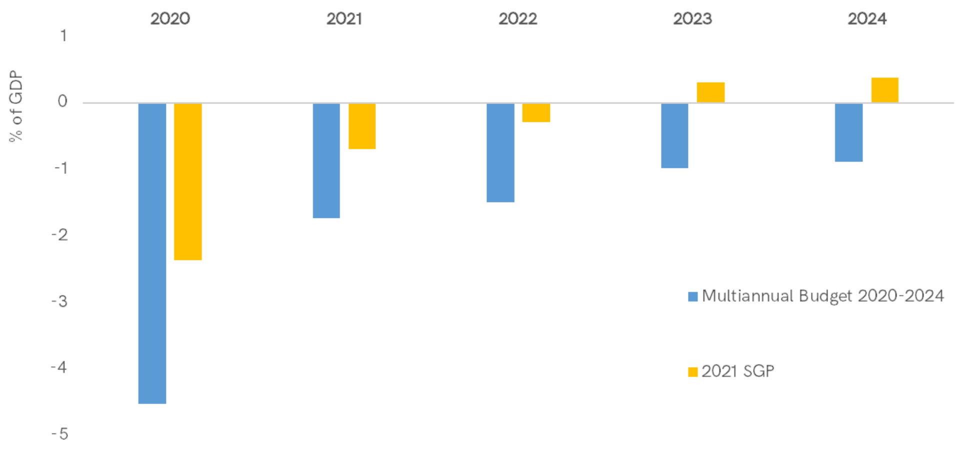
Source: Ministry of Finance, STATEC.

Chart 20: Comparison with respect to the previous update of the SGP and the Multiannual budget – Public debt (in % of GDP)



Source: Ministry of Finance, STATEC.

Chart 21: Comparison with respect to the previous update of the SGP and the Multi-annual budget – Structural balance (in % of GDP)



Source: Ministry of Finance, STATEC.

IV. Quality of public finances

Luxembourg continues to follow a provident approach aimed at careful management of public finances. The 2021 Budget was prepared in accordance with the Government's intention to encourage a rapid return to qualitative and job-creating growth through quality investments.

The reassuring public finance situation in early 2021 is above all the result of the authorities' balanced choices over the past months. Measures targeted to business sectors' needs, and the maintaining of public investments at high levels, will further foster the recovery of the Luxembourg economy. In addition, the favourable starting position made it possible to provide rapid and generous support to citizens and businesses.

The quality of public finances is not only measured in "quantitative" terms, but also in "qualitative" terms. Indeed, the Government has been consistently committed to the quality of public finances.

The 2021 Budget law, as voted on 19 December 2020, seeks to improve the efficiency and quality of the State's public finances by focusing on 5 priorities, namely: (i) maintaining high levels of investment, (ii) embedding solidarity within society; (iii) promoting affordable housing; (iv) strengthening the country's competitiveness; and (v) fostering a sustainable economy.

An ambitious public investment policy through the development of productive investments and a strengthening of essential institutions includes the maintenance and modernization of existing infrastructures. The 2021 SGP provides for public investments totalling +4.5% of GDP until 2023 with an increasing annual trend. These public investments will be particularly important in the wake of the crisis and will support the Government's efforts towards the green and digital transition. In terms of digitalization, Luxembourg maintains its ongoing undertaking to develop state-of-the-art infrastructures and secure data management.

The importance given to the quality of public finances is also confirmed when compared to other EU Member States. Despite an ambitious public investment policy, the total level of public expenditure in % of GDP in Luxembourg remains lower than the European average, with a ratio of 42.3% in Luxembourg in 2019 against 47.1% in the euro area. As for public revenue, it is clear that Luxembourg was getting close to the European average in 2019. The health crisis, however, has led to a drop in revenue across all EU countries.

Finally, the following should be noted with respect to the medium-term trend for public finances:

- The share of public expenditure in GDP is expected to gradually decline from 2021 onwards as a result of the recovery of the economy and less pronounced growth of intermediate consumption.
- Government revenues are expected to recover gradually from 2022 onwards, returning to pre-crisis levels by 2025.
- In terms of the composition of public revenues, direct taxes rise from 15.7% of GDP in 2020 to 16.3% in 2025, while indirect taxes rise from 11.3% of GDP in 2020 to 11.7% of GDP in 2025.

V. Long-term sustainability of public finances

The various social security pillars are monitored regularly to ensure both that benefits are in line with beneficiaries' needs, and that their financial sustainability is secured in a given period that varies according to each social security pillar. In recent years, monitoring mechanisms have been strengthened and broadened by specific legislative provisions introduced by reforms. This applies, in particular, to pension and long-term care insurance, which, by the very nature of the benefits, need to be planned in the medium and long term. The results of the analyses carried out using the mechanisms in place or on an ad hoc basis are discussed with social security partners and other stakeholders to guarantee good strategic management and the long-term viability of each pillar.

