Economy

ELENA DANESCU updated for this edition by the editorial staff

Research Scientist, Luxembourg Centre for Contemporary and Digital History (C²DH), University of Luxembourg, Luxembourg.

INTRODUCTION

Situated in the centre of Europe and bordered by two major powers, France and Germany, the small Grand Duchy of Luxembourg (with a total area of just 2,586 sq km and, in January 2020 a population of 626,108 inhabitants, according to official estimates, of whom 47.4% were foreigners—of some 184 different nationalities)—a multicultural, multilingual and cross-border area *par excellence*—has always sought to maintain an openness to its neighbours, both for reasons of security and to give itself access to larger markets. The fact that the country did not have its own currency increased this need for openness and made monetary policy a key factor for integration.

In the 19th century Luxembourg was part of the German customs and trade union (Zollverein). Following the First World War, the country embarked on a process of economic and monetary integration with Belgium via the Belgium-Luxembourg Economic Union (initially set up in 1921 and regularly extended over the ensuing decades). It also played a driving role in the economic and political rapprochement of Belgium, the Netherlands and Luxembourg in the Benelux Economic Union (established in 1944 and restyled as the Benelux Union in 2008). Following the Second World War, it was ultimately with the European project that these integration efforts began to bear fruit and take on a new dimension. Luxembourg was one of the six founding members of the European Coal and Steel Community (ECSC) and the European Economic Community (EEC); in 1952 the country became the workplace and one of the permanent seats of the institutions of the European Community (EC, later European Union—EU), and it played a pioneering role in the establishment of Economic and Monetary Union (EMU).

In political terms, European integration and multilateral co-operation enabled Luxembourg to become an equal partner in the decision-making processes and leadership of European organizations. In economic terms, these features gave the country the tools it needed to forge a development model that could underpin the creative growth of its social market economy, while preserving the majority of its vital interests—particularly the steel industry and the financial centre—over the long term. With a gross domestic product (GDP) growth rate of 2.3% in 2019, slightly lower than the 2.6% growth rate in 2018, and an average annual growth rate of 3.4% between 1996 and 2019, the highest GDP per caput among the Organisation for Economic Co-operation and Development (OECD) member states, a level of material wellbeing above the European average, and sound public finances, Luxembourg is currently one of the most politically stable, innovative and prosperous countries in the world. Its strong fiscal position is well illustrated by a longstanding AAA credit rating and a significant accumulation of government financial assets. This essay will endeavour to explain how Luxembourg managed to achieve this; its current strengths and weaknesses; and its future challenges in an increasingly globalized, competitive international environment.

FROM AN AGRARIAN ECONOMY TO A KNOWLEDGE-DRIVEN ECONOMY

Beginning in the 20th century, Luxembourg experienced several periods of transition. The largely agriculture-based economy became industrialized, driven by a powerful steel industry which remained the dominant sector from the immediate post-Second World War years to the mid-1970s. The country had a considerable competitive advantage in this respect owing to iron ore deposits in Luxembourg itself and in the neighbouring French region of Lorraine. The industrial flagship was Aciéries Réunies de Burbach-Eich-Dudelange (ARBED), founded in 1911, which developed its production in Europe and established a global network of sales outlets. Between 1953 and 1968 the steel industry contributed approximately 25% of the country's GDP growth, while steel production represented 50% of its added industrial value. Over the same period, the nominal wage grew by 29.3%. The improvement in living standards led to the emergence of the middle class and to an increase in urbanization. The Government improved the social security regime and extended it to all workers, thus helping to close the gap in social equality, raise living standards further and boost social cohesion in the country over the long term. The asymmetry between steel output (e.g. 6.4m. metric tons of steel in 1974) and national requirements (approximately 5% of this output) meant that Luxembourg had to export its steel production, which made the country entirely dependent on the international economic climate. Most of Luxembourg's steel went to the EEC. Membership of the Community organizations had a positive impact on the country, multiplying its wealth and boosting living standards. At the same time, the contrast between Luxembourg's thriving steel industry and its small population prompted it to look beyond its borders to augment its workforce. This resulted in several waves of immigration, especially from Italy at the turn of the 20th century and from Portugal in the late 1960s. The discrepancy between the required and available capital in the country meant that it needed to tap into foreign capital. Luxembourg also looked abroad for expertise.

Even as the steel industry reached its peak, the Government set about exploring possibilities for economic diversification, introducing a suitable legislative framework with the establishment of the Board of Industrial Development in 1959, the adoption of the framework law on economic expansion in 1962 and the creation of the Société Nationale de Crédit et d'Investissement (SNCI) in 1980. It managed to attract major multinational companies in other manufacturing sectors (glass, chemicals and plastics) and in the service industry (trade, tourism and public administration). Most of the new companies that came to the country were from the USA, such as Goodyear, DuPont de Nemours and Guardian. Nevertheless, 60% of foreign direct investment into Luxembourg was from its neighbours, Germany and Belgium. The early 1970s saw the rise of a new growth sector for Luxembourg: the international financial centre. This was the result of action taken by the Government as well as several external factors, including the interest equalization tax introduced by the USA in 1963 and the German securities transfer tax (*Kuponsteuer*) introduced in 1965. US capital and German banks were attracted to Luxembourg. Germany was the main investor in the banking sector, with 53% of all investments. The country would also become a 'laboratory' for the single European currency, one of the architects of which was Pierre Werner (Prime Minister of Luxembourg in 1959–74 and again in 1979–84, and Chairman of the expert committee that drafted the 1970 Werner Report, which formed the basis of EMU). The Luxembourg Stock Exchange (LuxSE), Kredietbank SA Luxembourgeoise, the Banque Internationale à Luxembourg, the Banque et Caisse d'Epargne de l'Etat, Luxembourg (the latter two recognized as systemically important banks in the country) and Cedel (which became Clearstream Banking in 1999) also played a major role.

In 1974 the steel industry began to decline, marking the end of the 'Trente Glorieuses'. Luxembourg was forced to implement considerable structural changes and embarked on its second major transition, from an industrial economy to a service economy based on the financial sector. This was reflected by fundamental changes in the structure of the country's economic value added. Between 1970 and 2016 the share of industry contracted sharply, from 47% to 7.3%, while the share of the steel industry shrank from 28% to 2%. The share of industry in total employment contracted from 33% in 1970 to 7.8% in 2016, but increased to an estimated 12% in 2018. Expressed in absolute figures, this downward trend—from 45,800 workers in 1970 to 32,700 in 2016 and 41,100 in 2018—is less pronounced. The weight of agriculture in the economy also fell considerably, representing just 0.2% of GDP and 0.8% of total employment in 2019. From the mid-1980s the country's economic growth accelerated, driven by its financial centre, whose contribution to GDP currently stands at around 30%. In 1998 the financial industry generated some 20% of GDP. An indirect impact of this sector has been the development of business in related specialist areas, including information technology, data processing, intellectual property, legal and accounting expertise, training and business services. From 1985 to 2017 average annual GDP growth was twice as much as that of neighbouring countries and of the member states of the EC/EU.

