

# The Evaluation Report of Luxembourg's Investment Climate



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## 【Foreword】

# To Pursue Green and Sustainable Finance in the New Wave of the Belt & Road Investment

President Xi Jinping has said, “Urging efforts to foster new opportunities amid challenges and make new advances amid changes”. As the world is experiencing profound shifts unseen in a century, the new technological and industrial revolutions have accelerated shifts in the international landscape, resulting in major test for the international community with choices to be made between multilateralism and unilateralism, openness and seclusion, cooperation and confrontation. For all that, however, economic globalization is an irreversible historical trend, and the idea of a community of shared future for mankind is deeply rooted. Against this background, how financial intermediaries and think tank institutions serve national strategies, provide high-level financial services, and help high-quality international cooperation have become new challenges.

As an old Chinese saying goes, “even mountains and seas cannot distance people with common aspirations”. Facing new opportunities and challenges, all parties have reached a consensus on “embracing openness and cooperation for mutual benefit”. Dagong Global Credit Rating Co., Ltd, Institute of the Belt & Road Initiative of Tsinghua University and the embassies of various countries in China jointly released series of reports on transnational investment environment. One side, through an evaluation system on transnational investment environment, the report helps the investor country seize investment opportunities, avoid risks and optimize resource allocation by mitigating information asymmetry in international cooperation. The other side, the report helps the invested country locate itself in the global system through its own strengths and weaknesses, so as to complement each other's advantages and achieve win-win cooperation. The three parties, by doing so,



contribute to the implementation and integration of China's "Belt & Road" and "Dual Circulation" strategies.

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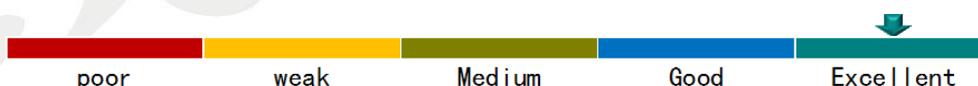


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# 2021 Investment Climate Index

“The Belt and Road” in Luxembourg



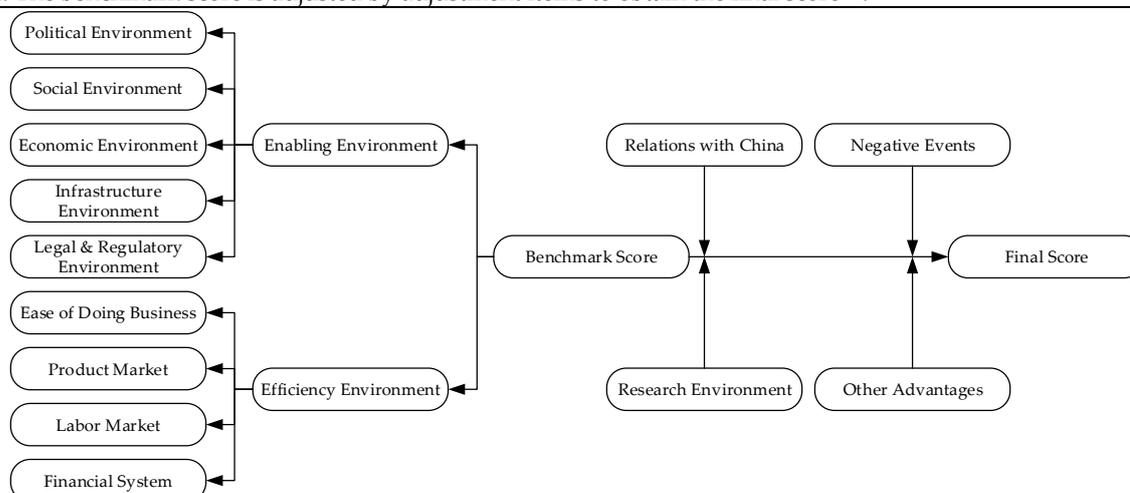
## Luxembourg's Investment Climate 2021: Excellent

● Enabling Environment	Excellent	● Efficiency Environment	Excellent	Adjustments
○ Political Environment	Excellent	○ Ease of Doing Business	Excellent	↓ Covid-19 Effect
○ Social Environment	Excellent	○ Product Market	Good	
○ Economic Environment	Good	○ Labor Market	Excellent	
○ Infrastructure Environment	Excellent	○ Financial System	Excellent	
○ Legal & Regulatory Environment	Excellent			

### Schedule 1 Investment Climate Index Logic and Index Partition

The process of the National Investment Climate Index is summarized as follows:

1. Weighting the political environment, social environment, economic environment, infrastructure environment and legal & regulatory environment to obtain the enabling environment index;
2. Weighting the ease of doing business, product market, labor market and financial system to obtain an efficiency environment index;
3. Weighting the above two indexes to get the benchmark score;
4. The benchmark score is adjusted by adjustment items to obtain the final score <sup>[1]</sup>.



[1] The 2021 Investment Climate Index has additionally increased the impact of the COVID-19 epidemic on the investment climate.

# Luxembourg's Investment Climate

## Political Environment[Excellent]

### Strengths

- ✓ There is a high degree of consensus among political parties and the political situation is stable;
- ✓ Strong government governance capability and policy continuity;
- ✓ Actively respond to *The Belt and Road Initiative*.

### Challenges

- The total seats of the ruling coalition in the parliament is just over half.

## Economic Environment[Good]

### Strengths

- ✓ The level of economic development is very high, with GDP per capita exceeding 100,000 USD;
- ✓ Luxembourg is an international financial center and one of the global investment fund management centers;
- ✓ The world's largest steel company is located in Luxembourg;
- ✓ The tertiary industry accounts for a high proportion, and the financial industry is highly developed.

### Challenges

- Affected by the epidemic, the short-term economy experienced a slight recession;
- House prices have risen too fast in recent years;
- There is a structural imbalance between supply and demand in the labor market.

## Legal and Regulatory Environment[Excellent]

### Strengths

- ✓ Laws related to investment and business are complete, open and transparent;
- ✓ Foreign investors enjoy national treatment;
- ✓ Enjoy the dual investment preferential policies of the EU and the country.

### Challenges

- The legal system is more complicated, and both the EU and the domestic legal system need to comply;
- The EU's foreign investment policy tends to be conservative;
- Strict environmental protection laws and regulations.

## Social Environment[Excellent]

### Strengths

- ✓ Very high level of social security;
- ✓ A steady growth of population and youthful;
- ✓ High level of education for Luxembourgers, increasing public education expenditure;
- ✓ Multi-cultural and convenience society.

### Challenges

- Continue to use loose immigration policies to attract young immigrants.

## Ease of Doing Business[Excellent]

### Strengths

- ✓ Simple, short time-consuming and low-cost administrative procedures.

### Challenges

- The process of getting credit needs to be improved.

## Financial System[Excellent]

### Strengths

- ✓ Developed financial system;
- ✓ Loose financing environment and low financing cost;
- ✓ Strong financial stability.

### Challenges

- The asset quality and profitability of the banking industry declined slightly.

## Infrastructure Environment[Excellent]

### Strengths

- ✓ Very developed transportation network;
- ✓ Europe's largest all-cargo airline;
- ✓ With four-level data center, connectivity ranks third in the EU..

### Challenges

- Electricity mainly depends on imports;
- Renewable energy power generation is still insufficient.