Concerning more specifically the general pension insurance scheme, for which reformed legislation entered into force on 1 January 2013, the legislation provides that the General Social Security Inspectorate (IGSS) will examine the financial situation of said scheme every five years halfway through and at the end of the 10-year cover period. This reform aimed to align the rate of replacement to life expectancy, to provide for regulatory mechanisms in the event of insufficient financial resources and to close the gap between the legal age and the actual retirement age, by means of an active policy facilitating job retention conditions for older employees.

The next IGSS actuarial report relating to the general pension scheme will take place at the end of this year. In it, the IGSS will update its forecasts for the financing of the system. Once the report is available, the Government will engage with it and it will be discussed with all stakeholders, mainly the social partners, to draw conclusions.

This is in line with the Government's willingness to involve the social partners in substantive discussions that concern society as a whole. In this respect it should be recalled that the last IGSS actuarial report submitted on 2 December 2016[14] was discussed by a group of experts appointed by all of the stakeholders. This group was set up by the Government of the 2013–2018 legislation. The group of experts concluded[15] that the general pension scheme is in a reasonably comfortable position.

Consecutive surpluses allowed a clearing reserve to be accumulated which, in 2019 (last consolidated data), corresponded to 4.81 times the amount of annual benefits, i.e. well beyond

[14] For further information: https://gouvernement.lu/fr/actualites/toutes_actualites/communiques/2016/12-decembre/02-bilan-assurance-pension.html
[15] The report of the "Pensions" working group can be obtained from the following link: https://gouvernement.lu/fr/publications/rapport-etude-analyse/igss/rapport-du-groupe-de-travail-pensions/2018/rapport-du-groupe-de-travail-pensions.html

the minimum level required of 1.5 times the amount of annual benefits. The medium-term forecast and long-term actuarial projections confirm that the current overall contribution rate of 24% is sufficient to meet the requirements of Article 238 of the Social Security Code until the end of the current coverage period from 2013 to 2022.

The assessment also highlights that even if the impacts of the 2012 pension insurance reform (entered into force on 1 January 2013) are not yet visible on the scheme's financial situation, the actuarial projections confirm that the mechanisms introduced by the pension insurance reform will have a positive effect on the scheme's financial situation in the long term.

As regards the long-term care insurance scheme, which currently has just under 15,000 beneficiaries, the Government has undertaken a reform to modernize this pillar and meet the challenges of demographic developments and to continue to ensure equitable access to high-quality benefits[16]. The main objectives of the reform[17], which entered into force on 1 January 2018, consist of providing a personalised offer of the benefits that meets each person's daily needs, of strengthening the quality through clear standards and criteria with adequate controls, of simplifying procedures and of consolidating the system in light of the societal developments and the principles of the fundamental law of 1998.

In addition, the reform put in place tools to allow for better monitoring of the entire long-term care insurance scheme, to better anticipate future changes and the system's financial balance. This involves, among other things, drawing up analyses and reports on the quality of services provided (Care Insurance Assessment and Monitoring Authority) and on the level of fixed cover established by the reform, which addresses the real needs in terms of essential acts of life (IGSS). The first report was produced in 2019[18].

In this context, it should be noted that the Government's priorities include involving, to the extent possible, social partners and more broadly all stakeholders, in preparing and implementing the various reforms by resorting to concerted action. This approach seeks to ensure that the reforms are also taken up by stakeholders as much as possible and to continue to guarantee future access to high-quality services whilst ensuring that there is a healthy financial balance across the various social security pillars.

[16] Presentation of the reform's key components: https://gouvernement.lu/fr/actualites/toutes_actualites/communiques/2016/06-juin/21-schneider-copas.html
[17] Act of 12 July 2017.
[18] Dependency cover: Provisional analysis report, IGSS, 2019: https://igss.gouvernement.lu/fr/publications/rapport-previsionnel-2019/2019/rapport-analyse-previsionnel.html

In fact, in addition to financial stability, which must of course be guaranteed, the level of services for each pillar is just as essential, whether for pensions, healthcare (health insurance) or long-term benefits (care insurance).

This priority thus falls within the sustainable development goals[19] of the United Nations and more specifically those aimed at ensuring that all persons have access to accessible and high-quality social security services. This also applies to pensions, the level of which must enable all beneficiaries to live with dignity, particularly those pensioners who have had a low income during their working lives.

The same applies to benefits aimed at beneficiaries retaining a certain level of independence, to the extent possible, if they need the support of a third person (care situation).

The 2021 SGP includes new forecasts on ageing-related expenditure which have been produced by the "Ageing Working Group" of the Economic Policy Committee within the ECOFIN Council, as part of the publication of the 2021 Ageing Report (Table 7). According to previous projections in the 2018 Ageing Report, ageing-related spending was to reach 30.9% of GDP in 2070. The updated forecasts show a rate of 27.3% of GDP for the same year, thus a relative reduction of 3.6 percentage points. This revision emanates mainly from long-term care and education expenditure and is mainly explained by the adaptation of the demographic projections produced by EUROSTAT (EUROPOP2019) as well as by the update of the underlying data used to produce them.