Luxembourg is an export-intensive economy and the trade deficit is a recurrent characteristic. Between 1988 and 2019 the balance of trade averaged −€340m., reaching an all-time high trade deficit of €30m. in February 1988 and a record low of −€1,060m. in September 2012. The trade balance in 2019 stood at –€7,094.5m.

The share of foreign trade in Luxembourg's GDP is currently higher than 30%. EU countries are by far the country's largest trading partner, accounting for about 85% of exports and 87% of imports. Its three main trading partners are Germany, France and Belgium; its top customer is Germany (more than 26.4% in 2019) and its leading supplier is Belgium (35.7%). Luxembourg mainly exports iron and steel, chemical and rubber products, glass, electrical and electronic equipment, and financial services, its most profitable export. The country remains dependent on imports of energy (mineral fuels and oil) and most of its consumer goods. Luxembourg has successfully diversified its exports outside the EU, and the country is now developing trade relations with countries in Asia and the Middle East. Luxembourg has managed to establish itself as a hub for international trade, and this contributes significantly to the country's economic activity and domestic employment. Although in 1970 exports of goods represented more than twice the value of exports of services, the growth of the service sector has led to a reversal of this situation: nowadays Luxembourg exports more services than goods.

The expansion of the financial industry resulted in the emergence of a new phenomenon in Luxembourg: in order to meet its workforce requirements, the country turned to cross-border workers. This new development was made possible only by labour mobility, the discrepancy in unemployment rates between Luxembourg and its neighbours, and a positive wage differential. In 1998 cross-border workers made up one-third of the country's workforce. Of the total workforce, 55% were non-Luxembourgers. Concerted state intervention (in the form of investing to boost productivity, controlling mass unemployment by introducing community projects, activating the ECSC's aid mechanisms and developing a productive synergy with Belgium) and the spectacular growth of the financial sector enabled the country to avoid a painful socioeconomic crisis. Political leaders improved the legislative and institutional infrastructure underpinning the financial centre in three main areas: implementing international regulations; setting low taxes; and establishing strict rules on banking secrecy. The leaders explored possibilities for further economic diversification in innovative, competitive areas such as audio-visual technologies and communications satellites, as reflected in companies such as the Compagnie Luxembourgeoise de Télédiffusion and the Société Européenne des Satellites (SES). SES is now the world's leading satellite operator, reaching 99% of the global population. As regards the steel industry, in 2001 ARBED merged with Usinor and Aceralia, thus creating Arcelor, which in turn merged with Mittal Steel in 2006. ArcelorMittal, which has its headquarters in Luxembourg, is currently the world's largest steel producer.

To reconcile economic interests and social stability, the Government opted for a proactive social policy, with key measures including an automatic wage indexation mechanism based on increases in the cost of living (1965), the 40-hour working week (1975), a guaranteed minimum income (1986) and the expansion of the health care system. Labour relations were strengthened. In 1977, during the steel crisis, a Consultative Tripartite Committee (comprising the Government, employers and the unions) was established, acting as a shock absorber for both sides of industry. The Committee formed the basis of the Luxembourg social model, which relies on democracy, social solidarity and consensus to underpin social and economic development.

In 2007, during the emergence of the sub-prime mortgage crisis stemming from low-income borrowers' inability to meet repayment obligations on lending, Luxembourg had the EU's largest banking sector and was a highly specialized, widely diversified global financial centre (with investment funds, insurance companies and banks, most of which were branches of foreign-based establishments). Since Luxembourg's economy was strongly driven by this sector, the potential vulnerabilities were considerable. In 2008 the financial sector contributed 29% of the country's GDP, 12% of jobs and 20% of total tax revenues—a significantly higher proportion than in any other OECD country. The global financial crisis resulted in a decrease of 20% on the aggregated balance sheet of Luxembourg's banks and a decline in GDP of 5.4%. The contraction of the financial sector led to a fall in tax revenues, which raised the risk of a long-term impact on the sustainability of the generous Luxembourg social security system, placed under growing pressure by an ageing population.

Another long-term problem was the country's ongoing structural unemployment, despite a rise in the overall employment rate. In 2015 GDP strongly increased by 4.9%, returning to its pre-crisis level (during 2000–07 GDP rose by roughly 4.7% per annum). The Government bailed out two major cross-border banks, Dexia and Fortis, which were experiencing serious difficulties; both required recapitalization equivalent to 6% of GDP. However, government aid, in the form of guarantees and injections of capital, was less extensive than in other OECD countries. Three small Icelandic banks were placed under the legal administration of the Commission de Surveillance du Secteur Financier (CSSF—Financial Sector Supervisory Commission). These problems, which were caused by cross-border issues, were resolved without severe difficulties, and contagion to other establishments in the financial centre was avoided. Although Luxembourg fared better than its partners in the eurozone, the crisis had a lasting effect on the country's competitive advantage, particularly because it had to align its financial regulations with European and international initiatives, such as budget constraints, prudential supervision and increased transparency.

To guarantee its future position in a competitive globalized environment, the country faced a major strategic challenge: it had to diversify its economy by focusing on state-of-the-art fields with high added value, while preserving the competitiveness of the financial sector. Luxembourg continued to prioritize innovation as the main driver of smart, sustainable and inclusive growth, embarking on its third major transition—from a financial economy to a knowledge-driven economy.

THE GOVERNMENT'S MAIN OBJECTIVES 2018–23

Following the general election held on 14 October 2018, the governing coalition comprising the Demokratesch Partei (DP—Democratic Party), the Lëtzebuerger Sozialistesch Arbechterpartei (LSAP—Socialist Workers' Party of Luxembourg) and Déi Gréng (The Greens) remained in power under Xavier Bettel of the DP.

The Government's programme, the 'Declaration on the government programme 2018–2023', described by the Prime Minister as 'social, liberal and eco-friendly', reflects an approach based on 'justice, sustainability and social cohesion, while promoting the country's competitiveness'. The main priorities are the protection of resources, the preservation and strengthening of quality of life, and a clear commitment to diversity, multilingualism, history and the Luxembourgish language. Areas for action also include the implementation of a family-friendly policy and a more equitable distribution of the results of shared societal efforts, as well as the consolidation of a strong social state. Finally, there is a focus on the diversification of the economy, digitalization and investment in mobility and infrastructure.