## Product Market[Good]

### Strengths

- ✓ Complete tax structure;
- ✓ Reasonable tax settings;
- ✓ Low tax rate;
- ✓ Tax incentives for foreign investors;
- ✓ Free domestic public transportation.

### Challenges

- Public utility fees are slightly higher than other EU countries;
- High and rising housing prices;
- EU tariff protection on specific products.



## Labor Market[Excellent]

### Strengths

- ✓ High-quality, professional and international workforce;
- ✓ The social security taxes and fees paid by employers are more competitive than neighboring countries;
- ✓ Good labor relations.

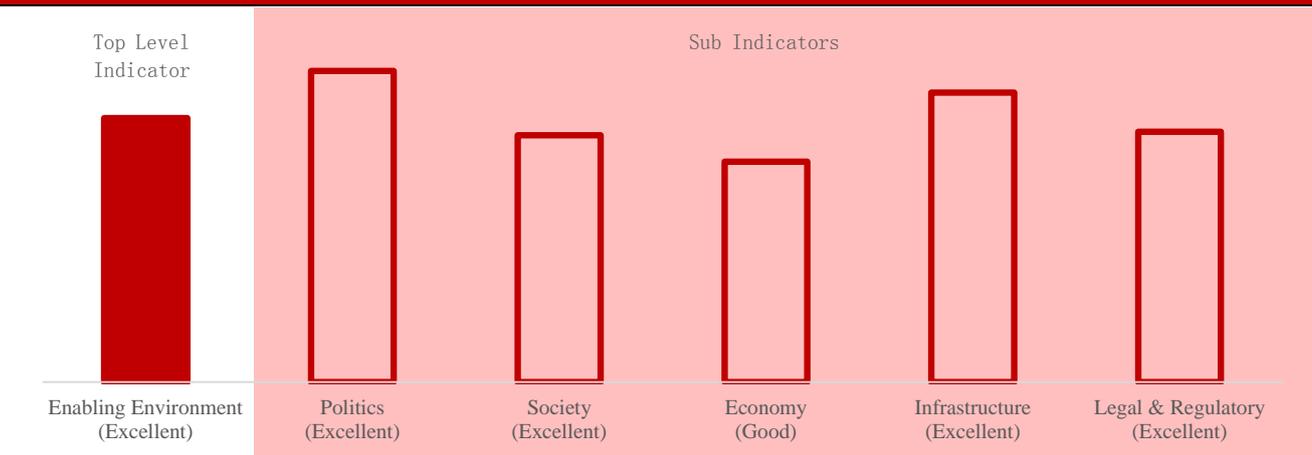
### Challenges

- Large demand for foreign workers;
- High redundancy cost;
- Restricted conditions for the introduction of foreign workers and protection for EU workers.



# 01 Enabling Environment

Figure 1-1 Enabling Environment Index-Luxembourg 2021



Data Source: Dagong Global

Note: Politics, Society, Economy, Infrastructure, Legal and Regulatory are the sub index.

## Chapter 1 Enabling Environment

### I. Political Environment

Strengths	
✓	There is a high degree of consensus among political parties and the political situation is stable;
✓	Strong government governance capability and policy continuity;
✓	Actively respond to <i>The Belt and Road Initiative</i> .
Challenges	
✓	The total seats of the ruling coalition in the parliament is just over half.

#### Political Situation

Luxembourg has a high degree of consensus among political parties, and the overall political situation remains stable. In the election ended in October 2018, the ruling coalition composed of the Democratic Party, the Social Labor Party and the Green Party won 31 of the 60 parliamentary seats<sup>1</sup>, getting re-elected by a small advantage. After the formation of the cabinet, although the total number of seats in the ruling coalition is reduced by one compared with the previous term, it will not have a negative impact on the stability of the political situation. On the one hand, Luxembourg implements a hereditary constitutional monarchy under a parliamentary democracy, and the regime has a smooth transition for long; On the other hand, major political parties in Luxembourg have relatively consistent political views on the problems facing the country and development strategies. Among them, the Christian Social People's Party<sup>2</sup>, which is the largest political party, has repeatedly governed with the Social Labor Party in the ruling coalition, with a high degree of tacit understanding.

#### Strategic Policy

The Luxembourg government has very strong governance capabilities, and its national development strategy is largely in line with national conditions. In terms of governing capacity, Luxembourg's inter-party consultation mechanism is mature, the policy positions of different parties are relatively consistent, and their grasp of national conditions is basically accurate. Additionally, Luxembourg's Corruption Perceptions Index in 2020 is 80<sup>3</sup>, ranking 9th among the 180 sample countries. The degree of incorruptness is very high. In terms of development strategy, on one hand, the Luxembourg government promotes economic diversification while maintaining financial security; on the other hand, the government actively promotes domestic

<sup>1</sup> The three parties received 12 seats, 10 seats and 9 seats respectively. Among them, the Democratic Party decreased by 1 seat, the Social Labor Party decreased by 3 seats, and the Green Party increased by 3 seats. The total number of seats in the ruling coalition needs to be more than half.

<sup>2</sup> The Christian Social People's Party won 21 parliamentary seats.

<sup>3</sup> From Transparency International website, <https://www.transparency.de/cpi/cpi-2020/cpi-2020-tabellarische-rangliste/>.



reforms to cope with the impact of the rigid domestic labor market and the strengthening of EU supervision on Luxembourg. First of all, the Luxembourg government strives to attract international internet giants, and combines its own advantages in the financial industry to accelerate the development of financial technology. Currently, internet companies such as Skype and Amazon have moved their regional headquarters to Luxembourg. Second, in the face of the EU's "Anti-Tax Avoidance Directive" and increasing requirements for tax transparency, the Luxembourg government has also made corresponding adjustments to the tax system to improve the domestic investment environment and keep it consistent with the EU. Third, in the face of the high domestic unemployment rate and the mismatch of skills in the labor market, the Luxembourg government has also introduced measures such as expanding education expenditures, strengthening vocational training, and increasing employment subsidies, which can alleviate the contradiction between supply and demand in the labor market to a certain extent.

### **China-Luxembourg Political Relationship**

Diplomatic relations between China and Luxembourg have developed smoothly, with close high-level leaders exchanges between the two countries. China and Luxembourg established diplomatic relations in November 1972. Luxembourg has always maintained neutrality in the field of diplomacy, advocating equality, opposition to arms race, compliance with international law, respect for human rights and interests of small countries, etc. Luxembourg also actively develops foreign aid, in order to eliminate poverty and promote development, which is basically consistent with China's position on major international issues. The relations between China and Luxembourg have been rapidly warming up. Nowadays, Luxembourg advocates actively developing and expanding cooperation with countries in the Asia-Pacific region. China is a key diplomatic target country for Luxembourg. The exchanges between leaders at all levels of China and Luxembourg have been continuously deepening. In June 2017, Luxembourg Prime Minister Bettel visited China, President Xi Jinping and Premier Li Keqiang met with Bettel; in March 2019, Premier Li Keqiang of the State Council met Prime Minister Bettel of Luxembourg who came to China to attend the Bo Ao Forum for Asia Annual Conference 2019; in September 2019, Yang Chuantang, Vice Chairman of the National Committee of the Chinese People's Political Consultative Conference, paid an official goodwill visit to Luxembourg. In addition, in October 2016, the Governor of the People's Bank of China Zhou Xiaochuan met with visiting HRH Guillaume of the Grand Duke of Luxembourg and the Minister of Finance Pierre Gramegna in Beijing. The two parties exchanged views on topics such as the construction of Luxembourg's international financial center and China-Luxembourg financial cooperation.