[19] Luxembourg 2030: Third National Sustainable Development Plan, December 2019: https://environnement.public.lu/dam-assets/documents/developpement-durable/PNDD.pdf

VI. Institutional aspects of public finances

Legislative modifications

With the entry into force of the Law of 12 July 2014 on the coordination and governance of public finances, the legal framework governing the institutional aspects of public finances has undergone substantial changes to render it compliant with European requirements. The aforementioned Law thus transposed into national law the provisions of the TSCG[20], of the "*Six pack*"[21] and the "*Two-pack*"[22]. The main changes introduced by the Law of 12 July 2014 are as follows:

- the rule stating that the budgetary situation must be in balanced or in surplus;
- sets a Medium-Term Objective (MTO) and a trajectory for related adjustments;
- a budgetary rule relating to central government expenditure;
- a medium-term budgetary framework including 4-year programming;
- a correction mechanism triggered if there is a significant variation;
- a special procedure in case the State's annual budget cannot be adopted;
- provisions aimed at promoting the transparency of public finances[23]; and
- the creation of the "National Council of Public Finance" (CNFP) as an independent body responsible for monitoring public finances.

Involvement of stakeholders in the European Semester

Since 2016, the Government regularly and systematically involves stakeholders in the annual cycle of policy coordination, the "European Semester". This Government initiative is motivated by the desire to improve consultations with the main stakeholders and the vital forces of the country, and thereby enhance the governance process of public finances in Luxembourg.

In this way, a social dialogue with the social partners and the Government was organized under the aegis of the Economic and Social Council (CES) on 30 March 2021 to discuss the Government's priorities as outlined in its Recovery and Resilience Plan (RRP), the National Reform Programme (NRP) and the Stability and Convergence Programme (SGP). The involvement of parliament is ensured through the presentation and debate on the NRP, RRP,

[20] Text of the Treaty as approved in the Act of 29 March 2013: http://data.legilux.public.lu/eli/etat/leg/div/2013/04/26/n1/jo.
[21] The "Six Pack" includes the following laws: Directive No 2011/85/EU, Regulation No 1173/2011, Regulation No 1174/2011, Regulation No 1175/2011, Regulation No 1176/2011 & Regulation No 1177/2011.
[22] The "Two Pack" includes the following laws: Regulation No 472/2013 & Regulation No 473/2013.
[23] Concerning fiscal spending in particular, implicit undertakings (guarantees, etc.), and shareholdings in private and public companies.

and SGP in the plenary session of the Chamber of Deputies, prior to their transmission to the European Commission on 27 April 2021.

National Economic and Financial Committee

Under the authority of the Ministers of Economy and Finance, the "National Economics and Finance Committee" (CEFN) is called upon to coordinate the work enabling the Government to meet the obligations incumbent upon it under European economic and financial governance. The CEFN was institutionalized in 2017 to replace the former "Forecasting Committee" which at the time coordinated the public stakeholders involved in preparing economic and budgetary forecasts.

The CEFN's main duties are the following:

- coordinating the work on the development of the SGP, the NRP and the draft budgetary plan (DBP);
- coordinating the preparation of public finance forecasts on the basis of unchanged policy, based on the macroeconomic forecasts prepared by STATEC;
- facilitating the exchange of information and data between competent national authorities;
- preparing analyses, upon request by the Government, on the potential impact of measures with a material impact on public finances or the economic situation.

Reconciling public finance concepts in line with the ESA 2010 and pursuant to the provisions of the 1999 Law

In the 2019 State Budget, several measures were implemented so as to reconcile the views on public finances according to the different concepts currently applied, namely the ESA 2010 and the accounting provisions of the Law of 8 June 1999 on the Budget, Accounting and Treasury of the State.

The State Budget as established annually on the basis of national legislation differs in several regards from the central government figures drawn up in accordance with the ESA 2010. These differences arise principally from the fact that central government constitutes an entity that exceeds the scope of the State Budget and also includes revenue and expenditures of special State funds as well as of entities that are mainly "controlled" or financed by the State (public institutions, foundations, separately managed State Departments, etc.). As a result, balances are not directly comparable when using the common benchmark.

In order to reconcile revenue and expenditure accounts as per ESA 2010 and the 1999 Law, a number of avenues were explored: i) a review of budget lines contained in the "Budget pour ordre" for which integration into the current budget could lead to gaps being reduced; ii) a review of the special funds, for which funding has been reviewed and the rationale of some funds has been reassessed; iii) a revised schedule, with earlier cut-off and transmission dates to align the budgetary year with the periods laid down by the European legislation under ESA 2010; and iv) restructuring the budget with the introduction of a budget for financial operations (borrowings, shareholdings/concessions) to avoid such transactions being included in revenue or expenditure in the capital budget (as in the ESA 2010) to ensure that they be clearly identified as financial operations.