The Government's approach is in accordance with the parameters set by the EU's Stability and Growth Pact (SGP), the Europe 2020 strategy and the requirements for the completion of EMU. An independent body, the National Council of Public Finance, was established in 2018 to monitor Luxembourg's public finances and evaluate medium-term economic and budget forecasts. The Government has introduced the principle of 'zero-based budgeting' (whereby all expenses must be justified in terms of political priorities) and a series of 250 measures (the 'Zukunftspak') to reduce the structural public deficit, with the aim of maintaining a structural balance of 0.5% of GDP by the end of the Government's term. Social dialogue has also been stepped up within the Standing Committee for Work and Employment and the Economic Committee (Comité de Conjoncture).

Significant Social Policy Proposals

A number of significant plans for reform in the area of social policy have been put forward by the Government. A reduction in working time has been put forward, of two days per year, by increasing the minimum statutory leave allowance by one extra day and introducing a new public holiday, Europe Day, on 9 May. The Government also plans to introduce more flexibility to working time and organization. Also, an increase in the minimum wage (salaire social minimum) of €100 net per month. This measure, which came into force on 1 July 2019 (retroactive to 1 January), increased the minimum wage to €2,071.1 per month. In January 2020 the minimum wage was increased to €2,142.0.

In terms of employment, measures include support for job seekers and those involved in social and professional activation measures with the social inclusion income. Recipients of the previous guaranteed minimum income are automatically entitled to social inclusion income. As of January 2020 the monthly social inclusion benefit stands at €751.46 per adult and €233.32 per child (increased by €68.96 for single-parent families). The Government is also extending the system of services in kind for low income families: in addition to free textbooks and child care, they can use drop-in centres free of charge during school hours. Also, a change in the indexation of family allowances, which (unlike salaries, pensions and other social transfers) have not been indexed to living costs since 2006. A new indexation mechanism was to be introduced by the end of the parliamentary term, i.e. by 2023.

Changes to the health care third-party payer system have also been put forward. Currently, patients pay the full cost of doctors' fees and are subsequently reimbursed by the National Health Fund (Caisse Nationale de Santé—CNS). The third-party payer principle applies only in some cases (for social reasons), as well as for prescription drugs. After a successful petition to parliament calling for a generalized third-party payer principle, a technical solution was put forward in January 2019; the new system is to be operational within three years. Health care costs for patients under the age of 18 are entirely refunded.

Relieving Tension in the Housing Market

Housing represents a major challenge for the Luxembourg economy and the country's competitiveness: real estate prices are being driven up because there is not enough supply to meet the continued high demand. The government programme 2018–23 sets out a series of measures, primarily large-scale investment in social housing and affordable housing which will be owned by the Government or local authorities; a new 'Housing Pact 2.0' between the Government and local authorities to give as many residents as possible access to public housing; increasing the state guarantee for those purchasing their first property; and increasing the current €20,000 tax credit to which each individual is entitled for registration fees. The Government is also keen to widen the availability of affordable accommodation for students and promote intergenerational cohabitation. Favourable tax measures offer indirect but valuable support for those struggling to pay high accommodation costs.

Towards a 'Tax Neutrality' System by 2023

The Government is aiming to introduce a single tax scale by 2023, regardless of marital status. The aim is to 'guarantee a taxation model that is neutral in terms of people's way of life'. The single tax system will prevent individuals from being disadvantaged if their situation changes during their lifetime. Households with children will continue to enjoy tax breaks, which will also take into account other family or social criteria.

Supporting the Energy Transition: Sustainable Mobility and Free Public Transport

The Déi Gréng Minister of Spatial Planning and of Energy, Claude Turmes, has spearheaded Luxembourg's energy transition strategy for the replacement of fossil fuels with renewable energy sources. As part of efforts to reduce plastic waste, plastic bags and all unnecessary packaging will be banned. From December 2020 the use of glyphosate will be prohibited, and by 2025 20% of Luxembourg's farms will produce exclusively organic products. The Government has taken a highly critical stance on nuclear energy, calling for the closure of the nuclear power stations in Tihange and Doel in Belgium and Cattenom in France, all of which are considered by Luxembourg to be a safety hazard.

The Government has drawn up a national mobility plan with a strong environmental component. Priority investments include the tram linking the Cloche d'Or industrial area (on the outskirts of Luxembourg City) and the airport, as well as a high-speed tram between Luxembourg City and Esch-sur-Alzette. To improve the quality of the environment, especially in urbanized areas, the emphasis will be on electromobility. The Climate and Energy Fund will offer subsidies to companies that reduce their environmental impact via employer mobility. These measures also reflect Luxembourg's commitment to tackling climate change: the country was a signatory of the Paris Agreement on climate change in 2016.

On 1 March 2020 all buses, trams and trains became free of charge in Luxembourg—the first country in the world to introduce free public transport. In doing so, the Government's stated intention was to address problems of traffic congestion, pollution and inequality. A number of priority investments to target the quality (i.e. punctuality and reliability) of public transport are also planned.

A World Leader in the Digital Economy

Another major priority for the Government is to diversify the economy by developing new sectors, and one ambition is to make Luxembourg a world leader in the digital sector. The country outlined a 5G strategy in 2018. Another focus area is the development of a national strategy for artificial intelligence. Further measures to support diversification and competitiveness include freezing the subscription tax on investment funds for the next five years and reducing corporation tax by 1% from 1 January 2019.

CURRENT SITUATION AND OUTLOOK

At late 2019, prior to the coronavirus (COVID-19) pandemic, which affected Europe from early 2020, Luxembourg had clearly confirmed the steadily increasing trend of the previous five years by returning to its excellent pre-crisis levels of growth, thereby consolidating its status as one of the world's most competitive economies. The World Economic Forum's *Global Competitiveness Report 2019* ranked Luxembourg in eighth place in the EU and 18th at international level in terms of competitiveness and medium- and long-term growth potential. The Luxembourg Observatory for Competitiveness (ODC) ranked the country seventh for economic aspects, first for the social dimension and ninth in environmental terms. However, this ranking of first place in Europe for its social system may be found to be lacking in substance in the medium and long term if Luxembourg's economic performances fail to keep pace. Luxembourg came fifth on the 2018 Digital Transformation Scoreboard, the European Commission's annual analysis to assess how much progress has been made by EU countries in integrating digital technologies. There follows a summary of the main characteristics of the Luxembourg economy and the challenges facing it.