On the issue of The Belt and Road, Luxembourg actively responds to The Belt and Road Initiative. Luxembourg is the second EU founding member to join The Belt and Road Initiative after Italy. In March 2019, when Premier Li Keqiang of the State Council met with Prime Minister Bettel of Luxembourg in Bo Ao, Hainan, China and Luxembourg signed the Agreement of Memorandum of Understanding between the Government of the People's Republic of China and the Government of the Grand Duchy of Luxembourg on Jointly Promoting the Construction of the Silk Road Economic Belt and the 21st Century Maritime Silk Road and other documents related to financial cooperation. In addition, Prime Minister Bettel of Luxembourg also mentioned in an interview in August 2017 that Luxembourg will firmly support China's The Belt and Road Initiative, and believes that The Belt and Road Initiative can bring a win-win situation for both China and Luxembourg.

## **II. Social Environment**

### **Social Security**

Luxembourg has been rated as "the safest city in the world" by the United Nations for years, with its perfect social security system and low crime rate. Luxembourg has a well-developed economy, a low unemployment rate, a small gap between the rich



### Strengths

- ✓ Very high level of social security;
- ✓ A steady growth of population and youthful;
- ✓ High level of education for Luxembourgers, increasing public education expenditure;
- ✓ Multi-cultural and convenience society.

### Challenges

- ✓ Continue to use loose immigration policies to attract young immigrants.

and the poor, and with its good social security, the crime rate is at a low level.

According to the data released by the government of Luxembourg, the total number of criminal cases in Luxembourg in 2016 was 38,537, a year-on-year decrease of 4.5%. Although the crime rate is low, Luxembourg still attaches great importance to public security. Good public surveillance and law enforcement have also ensured a high level of public security. Pickpocketing occurs only in airport, railway stations, bus stations and other places with large traffic. At the same time, Luxembourg is a member of NATO and has no terrorist attacks in history.

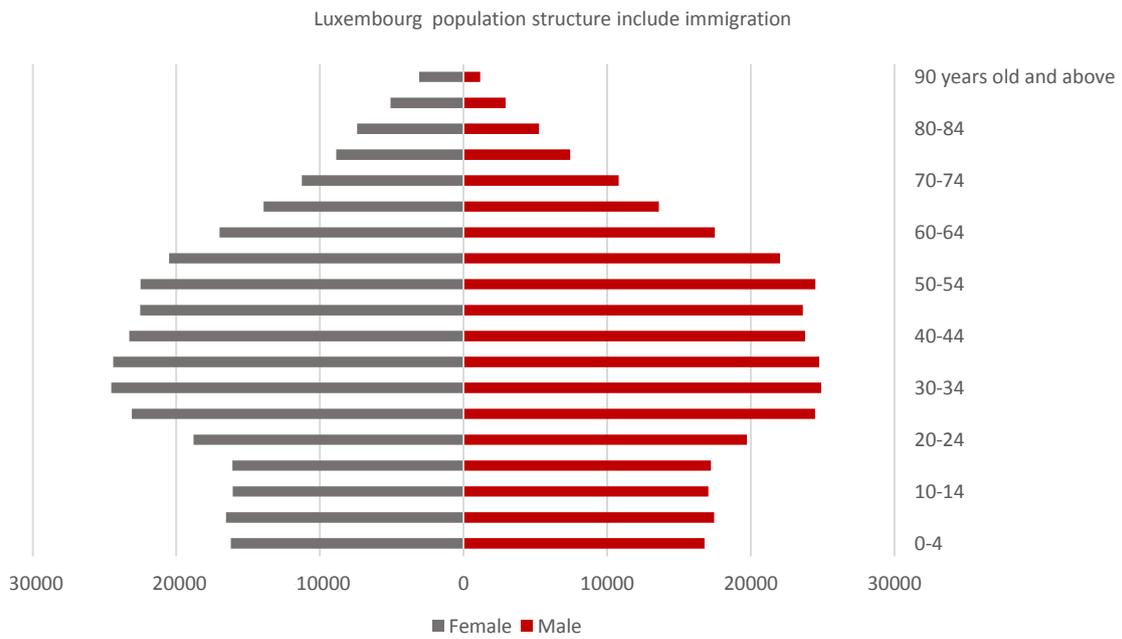
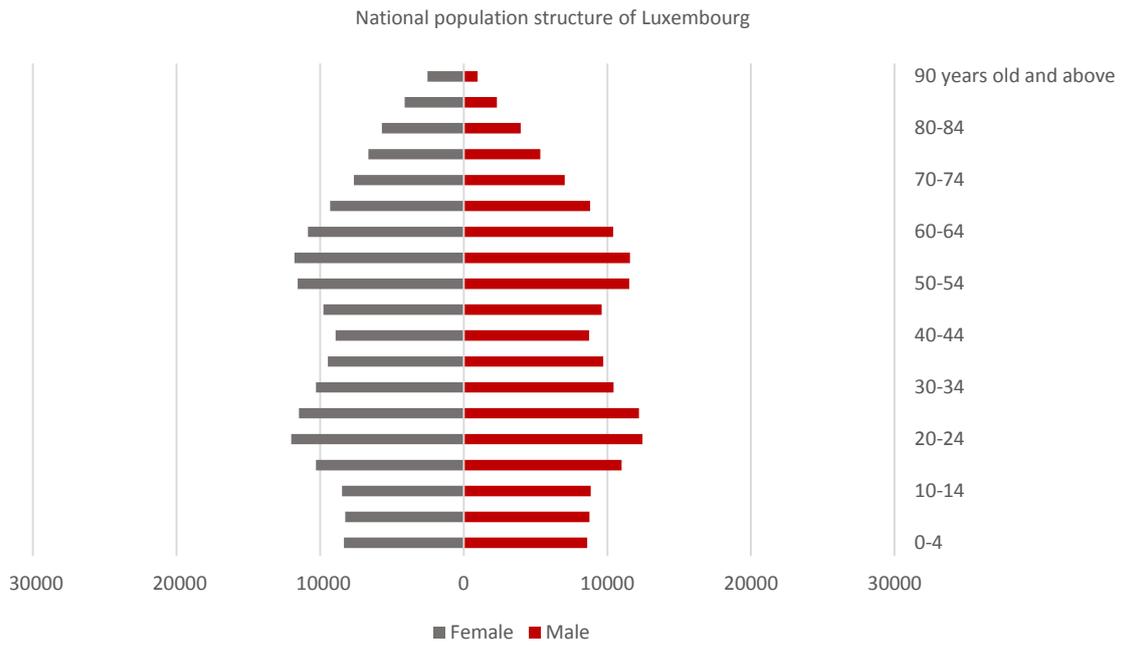
### Population

Luxembourg has benefited from an open immigration policy, and its population structure is young and growing steadily. In 2020, the total population of Luxembourg is 626,000, a year-on-year increase of 2.0%. Luxembourg adopts a relatively loose immigration policy. Obtaining long-term residence does not involve house purchase and investment, and permanent residency can be obtained in five years. The relatively successful immigration policy has effectively solved the problem of population aging in Luxembourg. In 2020, the population aged 15-64 account for 69.5% of the total population, and the elderly aged 65 and above account for 14.5% of the total population. In 2020, the total number of foreign immigrants in Luxembourg is 296,000, accounting for 47.4% of the total population, an increase of 21.1 percentage points from 1981. Among them, Luxembourg immigrants are mainly from the European Union, accounting for 81.8% of the total immigrant population<sup>4</sup>. The top rankings are Portugal (32.1%), France (16.1%), Italy (7.8%), Belgium (6.7%) and Germany (4.3%). As one of the smallest countries in Europe, Luxembourg has developed an enlightened society and family, and its people have a high standard of living. According to the population statistics of the Luxembourg Statistical Office, the life expectancy of men is 80.01 years old and that of women is 84.47 years old in 2018, and the life expectancy is gradually increasing.