While taking into account the structural changes made to the 2019 Budget in order to reconcile the two accounting systems, the State budget as established each year still differs on a number of respects from the central government budget, which is drawn up in accordance with the rules of the ESA 2010.

Nevertheless, several projects have been successfully completed to progress the reconciliation of public finance concepts. Hence in 2020, work on the second stage of the feasibility study on the possible implementation of the European Public Sector Accounting Standards in Luxembourg was completed.

In order to support accrual accounting, it was decided that a new IT system, SIFIN3, would be put in place and would be fully operational in 2023. Moving over to the new version of the IT system will also enable existing processes to be further streamlined and optimized.

VII. Statistical Appendix[24]

Table 1a. Macroeconomic prospects

	ESA Code	Year 2020	Year 2020	Year 2021	Year 2022	Year 2023	Year 2024	Year 2025
		Level	rate of change	rate of change	rate of change	rate of change	rate of change	rate of change
1. Real GDP	B1*g	51300	-1.3	4.0	4.0	2.7	2.6	2.6
2. Nominal GDP	B1*g	64143	1.0	6.3	4.7	4.1	4.2	4.2
Components of real GDP								
3. Private consumption expenditure	P.3	15234	-7.0	8.4	3.7	2.9	2.3	2.3
4. Government consumption expenditure	P.3	9468	6.9	0.6	1.2	3.4	3.1	3.1
5. Gross fixed capital formation	P.51	8613	-8.8	2.7	-0.2	5.4	3.7	3.7
6. Changes in inventories and net acquisition of valuables (% of GDP)	P.52 + P.53		0.0	0.0	0.0	0.0	0.0	0.0
7. Exports of goods and services	P.6	103173	2.5	8.5	6.2	4.4	4.8	4.8
8. Imports of goods and services	P.7	85647	2.1	9.5	5.8	5.1	5.2	5.2
Contributions to real GDP growth								
9. Final domestic demand		-	-2.3	3.1	1.3	2.4	1.9	1.9
10. Changes in inventories and net acquisition of valuables	P.52 + P.53	-	-0.4	0.0	0.0	0.0	0.0	0.0
11. External balance of goods and services	B.11	-	1.4	0.9	2.7	0.2	0.7	0.7

Table 1b. Price developments

	ESA Code	Year 2020	Year 2020	Year 2021	Year 2022	Year 2023	Year 2024	Year 2025
		Level	rate of change	rate of change	rate of change	rate of change	rate of change	rate of change
1. GDP deflator		1.3	2.3	2.3	0.7	1.4	1.5	1.6
2. Private consumption deflator		1.2	1.1	1.7	1.7	1.9	1.9	1.9
3a. HICP		105.9	0.0	2.0	1.9	1.9	1.9	1.9
3b. NICP		106.3	0.8	1.7	1.8	1.9	1.9	2.0
4. Public consumption deflator		1.2	0.4	1.2	1.8	1.7	1.7	1.7
5. Investment deflator		1.2	2.2	1.6	1.5	1.3	1.3	1.3
6. Export price deflator (goods and services)		1.3	1.3	3.2	1.6	2.4	2.7	2.7
7. Import price deflator (goods and services)		1.3	0.6	2.9	2.5	2.7	2.9	2.9

Table 1c. Labour market developments

	ESA Code	Year 2020	Year 2020	Year 2021	Year 2022	Year 2023	Year 2024	Year 2025
		Level	rate of change	rate of change	rate of change	rate of change	rate of change	rate of change
1. Employment, persons[1]		474	2.0	1.7	2.8	2.4	2.2	2.2
2. Employment, hours worked (in million of hours worked)		677	-3.3	8.2	3.4	2.5	1.9	1.9
3a. Unemployment rate (%) (harmonised definition, Eurostat)		19	6.3	6.8	6.4	6.6	7.1	7.6
3b. Unemployment rate (%) (ADEM definition)		19	6.3	6.8	6.4	6.6	7.0	7.5
4. Labour productivity, persons[2]		108	-3.2	2.2	1.1	0.3	0.5	0.4
5. Labour productivity, hours worked[3]		76	2.1	-3.9	0.5	0.1	0.7	0.7
6. Compensation of employees (in billion of euros)	D.1	32	1.2	7.4	5.6	4.8	4.6	4.6
7. Compensation per employee (in thousands of euros)		67	-0.8	5.6	2.8	2.4	2.4	2.4

[1]Occupied population, in thousands, domestic concept national accounts definition.

[2]National accounts definition.

[3]Number of people unemployed expressed in thousands.

[4]Idem.

[5]Real GDP per person employed.

[6]Real GDP per hour worked.