Keeping on Course at a Turbulent Time

After achieving growth of 4.2% in 2016 (measured at 2010 prices), Luxembourg's real GDP grew by only 2.3% in 2017 and by 2.6% in 2018. According to the Institut National de la Statisique et des Etudes Economiques (STATEC), the country's economy grew by 2.3% in 2019. Owing to the economic crisis occasioned by the COVID-19 pandemic, GDP growth was revised downward, from an initial forecast of 3.8% to –6.0% in 2020. However, growth of 7.0% was forecast for 2021. Luxembourg's economic strength can partly be attributed to exports from financial services. The growth rate exceeded the eurozone average of 2.2% in 2018, and the country represents a benchmark in terms of sustainable qualitative growth.

Although private investment has remained weak (except for goods transport, environmental and health technologies, the satellite industry and, more recently, space resource exploration), public investment has been boosted by major projects in three broad areas: mobility, green transport and environmental protection; research and intellectual assets based around the University of Luxembourg; and infrastructure and innovative industries (information and communication technology—ICT, energy and logistics), the showcase for which is the Belval development cluster on the France–Luxembourg border. There have been substantial investments in mobility, with a number of large-scale projects (rail, road and air transport, tram and urban transport). For the period 2013–18 rail transport received €1,600m., compared with €1,360m. from 2003–13. In 2013 the Fonds des Routes (Highways Fund) received €180m. in investments, compared with more than €340m. of expenses for 2018. Public investment-to-GDP ratio is expected to remain stable at around 4.0% of GDP, among the highest in the EU. Focusing investments on fostering digitalization and innovation, improving housing supply and sustainable transport infrastructure, and stimulating skills development would improve economic resilience and strengthen Luxembourg's long-term potential growth.

Inflation in consumer prices fell to 1.5% in 2018 from 1.7% in 2017, increasing to 1.7% in 2019. Inflation was sustained mainly by oil price movements. Inflation was forecast to be 0.9% in 2020, increasing to 1.3% in 2021, according to STATEC.. Under the impact of the automatic indexation of wages applied on 1 January 2017, average salaries increased by 1.9% in 2018; they increased by 1.1% in 2019, and were expected to rise by 2.5% in 2020.

Strengthening the Assets and Transparency of the Financial Industry

Representing some 24.0% of GDP in 2019, and some 11% of employment and 21% of fiscal revenues, the financial industry continues to drive Luxembourg's economy and to serve as a catalyst for qualitative growth. With its unparalleled range of services, well developed financial infrastructure and considerable expertise, Luxembourg is a global financial hub. In the context of the United Kingdom's decision to leave the EU (Brexit), Luxembourg has continued to interest foreign investors. At May 2019 it was the leading European centre for investment funds (and second internationally, behind the USA). The country houses the European Investment Bank and the European Investment Fund, investing roughly €80,000m. per year in the European and global economy.

Luxembourg is also the first-placed centre for private banking in the eurozone and the largest reinsurance centre in Europe. At August 2020 it was home to 128 banks from 28 countries (with, in 2019, assets of €815,054m.), which employ some 50,000 professionals. Given the considerable number of foreign banks in Luxembourg, the degree of internationalization of its financial centre is the highest in Europe.

New banks from third countries have recently established their European hubs in Luxembourg, including the seven largest Chinese banks. In 2019 14 banks from China were represented in Luxembourg. In addition, many international banking groups are establishing centres of excellence in Luxembourg, either in private banking, fund administration, custodian services or treasury management, or as booking centres for international loans.

During 2007–17, the financial sector recorded annual average growth of 3.7% and the workforce increased with the addition of 7,500 new jobs. Growth in the financial centre represented an increase of €300m. for the government budget in terms of direct taxes levied, which rose from €1,400m. to €1,700m. Although growth in the eurozone financial sector overall was higher than in Luxembourg in terms of volume, Luxembourg performed better in terms of value and employment. Luxembourg's market share in the value added of the eurozone financial sector has continued to grow, reaching 3% in 2017. The country is in first place in terms of investment funds, with a 33% market share.

Luxembourg has embarked on reforms to increase transparency in line with the most important regulations agreed at international level, including the automatic exchange of tax information for individuals in line with the Foreign Account Tax Compliance Act, in force since July 2015, and the end of banking secrecy pursuant to the OECD Common Reporting Standard. Also worth noting are the forthcoming law transposing the EU Anti-Tax Avoidance Directive, the establishment of the Multilateral Convention to Implement Tax Treaty Related Measures to Prevent BEPS and the international working groups tackling harmful tax competition. These will be enhanced by the Directive on Administrative Co-operation 5 (DAC 5) on access to anti-money-laundering information collected by tax authorities, DAC 6 on transparency rules for intermediaries (which was implemented in 2020), and by the General Data Protection Regulation (which came into force in 2018). With the establishment by legislation in 2019 of a Register of Beneficial Owners for Luxembourg-registered entities, the country has strengthened its legislation on the prevention of the use of the financial system for the purposes of money laundering or terrorist financing, in accordance with EU directives.

The attractiveness of Luxembourg as a financial centre is liable to be affected by the process of tax and financial harmonization at EU and OECD level and the new regulatory environment: namely, the three pillars of Banking Union (the Single Supervisory Mechanism, the Single Resolution Mechanism and the European deposit guarantee scheme) and the liquidity regulation provided under the Basel III agreement. To offset this risk, the country is pursuing the diversification and specialization of its financial industry. Luxembourg's investment fund industry benefits from EU passports under the regulatory framework provided by the Undertakings for Collective Investment in Transferable Securities Directive and the Alternative Investment Fund Managers Directive. These enable Luxembourg to offer investment funds to other EU countries which remain under the supervision of the European Central Bank/CSSF. The Systemic Risk Committee (SRC) will closely monitor the links between banks and the fund industry as well as developments in the housing market. The Banque Centrale du Luxembourg (BCL) serves as the Secretariat to the SRC.

Pursuing an Agenda of Innovative Sustainable Finance

Since 2017, Luxembourg's financial centre has been at the forefront of developing initiatives and financial instruments that are specifically designed to support sustainable finance. Through its involvement in a number of initiatives at international and EU level, Luxembourg has the potential to drive the political agenda for sustainable development: it is a member of the International Network of Financial Centres for Sustainability; the BCL is a member of the Central Banks and Supervisors Network for Greening the Financial System; the Luxembourg Government is actively engaged in discussions at EU level as a member of the EU Member States Expert Group on Sustainable Finance; the LuxSE actively contributes to various working groups at EU level, such as the EU Technical Expert Group on Sustainable Finance, and also chairs the United Nations (UN) Sustainable Stock Exchanges Initiative's Green Finance Advisory Committee; and the Luxembourg Bankers' Association chairs the working group on incentives and disincentives for sustainable finance in the European Banking Federation.