<sup>4</sup> Since the UK formally leaves the EU in 2020, the statistics do not include the UK.



Figure 1-2 Structure of Luxembourg population(person)



Data Source: Luxembourg Statistical Office, Dagong Global



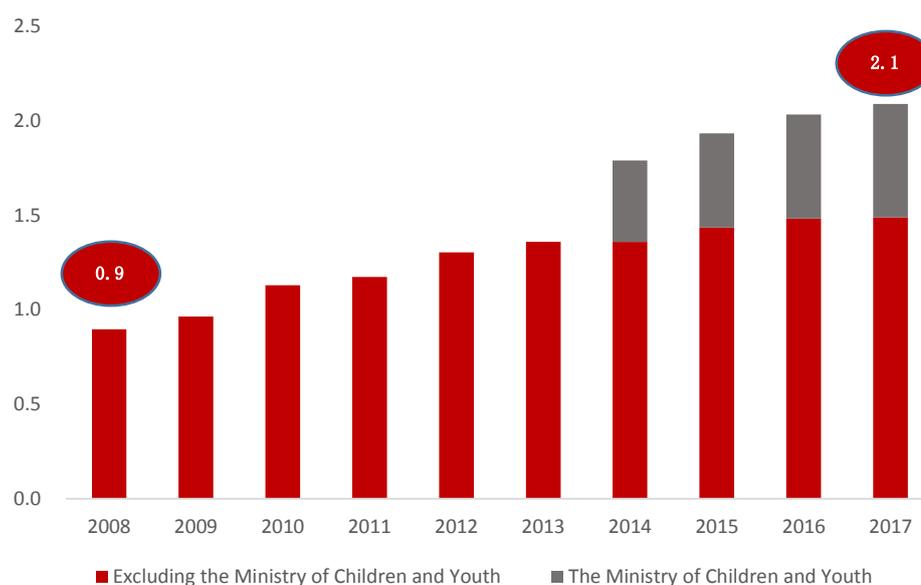
**Table 1-1 Population changes in Luxembourg from 2010 to 2020 (person)**

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Total population	502,100	512,400	524,900	537,000	549,700	563,000	576,200	590,667	602,005	613,894	626,108
Luxembourg	285,700	291,900	295,000	298,200	300,800	304,300	307,000	309,170	313,771	322,430	329,643
European Union	186,244	191,679	198,681	206,122	214,390	222,192	229,506	240,290	244,400	246,053	247,878
among them:											
Portugal	79,769	82,362	85,321	88,243	90,764	92,063	93,124	96,779	96,544	95,516	95,057
France	29,695	31,455	33,123	35,215	37,158	39,370	41,671	44,284	45,822	46,938	47,805
Italy	18,166	18,058	18,117	18,344	18,773	19,524	20,276	21,345	21,962	22,465	22,996
Belgium	16,759	16,926	17,165	17,555	18,159	18,834	19,406	20,029	20,212	19,953	19,823
Germany	12,059	12,049	12,259	12,382	12,659	12,789	12,787	13,092	13,146	13,015	12,849
Other	30,156	28,821	31,219	32,678	34,510	36,508	39,694	41,207	43,834	45,411	48,587

### Education

Luxembourg attaches great importance to education, and its citizens are highly educated. According to the law, children over 4 years old in Luxembourg must receive 12 years of compulsory education, ranging from 4 to 16 years old, including two years of pre-school education and ten years of primary and secondary education. There are 157 public primary schools and 39 Public High Schools in Luxembourg. According to the Luxembourg Statistical Office, there are 33,600 primary school students, 13,300 middle school students, 26,700 secondary technical school students and 7,109 college students in 2018/19 school year. The government of Luxembourg attaches great importance to national education, and the budget for national education is increasing from 900 million euro in 2008 to 2.09 billion euro in 2017. University Education in Luxembourg is mainly concentrated in the University of Luxembourg, with the Faculty of Law, Economics and Finance (FDEF), Faculty of Language and Literature, Humanities, Arts and Education (FLSHASE). There is only one local university in Luxembourg, so more students are encouraged to go to other countries for college education. According to statistics, there were 7,703 Luxembourg students studying abroad in 2015, mainly in Belgium, Germany and France.

Figure 1-3 The evolution of Luxembourg's national education budget (Billion EUR)



Data Source: Luxembourg Statistical Office, Dagong Global

Note: Since the legislative election of October 20, 2013, the departments Childhood and Youth are part of the Ministry of Education.

Table 1-2 Overview of Luxembourg's primary and secondary education

Number of School	239	Number of Teacher/person	11,204
Public School	211	Elementary School teacher/person	5,715
Private School	6	Middle School teacher/person	4,931
International School	22	Special education teacher/person	558
Number of Student/thousand	102	Number of Diploma and Certificate	4,572
Public School/thousand	85	Diploma of Secondary School and Technical Secondary School	2,810
Private School/thousand	4	Technician's Diploma	780
International School/thousand	13	Vocational Aptitude diplomas and Vocational capacity Certificate	982

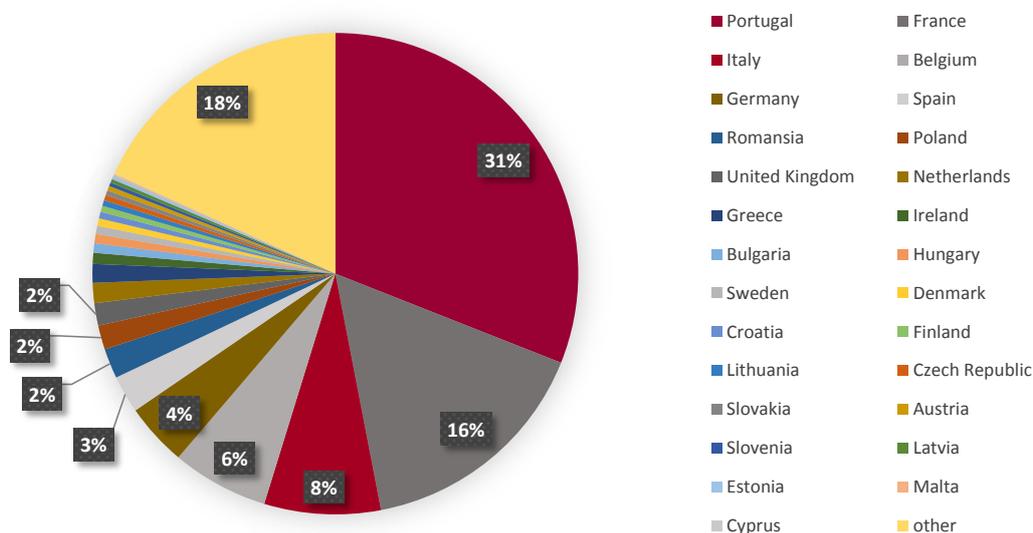
### Social Culture

Luxembourg's multi-cultural and social diversity has contributed to its rich and inclusive social culture. In terms of language, due to the historical origins of Luxembourg with France and Germany, the official languages are French, German and Luxembourgish. Among them, Luxembourgish is mostly used as spoken folk language, as well as for the language of local administration and judicial organs. German is mostly used in newspapers and news. French as a legislative language is mostly used in administration, justice and diplomacy. The use of multiple languages is a major feature of the Grand Duchy of Luxembourg. Although Portuguese and Italians account for a relatively high proportion of Luxembourg immigrants, Portuguese and Italian are not widely used. The Grand Duchy of Luxembourg is one of the few countries in the world where several languages are spoken and written in their lives, whether in the private, professional, social, cultural or political spheres. In terms of religion, 97% of the country's residents believe in Roman Catholicism.