[24] Since Luxembourg has not included the amounts it was granted under the Recovery and Resilience Facility in the forecasts of the SGP, the table relating thereto has not been included in the Appendix.

Table 1d. Sectoral balance sheets

in % of GDP	ESA Code	Year 2020	Year 2021	Year 2022	Year 2023	Year 2024	Year 2025
1. Net lending/borrowing vis-à-vis the rest of the world	B.9	-	-	-	-	-	-
2. Net lending/borrowing of the private sector	B.9	-	-	-	-	-	-
3. Net lending/borrowing of general government	EDP B.9	-4.1	-2.0	-1.3	-0.4	0.0	0.4
4. Statistical discrepancy		-	-	-	-	-	-

Table 2a. General government budgetary prospects

	ESA Code	Year 2020	Year 2020	Year 2021	Year 2022	Year 2023	Year 2024	Year 2025
		Level	% of GDP	% of GDP	% of GDP	% of GDP	% of GDP	% of GDP
Net lending (EDP B.9) by sub-sector								
1. General government	S.13	-2 620	-4.1	-2.0	-1.3	-0.4	0.0	0.4
2. Central government	S.1311	-3338	-5.2	-3.1	-2.4	-1.5	-1.0	-0.5
3. State government	S.1312	…	…	…	…	…	…	…
4. Local government	S.1313	-122	-0.2	0.0	0.0	0.1	0.1	0.1
5. Social security funds	S.1314	840	1.3	1.1	1.0	1.0	0.9	0.7
General government (S13)								
6. Total revenue	TR	28 033	43.7	43.5	43.6	44.3	44.5	44.7
7. Total expenditure	TE[1]	30 654	47.8	45.5	44.9	44.6	44.4	44.3
8. Net lending/borrowing	EDP B.9	-2 620	-4.1	-2.0	-1.3	-0.4	0.0	0.4
9. Interest expenditure	EDP D.41	149	0.2	0.2	0.2	0.1	0.1	0.1
10. Primary balance[2]		-2 471	-3.9	-1.8	-1.1	-0.2	0.1	0.5
11. One-off and other temporary measures[3]		…	…	…	…	…	…	…
Selected components of revenue								
12. Total taxes (12=12a+12b+12c)		17 247	26.9	26.9	27.0	27.6	27.9	28.1
12a. Taxes on production and imports	D.2	7 070	11.0	11.5	11.5	11.6	11.7	11.7
12b. Current taxes on income, wealth, etc.	D.5	10 043	15.7	15.2	15.3	15.8	16.0	16.3
12c. Capital taxes	D.91	135	0.2	0.2	0.2	0.2	0.2	0.2
13. Social contributions	D.61	8 116	12.7	12.2	12.3	12.3	12.4	12.4
14. Property income	D.4	596	0.9	1.3	1.1	1.1	1.1	1.1
15. Other[4]		2 074	3.2	3.1	3.1	3.1	3.1	3.1
16=6. Total revenue	TR	28 033	43.7	43.5	43.6	44.3	44.5	44.7
p.m.: Tax burden (D.2+D.5+D.61+D.91-D.995)[5]		25 363	39.5	39.1	39.3	40.0	40.3	40.5
Selected components of expenditure								
17. Compensation of employees and intermediate consumption	D.1+P.2	9 829	15.3	15.0	15.0	14.9	14.9	14.9
17a. Compensation of employees	D.1	6 942	10.8	10.6	10.7	10.7	10.8	10.8
17b. Intermediate consumtpion	P.2	2 888	4.5	4.4	4.2	4.2	4.1	4.1
18. Social payments (18=18a+18b)		13 429	20.9	19.5	19.1	19.2	19.2	19.4
of which Unemployment benefits [6]		1 154	1.8	1.4	1.0	0.9	0.9	0.8
18a. Social transfers in kind supplied via market producers	D.6311, D.63121, D.63131	2 288	3.6	3.5	3.4	3.4	3.4	3.5
18b. Social transfers other than in kind	D.62	11 141	17.4	16.0	15.7	15.8	15.8	15.9
19=9. Interest expenditure	EDP D.41	149	0.2	0.2	0.2	0.1	0.1	0.1
20. Subsidies	D.3	761	1.2	1.1	1.1	1.0	1.0	0.9
21. Gross fixed capital formation	P.51	3 231	5.0	4.5	4.6	4.6	4.5	4.4
22. Capital transfers	D.9	776	1.2	1.3	1.1	1.0	1.0	1.0
23. Other[7]		2 479	3.9	3.8	3.8	3.7	3.7	3.5
24=7. Total expenditure	TE[1]	30 654	47.8	45.5	44.9	44.6	44.4	44.3

[1]Adjusted for the net flow of swap-related flows, so that TR-TE=EDP B.9.

[2]The primary balance is calculated as (EDP B.9, item 8) plus (EDP D.41, item 9).

[3]A plus-sign means deficit-reducing one-off measures.