The Luxembourg Green Exchange (LGX) is the world's first and only platform for the listing of sustainable, social and green securities. In 2017 the Government signed an agreement with the retail banks in the financial centre on zero-interest 'climate bank' lending, the 'Klimabank' initiative. Luxembourg and the European Investment Bank (EIB) have also launched an innovative climate finance platform, with the aim of encouraging investment in projects with a strong impact in combating climate change, in accordance with the international commitments entered into under the Paris Agreement on climate change.

Luxembourg increasingly plays the role of a gateway to and from China. Chinese banks in Luxembourg not only serve China-based clients (enabling them to invest in Europe), but also provide European clients with the expertise and opportunity to invest in China. The LuxSE's Chinese domestic Green Bond Channel bridges the information gap between Chinese issuers and international investors. Green bonds listed on the Shanghai Stock Exchange can be traded via existing channels, and co-operation with the LuxSE focuses on providing information in English to offshore investors. Luxembourg has consolidated its position as a European hub for the internationalization of the Chinese currency, the renminbi (RMB—as shown by the arrival of the seven leading Chinese banks in Luxembourg). Luxembourg is also the leading financial centre for Islamic finance outside Muslim countries, demonstrating its expertise by becoming the first country to issue a sovereign *sukuk* (Islamic bond) in euros.

Luxembourg's early development of outstanding expertise in microfinance in the 2000s provided the foundation for its development of impact finance and sustainable finance in general, and a number of microfinance funds are based in Luxembourg.

Luxembourg has also witnessed a broad spectrum of financial technology (FinTech) activities, driven by the integration of social, mobile, analytics and cloud technologies and supported by an innovation-friendly and responsive financial regulator. Leading international players in the payments sector, such as PayPal, Amazon Payments and Six Payment Services, have chosen Luxembourg as their hub to serve the entire EU market. Moreover, a number of home-grown Luxembourg payment service providers have been successfully acquired in recent years. These include Digicash and Paycash (which now operates as Mercedes Pay).

Luxembourg has developed structures in the area of financial technology transfer. The Luxembourg House of Financial Technology, set up in 2017, has proved to be a successful national platform for those involved in the digitization of financial services. The House of Training (Agence de Transfert de Technologie Financière) was founded in 1999 with the aim of co-funding training programmes worldwide, mostly in 40 developing countries, in the areas of cybersecurity, financial structures and sustainable development. Several groups of companies have developed projects based on blockchain (cryptocurrency) technology, especially in the area of investment funds. The CSSF has taken a proactive approach to ensuring the effective regulation of FinTech developments. Since Luxembourg is mostly involved in cross-border activities, regulatory technology provides a major opportunity for the country.

Luxembourg and Brexit

A study published by the credit rating agency Standard & Poor's in March 2019 on the basis of a 'Brexit Sensitivity Index' demonstrated that Luxembourg, together with Ireland and the Netherlands, was among the countries most vulnerable to Brexit. This indicator took into account exports of goods and services to the UK, bidirectional migration, links between the financial sector and British counterparts, and foreign direct investment in the UK. Economic links between Luxembourg and the UK are particularly close, with the UK a major market for Luxembourg's export in services as well as for goods. The UK has a strong presence in the financial sector.

As of 1 January 2020 some 5,300 British citizens were living in Luxembourg (approximately 0.8% of Luxembourg's total population), making the British community the sixth largest international community in Luxembourg. In 2018 70% of British nationals in Luxembourg stated that they were planning to apply for Luxembourgish nationality following the Brexit decision—in 2019 1,382 citizens held dual British-Luxembourgish citizenship. Some 2,000 Luxembourgers were living in the UK in 2019, including 1,200 students. The Luxembourg Government published its national preparations for Brexit in January 2019. British nationals will be able to stay in Luxembourg with the same rights as EU citizens for a transitional period of one year after the date of withdrawal, and those resident for five or more years may apply for permanent residency. British teaching staff at international schools and British employees at the BCL or in the civil service will also be protected, and there will be protections for customers of the financial centre and for air traffic rights (the 'fifth freedom' governing international air travel allows aircraft to pick up or drop off passengers or freight originating in or heading to any country), given that there are nine daily passenger flights between Luxembourg and London, in addition to Cargolux freight traffic. Following the UK's departure from the EU in January 2020, negotiations ensued on the future relationship between the UK and the Union after the transition period, which was to end on 31 December. It was unclear at mid-2020 whether agreement on a deal would be forthcoming.

Luxembourg is an attractive option for companies post-Brexit transition period, especially if the UK loses the EU 'passporting' rights, a mechanism that enables banking and financial establishments to carry out their activities across the European Economic Area. In this competition for relocation among Europe's major financial centres, Luxembourg looks set to be the favourite. Its main assets are its stable political and economic environment; its global reputation for investment funds and wealth management; its central position in the eurozone; and the professional approach of its regulator. There are, however, obstacles associated with the size of the country (its market infrastructures are limited) and the high real estate price, and it does not always have the same level of attractiveness as other larger centres.

According to KPMG Luxembourg, some 72 companies, most of them operating in insurance and fund management, confirmed their move to Luxembourg, a relatively high number compared with other EU countries. The question for UK firms is often not whether to move out of the UK, but rather how much substance to allocate to their Luxembourg-based operations to be run in symbiosis with London-based functions. Major banks, asset managers and specialist insurance companies were reportedly planning on moving some of their UK operations Luxembourg. Thus, looking ahead, Luxembourg's role as a global fund centre is set to continue growing. While Luxembourg has long been a key EU hub for cross-border life insurance and reinsurance, the non-life sector has also been significantly bolstered by the arrival of 11 global insurers, chose to set up their post-Brexit EU headquarters in Luxembourg. Most of these insurers have already started operating with their new licences, which contributed to growth in premium income in Luxembourg's non-life sector of more than 23% over the first nine months of 2018. However, Luxembourg fears a 'lose-lose' post-Brexit despite financial sector gains.

It remains to be seen how the new relationship post-Brexit will affect value added and employment in Luxembourg. STATEC stated that approximately 500 direct jobs in asset management alone were created in 2018 as a result of relocations, twice as many as in 2017, and Brexit relocations reportedly created some 3,000 new financial centre jobs in Luxembourg.