Luxembourg's overall economic and social policies are characterized by facilitation and inclusiveness, which are conducive to the integration of foreign investors into the local society, and the "soft environment" of social culture is conducive to attracting foreign investors.

Figure 1-4 Luxembourg's main immigration structure (%)



Data Source: Luxembourg Statistical Office, Dagong Global

### III. Economic Environment

#### Economy Overview

Luxembourg has a high level of economic development and is also an international financial center and investment fund management center. In 2020, Luxembourg's GDP per capita is 117,000<sup>5</sup> USD (Table 1-3), ranking third in the world, only lower than the Principality of Monaco and the Principality of Liechtenstein. Neutral diplomacy and low tax policy made Luxembourg become an offshore financial center in the 1990s and quickly developed into one of the international financial centers. In the March 2021 GFCI report, Luxembourg ranks 17th<sup>6</sup> in the world and is also the world's second largest investment fund management center after the United States. In addition, Luxembourg's economic growth has been higher than the EU average for a long time, and it has recovered rapidly after the international financial crisis and the European debt crisis. At the same time, Luxembourg also has the world's largest steel company, Arcelor-Mittal Group, which produces steel nearly 100 million tons annually.

#### Strengths

- ✓ The level of economic development is very high, with GDP per capita exceeding 100,000 USD;
- ✓ Luxembourg is an international financial center and one of the global investment fund management centers;
- ✓ The world's largest steel company is located in Luxembourg;
- ✓ The tertiary industry accounts for a high proportion, and the financial industry is highly developed.

#### Challenges

- ✓ Affected by the epidemic, the short-term economy experienced a slight recession;
- ✓ House prices have risen too fast in recent years;
- ✓ There is a structural imbalance between supply and demand in the labor market.

<sup>5</sup> Annual average exchange rate 2020: 1 USD = 6.8974 CNY, 1 EUR = 7.8683 CNY.

<sup>6</sup> Z/Yen: <https://www.zyen.com/>.

**Table 1-3 Key economic indicators of Luxembourg**

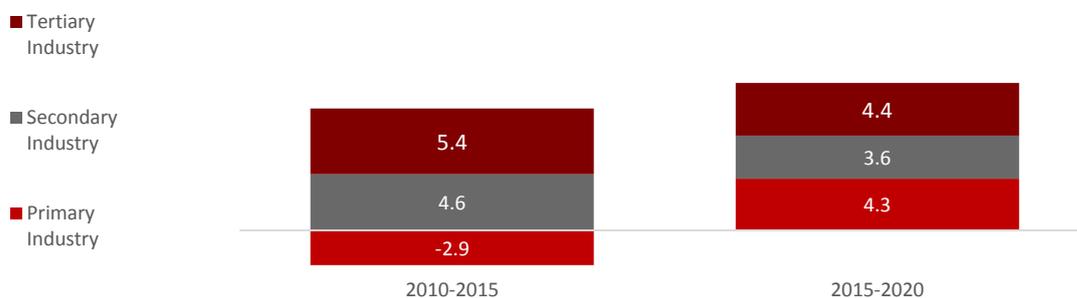
Project	Year	Amount	Project	Year	Amount
GDP (Billion USD)	2020	73.21	Inflation (%)	2020	-0.10
	2019	71.11		2019	1.74
	2018	70.95		2018	1.53
GDP per capita (USD)	2020	116,923.15	Unemployment (%)	2020	6.38
	2019	115,838.77		2019	5.30
	2018	117,859.72		2018	5.40
Real Economic growth rate (%)	2020	-1.31	Real Effective Exchange Rate	2020	101.50
	2019	2.30		2019	99.54
	2018	3.11		2018	100.33
Net foreign direct investment (Billion EUR)	2020	-20.04	Current account balance/GDP (%)	2020	4.29
	2019	19.62		2019	4.57
	2018	6.10		2018	4.75
Import/GDP (%)	2020	175.80	Export/GDP (%)	2020	214.53
	2019	172.76		2019	208.75
	2018	175.54		2018	211.56

Luxembourg's economy is dominated by the tertiary industry, with a relatively high proportion of the financial industry and obvious export-oriented characteristics, but some structural problems will affect long-term economic growth. First of all, in terms of industrial structure, the tertiary industry accounts for the highest proportion of Luxembourg's national economy. In 2020, the three major industries in Luxembourg accounted for 0.2%, 11.8% and 88.0%<sup>7</sup> respectively, and the average growth rate of the tertiary industry was also higher than that of the primary and secondary industries (Figure 1-5). Among the tertiary industries, finance, real estate, and information and communications are the three industries with the highest proportions. In 2020, these industries accounted for 25.7%, 8.9% and 8.4% of GDP respectively (Figure 1-6). Second, Luxembourg's economy is more outward-oriented. On the one hand, Luxembourg has a large number of foreign bank branches and a large number of offshore financial services, including BNP, National Bank of Spain, Bank of China, Industrial and Commercial Bank of China, China Construction Bank, Agricultural Bank of China, Bank of Communications, Hong Kong HSBC, etc. Foreign financial assets in Luxembourg are much higher than local financial assets, and Luxembourg may also be significantly affected by fluctuations in the global financial system. On the other hand, since 2010, Luxembourg's trade dependence has not been less than 300.0%. In 2015, it even exceeded 400.0%, and in 2020 it is still as high as 390.3%. Third, Luxembourg's long-term economic growth is vulnerable to structural factors. On the one hand, due to structural shortages in supply and the influx of international hot money, Luxembourg house prices rose by 7.0% and 10.1% in 2018 and 2019 respectively (the average Eurozone countries were about 4.6% and 4.2% in the same period), while 2010-2017 the average growth rate is only 5.0% (the average rate of increase in Eurozone countries is about 1.0% in the same period). If the excessively rapid rise in housing prices is not controlled, private consumption and investment will be suppressed. On the other hand, there is an imbalance between the supply and demand of skills in the Luxembourg's labor market. Although the education level of the people is generally high, it still cannot meet the domestic demand for senior intellectuals. At the same time, high-welfare policies have also led to the reluctance of some domestic workers to find jobs, and the rigid

<sup>7</sup> Luxembourg Statistical Office, [https://statistiques.public.lu/stat/TableViewer/tableViewHTML.aspx?ReportId=13167&IF\\_Language=eng&MainTheme=5&FldrName=2&RFPPath=21](https://statistiques.public.lu/stat/TableViewer/tableViewHTML.aspx?ReportId=13167&IF_Language=eng&MainTheme=5&FldrName=2&RFPPath=21).