[4]P.11+P.12+P.131+D.39+D.7+D.9 (other than D.91).

[5]Including those collected by the EU and including an adjustment for uncollected taxes and social contributions (D.995), if appropriate.

[6]Includes cash benefits (D.621 et D.624) and in kind benefits (D.631) related to unemployment benefits.

[7]D.29+D4 other than D.41)+ D.5+D.7+P.52+P.53+K.2+D.8.

Table 2b. No-policy change projections

		Year 2020	Year 2020	Year 2021	Year 2022	Year 2023	Year 2024	Year 2025
		Level	% of GDP	% of GDP	% of GDP	% of GDP	% of GDP	% of GDP
1. Total revenue at unchanged policies		28 033	43.7	43.6	43.6	44.2	44.4	44.7
2. Total expenditure at unchanged policies		30 654	47.8	44.6	44.8	44.5	44.2	44.3
3. Net borrowing/lending (general government)		-2 620	-4.1	-1.0	-1.1	-0.2	0.2	0.4
3.a. Net borrowing/lending (central government)		-3 338	-5.2	-2.1	-2.2	-1.4	-0.8	-0.5
3.b. Net borrowing/lending (local government)		-122	-0.2	0.0	0.0	0.1	0.1	0.1
3.c. Net lending/borrowing (social security funds)		840	1.3	1.1	1.0	1.0	0.9	0.7

Table 2c. Amounts to be excluded from the expenditure benchmark

		Year 2020	Year 2020	Year 2021	Year 2022	Year 2023	Year 2024	Year 2025
		Level	% of GDP	% of GDP	% of GDP	% of GDP	% of GDP	% of GDP
1. Expenditure on EU programmes fully matched by EU funds revenue		120	0.2	0.2	0.2	0.2	0.1	0.1
2. Cyclical unemployment expenditure[1]		1 154	1.8	1.4	1.0	0.9	0.9	0.8
3. Effect of discretionary revenue measures		92	0.1	0.1	0.0	0.0	0.0	0.0
4. Revenue increases mandated by law		...	...	...	...	...	...	...

[1]Absolute level of unemployment expenditure, based on COFOG 10.50.

Table 3. General government expenditure by function

% of GDP	COFOG Code	Year 2019	Year 2024
1. General public services	1	5.2	5.0
2. Defence	2	0.4	0.5
3. Public order and safety	3	1.2	1.2
4. Economic affairs	4	5.2	5.6
5. Environmental protection	5	0.9	1.0
6. Housing and community amenities	6	0.5	0.6
7. Health	7	5.1	5.5
8. Recreation, culture and religion	8	1.2	1.2
9. Education	9	4.7	4.6
10. Social protection	10	18.0	19.1
11. Total expenditure	TE[1]	42.3	44.4

[1]Adjused for the net-flow of swap-related flows, so that TR-TR-TE=EDP B.9.

Table 4. General government debt developments

% of GDP	ESA Code	Year 2020	Year 2021	Year 2022	Year 2023	Year 2024	Year 2025
1. Gross debt[1]		24.9	26.9	28.0	28.4	28.2	27.6
2. Change in gross debt ratio		2.8	2.0	1.2	0.4	-0.2	-0.6
Contributions to changes in gross debt							
3. Central government balance effect		5.3	3.3	2.5	1.5	1.0	0.5
4. Denominator effect		-0.2	-1.5	-1.2	-1.1	-1.1	-1.1
5. Other		-2.2	0.2	-0.1	-0.1	0.0	0.0
4. Interest expenditure[2]		0.2	0.2	0.2	0.1	0.1	0.1
5. Stock-flow adjustment		-2.4	-1.1	-1.2	-1.1	-1.1	-1.1
p.m.: Implicit interest rate on debt[3]		0.7	0.6	0.5	0.4	0.3	0.3

[1]As defined in Regulation 3605/93 (not an ESA concept).

[2]Cf. item 9 in Table 2a.

[3]Proxied by interest expenditure divided by the debt level of the previous year.

Table 5. Cyclical developments

% of GDP	ESA Code	Year 2020	Year 2021	Year 2022	Year 2023	Year 2024	Year 2025
1. Real GDP growth (%)		-1.3	4.0	4.0	2.7	2.6	2.6
2. Net lending of general government	EDP B.9	-4.1	-2.0	-1.3	-0.4	0.0	0.4
3. Interest expenditure	EDP D.41	0.2	0.2	0.2	0.1	0.1	0.1
4. One-off and other temporary measures[1]		….	…	…	…	…	…
5. Potential GDP growth (%)		2.5	3.0	3.3	3.5	3.5	3.5
6. Output gap		-3.7	-2.8	-2.2	-1.5	-0.7	0.0
7. Cyclical budgetary component		-1.7	-1.3	-1.0	-0.7	-0.3	0.0
8. Cyclically-adjusted balance (2 - 7)		-2.4	-0.7	-0.3	0.3	0.4	0.4
9. Cyclically-adjusted primary balance (8 + 3)		-2.1	-0.5	-0.1	0.4	0.5	0.5
10. Structural balance		-2.4	-0.7	-0.3	0.3	0.4	0.4

[1]A plus sign means deficit-reducing one-off measures.