Balanced Public Finances

Luxembourg's public finances are in good shape and are fully compliant with all EU SGP criteria. Over the medium term the overall budget situation has improved, strengthening competitiveness, enhancing living standards and boosting trust in the economy. The situation of public finances in 2018 and 2019 was mainly characterized by investment spending. This is in line with the Government's desire not only to make up for delays but also to prepare the country's infrastructure for future challenges. Public investment priorities include education for children, housing and public transport. The Government will also increase investment in sport, culture and public safety.

For the ninth consecutive year Luxembourg's public finances recorded a surplus, which in 2018 stood at 3.1% of GDP (compared with 1.3% in 2017), or €1,874.5m. In 2019 the surplus stood at €1,384.4, equivalent to 2.2% of GDP. Despite the fact that Luxembourg's fiscal position is among the strongest in the EU, long-term fiscal sustainability concerns remain, given the projected increase in costs due to an ageing population.

The country has managed to maintain its low level of public debt as well as a significant budgetary safety margin with respect to the Maastricht deficit reference value of 3% of GDP, demonstrating the Government's commitment to sound fiscal policies. Luxembourg's government debt continues to be among the lowest in Europe. It reached 21.0% of GDP in 2018, and in 2019 stood at 22.1% of GDP, second only to Estonia, which had the lowest debt-to-GDP ratio in Europe. However, public debt was expected to increase in 2020 (to an estimated 26.4%) and in 2021 owing to the COVID-19 crisis.

Recent changes to tax legislation, to strengthen investment and innovation and improve the competitiveness of firms, include: lowering the income tax rate for local authorities (from 21% to 19% for the 2017 tax year, then down to 18% for 2018 and 17% for 2019); increasing the rate of investment tax credit (from 12% to 13% for overall investment, together with an increase in the scope of application for innovative fields such as software and electric cars); and introducing a special tax regime for intellectual property (exemption of 80% of net eligible revenue, adjusted and compensated). With one of the lowest debt-to-GDP ratios in Europe and strong economic foundations, Luxembourg is the only eurozone country apart from Germany to have been awarded an AAA credit rating by all the major financial rating agencies—a major asset for the country. The main challenges facing Luxembourg are the rising costs of an ageing population—among the highest in the eurozone—as well as the introduction of measures designed to standardize financial practices.

Strengths and Weaknesses of a Highly Specific Employment Market

Luxembourg's employment market reflects the dynamic international environment that characterizes the country. Between May 2014 and February 2020, the unemployment rate fell significantly, passing below the 7% barrier in December 2014 and below 6% in March 2017, to reach 5.5% in January 2020. However, thereafter, owing to the COVID-19 crisis, unemployment rose, reaching a high of 7.0% in April 2020. At 20 July 2020 there were 19,762 unemployed, equating to 6.6% (an increase of 26.1% year-on-year). Jobs created as a result of the relocation of financial activities affected by Brexit represented one-quarter of net job creations in the financial sector in 2018. It is also worth noting that several global industrial groups are based in Luxembourg (such as ArcelorMittal, Goodyear, Guardian and Dupont), as well as communications giants (leading broadcaster RTL Group, and the Société Européenne des Satellites—SES, the world's leading provider of communications and television broadcasting services) and multinationals in the digital economy (Skype, iTunes, PayPal, eBay and Amazon.com).

At the end of the first quarter of 2020, Luxembourg had 443,936 employees, 239,934 of whom were residents and 204,003 cross-border workers. Cross-border workers represent 46.0% of the paid workforce, some one-half of whom are French, followed by Germans and Belgians, while Luxembourgers account for 26.6%, EU nationals resident in Luxembourg for 23.3% and third-country nationals resident in the country for 4.2%. Weak labour market outcomes for low-skilled workers, older workers and, to a lesser extent, women remain an important policy challenge. Regardless of strong economic growth and innovative measures taken by the national employment agency, youth unemployment (people under 30) remains high. During and after the COVID-19 lockdown, youth unemployment of those aged between 16 and 25 years increased substantially, from a pre-COVID-19 figure of 17.9% in November 2019 to 21.3% and 25.6% in March and April 2020, respectively, to reach a high of 27.7% in June, unemployment affecting young people without qualifications or experience in particular.

Luxembourg has a highly qualified workforce: the percentage of 35–34-year-olds with a higher education qualification stood at 55% in 2019, compared with an average of 45% in OECD countries. Two-thirds of jobs created in Luxembourg are aimed at higher education graduates, a trend that was confirmed by the 2014–15 reform of the government-funded grant scheme for students in higher education, which was also extended in 2017 to the children of cross-border workers. Secondary education remains a cause for concern: basic skills outcomes are lower than the EU average, and this performance worsened between 2012 and 2018. According to the OECD PISA rankings, out of 52 countries, Luxembourg was 28th, behind neighbouring countries Germany (12th), Belgium (21st) and France (27th). These results can be attributed primarily to the socioeconomic difficulties encountered by pupils (50% of 15-year-old pupils are immigrants), but also to the challenge posed by the trilingual approach of the Luxembourg school system. The reform of fundamental education (the first nine years of schooling) began to be implemented from the start of the 2017 academic year. Adapting teaching and professional training to meet the needs of the employment market remains a major challenge. Since 2018 the final package of measures in the secondary school reform has been implemented, with the aim of diversifying the range of subjects available by giving teachers more freedom and introducing several structures and mechanisms to improve support for pupils with specific and special needs within the regular school system.

Luxembourg is coping well with the influx of refugees, which includes minors applying for international protection. In 2018 the authorities recorded 2,205 requests for asylum, compared with 2,318 in 2017 and 2,447 in 2015—a record year. Most in 2018 were from Eritrea (17.8%), Syrian Arab Republic (10.3%), Iraq (8.9%) and Afghanistan (8.0%). A total of 978 people were awarded refugee status. Building on past experience, the authorities prefer to accommodate families with children, which are considered easier to integrate over time. To help enrol refugees in schools, training programmes and language classes, the authorities have made an appeal for retired teachers to return to work. Special measures have been taken to create welcome classes in primary and secondary schools focused on learning the language of instruction. These are also available to young adults. Poverty and social exclusion (affecting 19% of the total population) are among the lowest in the EU. High real estate prices are one of the main causes of social exclusion. Social transfers play a vital role in overcoming poverty, especially in view of increasing wage inequalities.