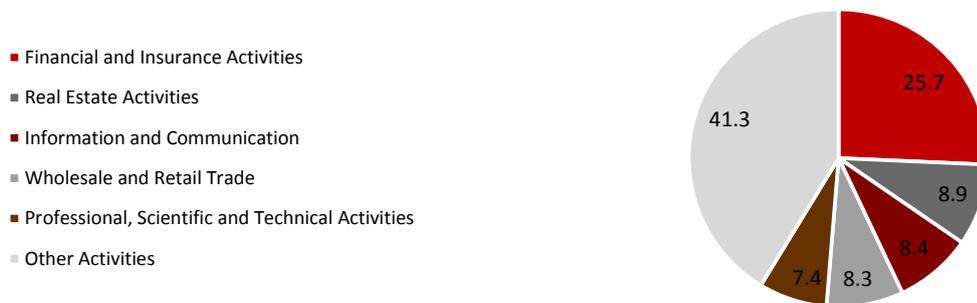
labor market may restrict the further improvement of labor productivity.

**Figure 1-5 The average five-year growth rate of the three major industries in Luxembourg 2010-2015/2015-2020 (%)**



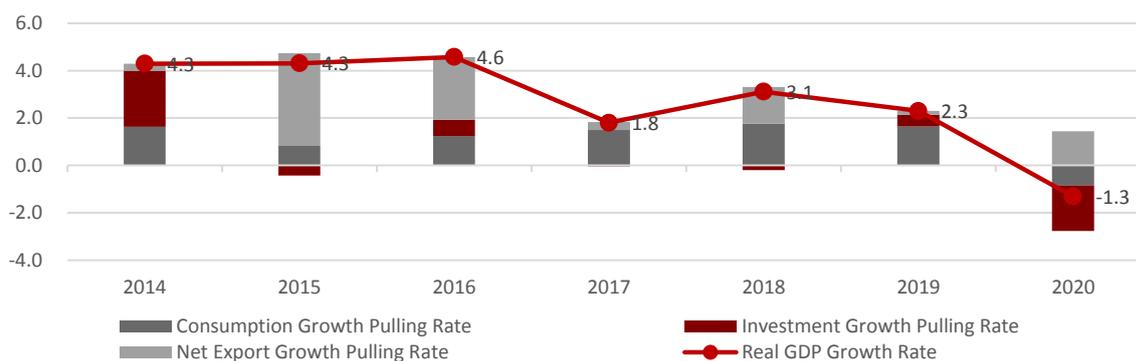
Data Source: Luxembourg Statistical Office, Dagong Global

**Figure 1-6 The proportion of Luxembourg's main industries in GDP in 2020 (%)**



Data Source: Luxembourg Statistical Office, Dagong Global

**Figure 1-7 The economic growth pulling rate of Luxembourg (%)**



Data Source: Luxembourg Statistical Office, Dagong Global

### Short-term economy

Due to the adverse effects of the COVID-19 epidemic (hereinafter referred to as "epidemic"), Luxembourg's real economy shrank slightly in 2020. Luxembourg's real economic growth rate is about -1.3% in 2020 (Figure 1-7), but among the Eurozone countries, Luxembourg is one of the countries with the lowest economic contraction. In the first half of 2020, the Luxembourg government adopted the "shutdown" policy



of in order to control the epidemic, resulting in varying degrees of decline in real consumption and real investment. In terms of consumption, Luxembourg's real consumption in 2020 decreased by 2.0% year-on-year, contributing -0.8% to the economic growth, of which the second quarter fell by 9.6% year-on-year; in terms of investment, Luxembourg's real investment in 2020 decreased by 11.0% year-on-year, contributing -1.9% to the economic growth, of which the second quarter fell by 23.9% year-on-year. However, due to the continuous quantitative easing policy of the European Central Bank to stimulate the economy, while e-commerce and online office have become new trends during the epidemic, Luxembourg's service exports grew rapidly. In 2020, Luxembourg's real net exports increased by 4.0% year-on-year, contributing 1.4% to the economic growth rate. The real net exports of trade in services increased by 8.4% year-on-year.

In the short term, due to various favorable factors, Luxembourg's economic growth rate will turn positive. First of all, the epidemic has led to a general economic contraction in the Eurozone countries in 2020, and most countries' inflation rate is far below the ECB's target level (about 2.0%). It is expected that the European Central Bank will continue to maintain its quantitative easing policy in 2021 to stimulate the economic recovery of the Eurozone countries. In May 2021, the Purchasing Managers Index (PMI) of the Eurozone countries' manufacturing industries reached 63.1, which is the highest value since the outbreak of the epidemic. Second, European and American countries have begun to vaccinate in early 2021, and the number of newly confirmed cases in a single day has also dropped significantly from the end of 2020. It is expected that the negative impact of the epidemic on European and American countries in 2021 will be weakened. Due to the highly export-oriented characteristics of Luxembourg's economy, the economic recovery of European and American countries will benefit Luxembourg. Third, after the Brexit, part of the UK's financial functions are expected to be transferred to Luxembourg, in order to facilitate EU financial supervision, which will also benefit the further development of Luxembourg's financial industry. It is estimated that Luxembourg's real economic growth rate will reach 4.0% and 3.8% in 2021 and 2022.

#### **China-Luxembourg Economic and Trading Relationship**

China is Luxembourg's most important trading partner country in Asia. The economic and trade activities of the two countries have been increasing, investment and financial cooperation have been continuously deepened, and the two countries have signed a number of cooperation agreements.

In the field of economy and trade, China is Luxembourg's most important trading partner country in Asia. In 2020, China is Luxembourg's 11th largest foreign trade export destination and 11th largest import source country, only below some EU countries and the United States, and ranks first in Asia. Luxembourg's exports to China (including trade in services) are approximately 2.31 billion EUR, accounting for approximately 1.7%<sup>8</sup> of Luxembourg's total exports, and imports from China are approximately 1.48 billion EUR, accounting for approximately 1.3%<sup>9</sup> of Luxembourg's total imports. Mechanical and electrical products, chemical products, textiles and base metals and their products are the main products of China-Luxembourg goods trade. Up to now, Luxembourg has opened direct international cargo flights to Shanghai, Zhengzhou, Beijing and Xiamen. At the same time, Zhengzhou International Dry Port also signed a memorandum of cooperation with Luxembourg National Railway in January 2016. The two sides will jointly develop railway lines that pass through Kazakhstan, Turkey and other countries and connect China and Luxembourg. This indicates that the cooperation between China and Luxembourg in the field of transportation has further expanded from air transport to rail transport. In addition, China and Luxembourg have also signed a series of

<sup>8</sup> Luxembourg Statistical Office, [https://statistiques.public.lu/stat/TableViewer/tableViewHTML.aspx?ReportId=13243&IF\\_Language=eng&MainTheme=5&FldrName=4&RFPPath=113](https://statistiques.public.lu/stat/TableViewer/tableViewHTML.aspx?ReportId=13243&IF_Language=eng&MainTheme=5&FldrName=4&RFPPath=113).