Table 6. Divergence from previous update and the multiannual budget

	ESA Code	Year 2020	Year 2021	Year 2022	Year 2023	Year 2024	Year 2025
Real GDP growth (%)							
2020 SGP		-6.0	7.0	…	…	…	…
Multiannual budget 2020 - 2024		-6.0	7.0	4.1	3.5	2.7	…
2021 SGP		-1.3	4.0	4.0	2.7	2.6	2.6
Difference 2021 SGP vs. 2020 SGP		4.7	-3.1	…	…	…	…
Difference 2021 SGP vs. Multiannual budget 2020-2024		4.7	-3.0	-0.1	-0.8	-0.1	…
Nominal GDP growth (%)							
2020 SGP		-6.6	9.3	…	…	…	…
Multiannual budget 2020 - 2024		-7.0	9.0	5.1	4.6	4.3	…
2021 SGP		1.0	6.3	4.7	4.1	4.2	4.2
Difference 2021 SGP vs. 2020 SGP		7.6	-3.0	…	…	…	…
Difference 2021 SGP vs. Multiannual budget 2020-2024		8.0	-2.7	-0.4	-0.6	-0.1	…
General government net lending (% of GDP)	EDP B.9						
2020 SGP		-8.5	-3.0	…	…	…	…
Multiannual budget 2020 - 2024		-7.4	-2.7	-2.2	-1.3	-0.9	…
2021 SGP		-4.1	-2.0	-1.3	-0.4	0.0	0.4
Difference 2021 SGP vs. 2020 SGP		4.4	1.0	…	…	…	…
Difference 2021 SGP vs. Multiannual budget 2020-2024		3.4	0.7	0.9	0.9	0.9	…
Structural balance							
2020 SGP		…	…	…	…	…	…
Multiannual budget 2020 - 2024		-4.5	-1.7	-1.5	-1.0	-0.9	…
2021 SGP		-2.4	-0.7	-0.3	0.3	0.4	0.4
Difference 2021 SGP vs. 2020 SGP		…	…	…	…	…	…
Difference 2021 SGP vs. Multiannual budget 2020-2024		2.2	1.0	1.2	1.3	1.3	…
General government gross debt (% of GDP)							
2020 SGP		28.7	29.6	…	…	…	…
Multiannual budget 2020 - 2024		27.4	29.4	31.3	32.4	32.9	…
2021 SGP		24.9	26.9	28.0	28.4	28.2	27.6
Difference 2021 SGP vs. 2020 SGP		-3.8	-2.8	…	…	…	…
Difference 2021 SGP vs. Multiannual budget 2020-2024		-2.6	-2.5	-3.3	-4.0	-4.7	…

Table 7. Long-term sustainability of public finances

(% of GDP)	AR 2021 *)			AR 2018 **)		
	2019	2070	2070-2019	2019 ***)	2070	2070-2019
Age-related expenditure	**16.9**	**27.3**	**10.4**	**18.1**	**30.9**	**12.9**
of which pension expenditure	9.2	18.0	8.7	9.0	17.9	8.9
of which health care expenditure	3.6	4.6	1.1	4.0	5.1	1.0
of which long-term care	1.0	2.5	1.4	1.4	4.1	2.7
of which education expenditure	3.0	2.2	-0.8	3.2	3.4	0.3
of which unemployment expenditure	-	-	-	0.5	0.4	-0.1
Pension reserve fund ("fonds de compensation") (in billion of dollars)	*34.9*	*0.0*		*32.9*	*0.0*	
Assumptions	AR 2021 *)			AR 2018 **)		
	2019	2070	2070-2019	2019 ***)	2070	2070-2019
Labour productivity growth	-0.8	1.5	2.4	0.7	1.5	0.9
Real GDP growth	2.3	1.3	-1.0	3.7	1.7	-2.0
Participation rate (males, aged 15-64)	76.6	73.6	-3.0	75.5	72.1	-3.4
Participation rate (females, aged 15-64)	67.4	71.8	4.4	66.0	66.5	0.5
Total participation rates (aged 20-64)	72.1	72.7	0.6	70.8	69.3	-1.5
population (in million)	0.6	0.8	0.2	0.6	1.0	0.4
Working-age population (15-64/total)	69.5	57.4	-12.2	69.0	57.2	-11.9
Ratio non-active/active (65+/15-64)	20.8	51.7	30.9	21.3	48.9	27.5
Ratio elderly active/active (55-64/15-64)	17.6	22.1	4.5	17.8	20.1	2.3
Unemployment rate (15-64)	5.7	4.9	-0.9	5.7	5.0	-0.7