A Competitive Business Environment in the Digital Era

After several years of mixed performances, Luxembourg's business environment has experienced a marked improvement since 2016, driven to a large extent by increased economic efficiency and competitiveness, reforms introduced by the Government and a more positive sentiment among business circles. In 2019 there were some 36,323 companies in Luxembourg, 1,210 more than in 2018. The proportion of financial, insurance and reinsurance services is just 3.4%, but these serve as the driving force of the economy in terms of value added. This sector was likely to continue to grow, with the positive impact of Brexit (especially company relocations) soon to become apparent. Small and medium-sized enterprises (SMEs—those with fewer than 250 employees), according to Eurostat estimates. represented 99.5% of all the country's companies in 2018, employing 190,438 people (67.0% of the active population) and contributing 67.7% to the economic value added. Since 2016 Luxembourg's strong position in international comparisons and benchmarks has helped to boost its image in the business community as a dynamic, open economy that is conducive to the development of growth projects. It should also be noted that in 2019 1,262 companies filed for bankruptcy.

The main stakeholders (Chambers of Commerce, Trades, Crafts, Tourism, Hospitality, etc.) have worked alongside the Government within a high-level committee to boost SMEs and entrepreneurship. In February 2019 Luxembourg announced its fifth National Action Plan to support SMEs, which consolidates the measures introduced by the fourth plan in March 2016, especially with effective, innovative instruments such as the SNCI, the secure interactive platform guichet.lu, through which individuals and companies can carry out administrative procedures online, the business inventory (cadastre du commerce) and the launch of LëtzShop. The plan also includes new strategies to help SMEs access additional funding for the digital transition and introduces a 'second-chance entrepreneurship' scheme, which gives bankrupt entrepreneurs another chance after a failed business venture. In July 2018 the Chamber of Deputies adopted a new financial aid scheme for SMEs. The budget of €89m. for the period 2018–22 (an increase of 27% over the previous five years) is designed to foster entrepreneurship, develop smart regulation, promote the growth of the labour market, facilitate access to finance, set up a more innovation-friendly business environment and help SMEs to enter international markets.

The European Commission's latest Digital Economy and Society Index (DESI 2019) places Luxembourg in sixth position in the EU for the integration of digital technology by companies. Compared with 2017, Luxembourg has gained 16 places, largely because the multidisciplinary 'Digital Lëtzebuerg' initiative has begun to bear fruit. Launched in 2014 by the Government together with private, public and academic stakeholders, this strategy aims to make a 'positive digital transformation' based on five priorities: skills, policy, infrastructure, ecosystem and government. In December 2017 the Government adopted the Research and Innovation Smart Specialization Strategy, focusing on various priority sectors (industry, environmental technologies, health technologies, logistics, information and communications technology—ICT and space). Considerable progress in digitalization has been made in terms of policy, at government level (including administrative bodies) and within education, but the introduction of digital technologies in companies remains a challenge.

In May 2019 the new Luxembourg Government published the country's new digital strategy based around artificial intelligence, which it identified as its 'main strategic tool'. ICT is central to these measures, which focus on strengthening the digital infrastructure, supporting companies with the integration of innovative digital technologies and creating a favourable legal and financial framework. The main avenues for action are 'industry 4.0', big data production and storage, logistics, eco-technologies, health technologies, the space industry and financial services.

Although Luxembourg excels in areas such as contract enforcement, cross-border trade and building permit acquisition, and the country is the European leader in terms of arbitration and business conflict management, there is still scope for improvement with regard to its management practices and access to some independent professions such as law, architecture, engineering and health care, and it needs to open up its network industries (e.g. postal services and telecommunications) to competition, since the service providers in these sectors are still entirely state-owned.

Space as a New Opportunity

Since Luxembourg joined the European Space Agency (ESA) in 2005, the country's space industry—which particularly draws on its experience as a world leader in satellite communications—has grown steadily. Luxembourg has tripled its budget for space technology over the past five years, and this sector plays a major role in the country's economy, representing some 1.82% of GDP, with approximately 1,000 jobs and more than 40 companies (including the satellite operators SES and Intelsat, and three government-funded organizations).

The Luxembourg Space Agency was set up in 2017, together with a dedicated investment fund of €200m. The Luxembourg Space Agency was established in 2018 to develop and promote the commercial space sector in Luxembourg. A number of new companies have been established under the flagship initiative SpaceResources.lu. Launched in 2016, this programme has successfully positioned Luxembourg as a pioneer in the exploration and use of space resources. The Luxembourg Space Cluster, which fosters innovation, technological co-operation and synergy between networks of private and public stakeholders in the field, is at the forefront of the series of clusters for creativity and innovation set up in Luxembourg.

Luxembourg is globally recognized for its ambition in this field and is one of the main players in the commercial space sector, which has also enabled it to attract companies from other sectors of the space industry such as telecommunications and Earth Observation. In 2018 the Ministry of the Economy held the first Mining Space Summit, attended by stakeholders from the space sector and the mining industry with the aim of launching scientific, technological and financial co-operation. The country also hosted the Space Forum, Asteroid Day and NewSpace Europe. In 2018 around 30 new projects were implemented in connection with programmes run by the ESA and the national space programme LuxIMPULSE. Luxembourg is set to play a key role in the EU Space Programme for 2021–27. Luxembourgers have also been appointed as Vice-Chairman of the ESA Council and Chair of the ESA's Joint Board on Communication Satellite Programmes. In June 2018 the ESA announced that it was setting up a European Space Education Resources Office for Luxembourg.

From the start of the 2019/2020 academic year, the University of Luxembourg offered an Interdisciplinary Space Master's degree focusing on the space industry, which would train engineers in robotics, autonomous systems and artificial intelligence, as well as providing a grounding in business development. The programme reflected the Government's objective to become Europe's hub for new space activities, in particular in the field of the exploration and use of space resources.

International co-operation has been furthered by the signing of co-operation agreements with other countries and exchanges to create a favourable regulatory framework for commercial space activities. In 2018 new agreements were signed with China, Poland and the Czech Republic (Czechia), following on from those concluded with Portugal, Japan and the United Arab Emirates. The agreement with China includes co-operation with the Chinese Academy of Sciences' National Space Science Center, with the aim of creating a space exploration laboratory in Luxembourg. In May 2019 Luxembourg and the USA signed a memorandum of understanding that will serve significantly to deepen co-operation in the field of space by facilitating space research, exploration, development and use. Luxembourg has also been involved in UN activities in the area of space, and it participated in the high-level International Space Exploration Forum (ISEF2).

Making a Success of the 'Third Industrial Revolution' in a Data-driven Economy

Luxembourg is pursuing a transition towards a new industrial model. A strategic study on the 'third industrial revolution', commissioned by the Government, was released in 2016. The study encourages the transition to a new industrial model based on the convergence of ICT, renewable energy and new transport methods, via a participatory, collaborative approach. Targeted areas include increasing energy efficiency, developing a high-performance computing infrastructure and setting up technology platforms for co-located industry and university researchers working on common cross-cutting issues. This role of Luxembourg as a laboratory for a knowledge-based, sharing economy further boosts the country's image as a 'smart nation'.