<sup>9</sup> Luxembourg Statistical Office, [https://statistiques.public.lu/stat/TableViewer/tableViewHTML.aspx?ReportId=13242&IF\\_Language=eng&MainTheme=5&FldrName=4&RFPPath=113](https://statistiques.public.lu/stat/TableViewer/tableViewHTML.aspx?ReportId=13242&IF_Language=eng&MainTheme=5&FldrName=4&RFPPath=113).



important economic and trade agreements such as investment protection agreement, double taxation avoidance agreement, cooperation agreement between the China Council for the Promotion of International Trade and the Luxembourg Chamber of Commerce, and a memorandum of cooperation on the establishment of RMB clearing arrangements in Luxembourg.

In the field of investment, Luxembourg is China's fourth-largest direct investment stock country in Europe, and China's investment in Luxembourg is mainly concentrated in the financial industry. As of the end of 2019, the stock of Chinese direct investment in Luxembourg reached 13.90 billion USD<sup>10</sup>, ranking fourth in Europe, only below the Netherlands (23.85 billion), the United Kingdom (17.14 billion) and Germany (14.23 billion). Luxembourg's direct investment stock in China is approximately 6.17 billion USD. In 2019, China's direct investment flow in Luxembourg was 690 million USD, ranking fifth in Europe, only below the Netherlands (3.89 billion), Sweden (1.92 billion), Germany (1.46 billion) and the United Kingdom (1.10 billion). Luxembourg's direct investment flow to China is approximately 330 million USD. Nowadays, China's five largest state-owned banks have established branches in Luxembourg. In addition to the aforementioned financial institutions, Huawei has a branch in Luxembourg, and China Cargo Airlines also has some trading and logistics companies operating in Luxembourg. In the field of finance, the cooperation between China and Luxembourg has also been deepening. In October 2013, the People's Bank of China and the European Central Bank signed an RMB 350 billion/EUR 45 billion local currency swap agreement, which is valid for three years and have renewed for three years in October 2016 and October 2019, and it can be renewed again after mutual agreement in October 2022. Since Luxembourg is a Eurozone country, the agreement will greatly facilitate China-Luxembourg economic and trade cooperation. In April 2015, the pilot area for RMB Qualified Foreign Institutional Investors (RQFII) was expanded to Luxembourg with an initial investment quota of 50 billion RMB, which is conducive to broadening the RMB asset allocation channels for foreign investors. In addition, in Luxembourg's offshore financial business, RMB business is mainly concentrated in three areas: Dim Sum bonds, RMB qualified foreign institutional investor funds and RMB investment funds.

#### IV. Infrastructure Environment

Strengths	
✓	Very developed transportation network;
✓	Europe's largest all-cargo airline;
✓	With four-level data center, connectivity ranks third in the EU.
Challenges	
✓	Electricity mainly depends on imports;
✓	Renewable energy power generation is still insufficient.

##### Transportation

Luxembourg is located in the heart of Western Europe. As a financial services and trade logistics-led developed country, Luxembourg has an extensive transportation network. In terms of highway and railway, Luxembourg and neighboring countries have achieved interoperability of highways and railways. In order to further promote convenient transportation, Luxembourg held high-level coordination meetings with relevant provinces (States) of neighboring countries to develop road, rail and waterway transportation. In 2021, Luxembourg will invest more than 300 million euros in railway infrastructure. In terms of air transport, Luxembourg has direct routes to Paris, Frankfurt, Munich, Barcelona, Madrid, London, Turin, Milan, Rome and Stockholm. Luxembourg has only one airport due to its limited land area. There is Luxair Luxembourg Airlines, which operates passenger transportation, and Cargolux Airlines International, which operates cargo. Among them, Cargolux Airlines International is the largest all-cargo airline in Europe. In terms of water transport, there is only one navigable river in Luxembourg, which is the Mosel River, the second largest tributary of the Rhine River. Through water transport, Luxembourg can connect with Germany and France. Merttert, the only freight port in Luxembourg, mainly transports fuels and semi-finished steel products. On 29 February 2020, public transport on the territory of Luxembourg was free of charge, making it the first country in the world to achieve free public transport for all.

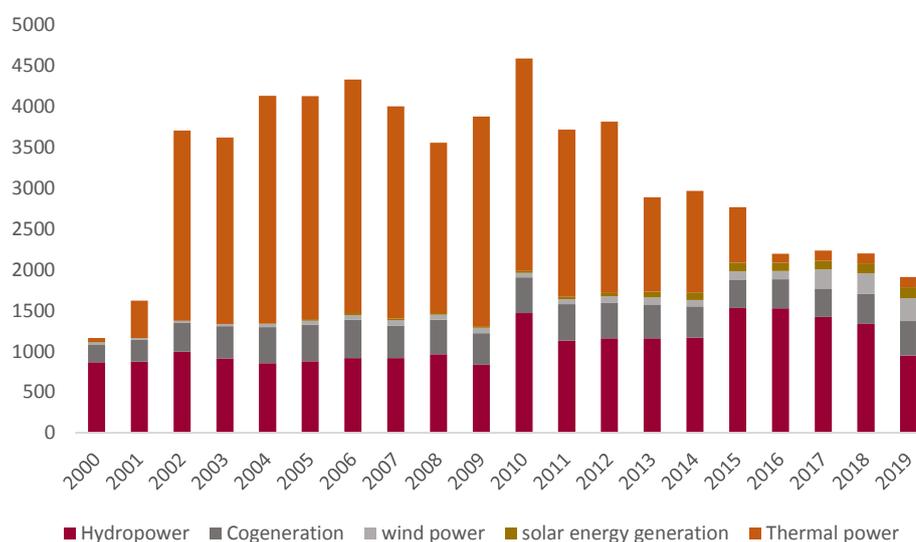
<sup>10</sup> Statistical Bulletin of China's Outward Direct Investment 2019, same as below.



### Electricity

Most of Luxembourg's electricity relies on imports, and nearly half of the country's electricity comes from hydropower. According to data released by the Luxembourg Statistics Office, in 2019, the installed capacity of various power plants in Luxembourg was 1,775 MW, and the total electricity generation was 1,908 MWh, of which hydropower was 949 MWh, accounting for 49.7% of the total electricity generation, while hot-spot combined electricity was 423 MWh, accounting for 22.1% of total electricity generation. Luxembourg's overall electricity generation has shown a downward trend since 2010, mainly due to the gradual decrease in thermal power generation. About 10% of Luxembourg's electricity consumption is self-produced, and the rest is mainly imported from the neighboring countries of Germany, France and Belgium, which are 5,240 MWh, 1,338 MWh and 240 MWh respectively. According to the 2020 EU renewable energy statistics released by Eurostat, in 2019, Luxembourg's renewable energy accounts for only 7% of total final consumption in 2019, ranking at the bottom of the EU and lagging behind national targets.

**Figure 1-8 Change in total power generation in Luxembourg (Megawatt hour)**



Data Source: Luxembourg Statistical Office, Dagong Global

### Telecommunications

Luxembourg has a sound postal and telecommunication network and attaches great importance to the construction of an information society. As of 2019, Luxembourg has 280,000 wired telephone users and 518,000 mobile phone users. The home computer penetration rate is 97%, the Internet penetration rate is 97.8%, and the proportion of people who use the Internet every day reaches 97%. The penetration rate of enterprises using the Internet has reached 98%. Luxembourg is home to Europe's most modern data center part and hosts 40% of all European Tier IV data centers.