Sources:

*) 2021 Ageing report (AR) baseline scenario

**) 2018 Ageing report (AR) baseline scenario

***) estimated values 2019, base year 2016

Table 7a. Stock of guarantees adopted/announced according to the SGP

Measures		Adoption date	Maximum amount (% of GDP)	Estimated take-up[1] (% of GDP)
In response to COVID-19	State guarantee scheme	Apr-20	3.9	0.2
	Office du Ducroire (support to companies that export internationally, including to markets affected by COVID-19)	Apr-20	0.3	0.2
	Subtotal		4	0.4
Other	Non-Covid-19 public guarantees	...	7.6	6.7
	of which guarantees to the financial sector [1]	...	5.9	5.1
	Subtotal		13	11.8
Total			**17.7**	**12.2**

[1]At 31.12.2020.

[2]Including the credit line to the Single Resolution Fund.

Table 7b. Discretionary measures adopted/announced according to the SGP

	Measures	ESA Code (Revenue/ Expenditure component)	Adoption date	Budgetary impact (% of GDP - change from previous year)	
				2020	2021
Temporary measures [2]	**Expenditure**				
	I. COVID-19 Measures				
	Health and crisis management expenditures	P.5 & P.2	Mar-20	0.3	-0.2
	Reimbursable advances	D.9	Apr-20	0.2	
	Various direct aids for SMEs and the self-employed	D.9	Apr-20	0.2	-0.1
	Recovery and Solidarity Fund	D.9	Jul-20	0.1	0.1
	Measures to support investments	D.3 & D.9	Apr-20	0.0	0.0
	Sectoral aids to support tourism, culture, sport and agriculture	D.9	Jun-20	0.0	0.0
	Financial aids and purchase premiums for energy renovation, promotion of heating systems based on renewable energies and electromobility	D.3 & D.9	Apr-20	0.0	
	Short-time working schemes	D.62	Mar-20	1.0	-0.5
	Aid to ensure the school rotation system, and education and care services	P.2 & D.11	May-20	0.1	
	Social support schemes	D.62 & D.9	May-20	0.1	
	Sickness leave payments	D.62	Apr-20	0.2	
	Special leave for family reasons	D.62	Mar-20	0.4	
	State guarantee scheme - Provision		Mar-20	0.2	
	Total expenditure			2.8	-0.7
	Revenue				
	I. COVID-19 Measures				
	Direct Taxes - Cancellation of the 1st and 2nd advance in 2020 & for the HORECA the 3rd and 4th advance in 2020 and 1st and 2nd advance in 2021	D.5	Mar-20	-0.4	
	Indirect Taxes - Administrative tolerance and reimbursement of outstanding VAT credit balances < EUR 10 000	D.2	Mar-20	-0.3	
	Deferral of social security contributions without interest of penalities Suspension of default interest on delayed contributions until 31 Dec	D.61	Mar-20	-0.2	
	Total revenue			-0.8	
	Subtotal			**2.0**	**-0.7**
Non-temporary measures [2]	**Expenditure**				
	II. Discretionary measures				
	Various measures fostering the green and digital transition and addressing the housing situation (see Table 5 of the 2021 DBP)	Divers	Dec-20		0.1
	Total expenditure				0.1
	Revenue				
	II. Discretionary measures				
	Implementation of a CO_2 tax	D.2	Dec-20		-0.1
	Tax package in favour of social equity, green transition and long-term competitiveness (see Table 5 of the 2021 DBP)	D.2 & D.5	Dec-20		
	Total revenue				-0.1
	Subtotal				**0.0**
Total				**2.0**	**-0.6**

[1]Excluding those reforms and investments that are planned to be financed by grants under the RRF.
[2]For the purpose of this table, temporary measures refer to those discretionary measures that have no budgetary impact beyond 2022, which corresponds to the end of the Commission spring 2021 forecast horizon. By contrast, those measures adopted or announced for 2020, 2021 or 2022 that continue to have a fiscal effect of 0.1% of GDP or greater until at least 2023 are considered as 'non-temporary' for the purpose of this table.

Table 8. Basic assumptions

	Year 2020	Year 2021	Year 2022	Year 2023	Year 2024	Year 2025
Short-term interest rate (annual average)	-0.4	-0.5	-0.4	-0.4	-0.3	-0.2
Long-term interest rate (annual average)	0.1	-0.1	0.4	0.8	1.1	1.5
Exchange rate €/$ (annual average)	1.14	1.23	1.24	1.24	1.25	1.25
Nominal effective exchange rate	1.00	0.99	0.99	0.99	0.99	0.99
EU GDP growth	-7.1	4.2	4.9	2.2	1.4	1.4
Growth of relevant foreign markets	-12.0	8.0	8.9	3.4	2.5	2.5
Oil prices (Brent, $/baril)	41.8	51.1	55.2	58.4	60.7	109.7