Since late 2016, a collective process has been initiated and effective cross-sector governance has been introduced, enabling socioeconomic stakeholders to collaborate within nine different platforms (energy, mobility, construction, food, industry, finance, smart economy, circular economy and the prosumer and social model), meeting regularly to discuss and take decisions in these areas. This has led to a new type of convergence between industry, energy and digital technology, shaped by environmental concerns, and therefore to a new socioeconomic model for Luxembourg. Under the Europe 2020 strategy, the country set itself ambitious national objectives for 'smart, sustainable and inclusive' growth and identified innovation as its driving force. The consolidation of a knowledge-based economy has become a major political priority.

Digital transformation is happening at a scale and speed that brings immense opportunities for innovation, growth and jobs in Luxembourg. The vision of data usage as central to economic and social development (a 'data-driven economy') is reflected in the 'Digital Lëtzebuerg' strategy, which aims to turn Luxembourg into a 'smart green digital nation'. This strategy consolidates ICT as a field of excellence for the economy and encourages the creation of start-ups in the areas of e-commerce, digital content, cloud computing, big data and e-skills. Particular efforts are being made to digitize government services in a move towards greater transparency and access to information. The investments made in digital infrastructure in recent years have placed Luxembourg second within the EU in terms of connectivity, a position which will undoubtedly be consolidated by the Government's 5G strategy for Luxembourg. In parallel, a new strategic vision on artificial intelligence will further support the country's ambition to be one of the most advanced digital societies in the world.

Luxembourg was chosen to host the headquarters of the multi-billion-euro European Commission EuroHPC Joint Undertaking. The Meluxina supercomputer, with a calculating power of 10 petaflops (10,000,000,000m. operations per second) and a cost of €30.4m., will be hosted, operated and marketed at the LuxConnect data centre in Bissen, and powered exclusively by green energy produced in part by KioWatt, a co-generation plant fuelled by scrap wood. Meluxina is scheduled to become operational by the end of 2020. It will facilitate the digital transition of the economy and will be used for applications in the areas of research, personalized medicine and eHealth projects, as well as for the needs of companies (SMEs and start-ups) and the financial centre.

Between 2000 and 2018 investment in public research increased more than fivefold, with one of the Government's key projects being the Cité des Sciences in Belval, which is home to another hub of research and knowledge, the University of Luxembourg, as well as the country's main funding institutions for research and development, the National Research Fund (FNR) and Luxinnovation. This multidisciplinary, multisector platform houses nearly all of the country's higher education, research and innovation activities, together with innovative private companies such as the Technoport and the House of BioHealth. The country plans to build a digital health ecosystem during 2019–23, with the aim of accelerating the transition in Luxembourg from a public research-driven to a business-driven innovative biomedical ecosystem.

Luxembourg is therefore consolidating its growth by investing in the intangible dimension of productivity: education, research and innovation. The diversification of the economy involves identifying niche skills and specializing in high-value-added activities such as technology-intensive industries and knowledge-intensive services, especially in the fields of computer science, intellectual property, consultancy, telecommunications, logistics and infrastructures.

Given its specific characteristics, Luxembourg faces a considerable strategic challenge if it is to guarantee its future in a globalized economic and energy environment. It needs to diversify its economy while safeguarding the competitiveness of its financial sector and the long-term sustainability of the Luxembourg social model, characterized by a high standard of living, high employment and a good level of social cohesion. The country's ageing population and the related welfare expenditure could jeopardize the long-term viability of its public finances.

THE CORONAVIRUS PANDEMIC

Luxembourg was affected by the COVID-19 pandemic from early 2020, with its first confirmed case in early March. On 15 March the Government instituted containment measures to mitigate the spread of the disease, including the closure of non-essential shops and businesses, the cancellation of cultural and sporting activities, and restrictions on non-essential travel. In response to the economic crisis caused by locking down large parts of the economy, the Government announced an economic stabilization programme amounting to some €8,800m. Measures included direct financial support for businesses and the self-employed in the form of grants and loans; a moratorium on the repayment of bank loans; wage support for enterprises; visa extensions for workers from third countries; support for remote working for cross-border workers (some of whom were affected by border closures); and protection from eviction for businesses. None the less, STATEC recorded an unemployment rate of 6.6% in July 2020 (it had stood at 5.4% in July 2019), however, this was down from a high of 7.0% recorded in April. GDP growth of –6.0% was forecast for 2020, but a GDP increase of 7.0% was forecast for 2021. The economy began to recover from May, after the shutdown from March of most shops, restaurants and bars, and passenger air transport began to be lifted, however, ongoing social distancing and other constraints were likely to mean a slow recovery. The worst affected sectors of the economy were construction, accommodation and food service activities, and transportation and storage.

CONCLUSION

Luxembourg's economy has come a long way since the Second World War, especially in recent years. The once bipolar agricultural/industrial society has become a competitive society largely based on knowledge-intensive services, characterized by high-performing human capital, political stability, prosperity and a strong welfare system. Among the key growth factors for Luxembourg, five can be identified as particularly important: the country's integration into larger economic areas; the systematic development of infrastructures; a permanently available workforce (through migration and cross-border workers); the existence of growth niches and high-value-added economic diversification; and a high level of social protection. The country's proactive political leadership, a source of long-term continuity, has turned exogenous challenges into opportunities, integrating them into a creative economic policy. Within Luxembourg's long-term strategic vision, the economy has been the main area on which political platforms have converged, underpinned by two pillars: a balanced approach and a culture based on consensus and peaceful labour relations. The 'Luxembourg consultation model' and Luxembourg's specific brand of social stability largely reflect this: agreement is reached between the 'social partners' (within the Tripartite and the Economic and Social Council) before legislation is adopted by the Chamber of Deputies, thereby creating an environment conducive to social solidarity where any potential disagreements can be identified and resolved in advance. The country has consolidated its national identity by opening itself up to the international community. Looking to the future, if Luxembourg is to safeguard its welfare state and boost competitiveness, especially in the post-COVID-19 crisis world, it will have to tackle three recurrent issues: an ageing population, unemployment (especially among young people and over the long term) and the sustainability of the social security system. None the less, credit rating agency Standard & Poor's confirmed Luxembourg's AAA rating in September 2020. The country's finances are in a good position to cope with the negative economic effects of the COVID-19 crisis.