**Table 1-4 Luxembourg's Infrastructure Condition**

Information Overview	Highlights
<p><b>Transport</b></p> <ul style="list-style-type: none"> <li>• Rail                             <ul style="list-style-type: none"> <li>• Total length 275 kilometers</li> <li>• Passenger turnover volume of 385 million person-kilometers (2015)</li> <li>• Freight turnover volume of 217 million ton-kilometers (2015)</li> </ul> </li> <li>• Roads                             <ul style="list-style-type: none"> <li>• Total length 2,908 kilometers (2019)</li> <li>• The density is 5.88 km/100 square kilometers (2019)</li> </ul> </li> <li>• Air transport                             <ul style="list-style-type: none"> <li>• Luxair (passenger)</li> <li>• Cargolux Airlines International (Freight)</li> </ul> </li> <li>• Water transport                             <ul style="list-style-type: none"> <li>• Mertert</li> </ul> </li> </ul>	<p><b>Rail</b></p> <ul style="list-style-type: none"> <li>• Connecting to major railway networks in Europe, a high-speed railway (TGV) has been opened between Luxembourg and Paris, and there are corresponding railway passenger and freight connections with neighboring Belgium, Germany, and the Netherlands</li> <li>• The National Railways of Luxembourg mostly operates jointly with neighboring countries such as French National Railways, Deutsche Bahn and Belgian National Railways</li> </ul> <p><b>Roads</b></p> <ul style="list-style-type: none"> <li>• 837 kilometers of national highways, 161 kilometers of expressways, 1891 kilometers of secondary roads</li> <li>• Connected by highways with Germany, France, the Netherlands, and Belgium</li> </ul> <p><b>Air transport</b></p> <ul style="list-style-type: none"> <li>• Cargolux Airlines International is the largest all-cargo airline in Europe, with more than 90 routes covering more than 50 countries and regions around the world</li> <li>• Cargolux Airlines International adopts a dual hub strategy. The European and American hub is located at Luxembourg Findel International Airport, and the Asia-Pacific hub is located at Zhengzhou Xinzheng International Airport</li> <li>• In 2014, the "Zhengzhou-Luxembourg" international freight route was officially opened, and the "Air Silk Road" for freight across China and Europe was successfully launched</li> </ul> <p><b>Water transport</b></p> <ul style="list-style-type: none"> <li>• In 2018, the shipment volume was 209,600 tons, steel products were 105,400 tons, and the unloading volume was 537,900 tons, of which about 355,200 tons of fuel</li> <li>• Connected with Germany and France through water transportation</li> </ul>
<p><b>Electricity</b></p> <ul style="list-style-type: none"> <li>• Installed energy-generating capacity of 1,775 MW</li> </ul>	<p><b>Electricity</b></p> <ul style="list-style-type: none"> <li>• Mainly hydropower power generation, accounting for 49.7% of total power generation</li> </ul>
<p><b>Telecommunications</b></p> <ul style="list-style-type: none"> <li>• Home computer penetration rate 97%</li> <li>• The penetration rate of enterprises using the Internet reaches 98%</li> </ul>	<p><b>Telecommunications</b></p> <ul style="list-style-type: none"> <li>• Joint deployment of quantum communication infrastructure with EU member states</li> <li>• The proportion of fiber optic network subscriptions ranked 25th in 141 countries (WEF 2019)</li> </ul>

## V. Legal and Regulatory Environment

### Investment related regulations

Luxembourg's laws on investment and business are very complete, with very detailed regulations in all fields and aspects, and its policies are open and transparent. Since Luxembourg has always been open to foreign investors and does not distinguish between domestic and foreign investors, there are no special provisions applicable to foreign investors, and the legal system used is basically the same as that of domestic investors. As a member of the European Union, Luxembourg usually converts EU directives and regulations into domestic laws. It also absorbs the legal systems of



Strengths	
✓	Laws related to investment and business are complete, open and transparent;
✓	Foreign investors enjoy national treatment;
✓	Enjoy the dual investment preferential policies of the EU and the country.
Challenges	
✓	The legal system is more complicated, and both the EU and the domestic legal system need to comply;
✓	The EU's foreign investment policy tends to be conservative;
✓	Strict environmental protection laws and regulations.

neighboring countries, including German tax law, French civil law and Belgian commercial law (statutory law and consistent applicable law). Luxembourg has signed investment protection treaties with participating investment countries. At present, Luxembourg has signed double taxation avoidance agreements with 77 countries and signed more than 93 investment protection treaties with participating investment countries.

**Table1-5 Luxembourg's Investment Related Policies**

<b>Trade regulations</b>	<i>Commercial Law</i>	<b>Investment Merger and Acquisition</b>	<i>EU M&amp;A Directive 2004/25/EC</i>
	<i>Competition Law</i>		<i>Mergers and Acquisitions Law</i>
	<i>Business Activity law</i>		<i>Business Company Law and Amendments</i>
	<i>Commodity Safety Law</i>		<i>Labor Law</i>
	<i>Consumer Credit Law</i>		<i>Securities Trading Regulations</i>
	<i>Patent law</i>		<i>Transaction Transparency Act</i>
<b>Customs</b>	<i>Regulation No. (EEC) 2913/92 on the establishment of the European Union Customs Code</i>	<b>Intellectual property</b>	<i>Convention on Industrial Property in Belgium, the Netherlands and Luxembourg</i>
	<i>Regulation (EC) No. 3285/94 on the implementation of common rules on imports</i>		<i>Copyright, Database Rights and Invention Patent Law</i>
	<i>Regulation (EEC) No. 2603/69 on the implementation of common export rules</i>		<i>Civil Law</i>
<b>Environmental protection</b>	<i>Double Taxation Avoidance Treaty</i>	<b>Investment cooperation</b>	<i>Business Conduct Law</i>
	<i>Enterprise Taxonomy</i>		<i>Business License Law and its amendments</i>
	<i>Forest Protection Law</i>		<i>Convention for the Settlement of Investment Disputes between States and Nationals of Other States</i>
	<i>Anti-Air Pollution Law</i>		<i>Labor Law</i>
	<i>Water Protection and Management Law</i>		<i>Public Contract Law</i>

As a member of the European Union, Luxembourg also implements relevant EU laws and resolutions. Under the EC Treaty, the EU's investment policy decisions are at the discretion of each member state. Under the premise of not violating relevant treaties and EU laws, each member state can formulate its own investment management policies according to the situation. The European Commission does not specifically set up investment and foreign investment competent departments and agencies. However, the business of the European Commission's Directorate-General for Trade in the investment field is to carry out negotiations on investment agreements on behalf of the European Union. The contents include investment market access and investment protection, but does not include investment and foreign investment management. In order to strengthen the supervision of foreign mergers and acquisitions of EU strategic industries, in March 2019, the EU Commission adopted the FDI Regulation, which has been formally implemented on



October 11, 2020. The key factors for review and consideration listed in the FDI Regulation mainly involve high-tech industries, critical infrastructure and sensitive data, etc. (Table 1-6). According to the FDI regulations, the European Commission can issue review opinions on specific foreign mergers and acquisitions, which has no legal effect. Although member states have the final decision-making right, they are still bound by it. On March 25, 2020, the European Commission issued the guidelines for EU foreign investment review, recommended all Member States to immediately strengthen the review of foreign investment in the field of health care, focusing on foreign mergers and acquisitions of EU enterprises affected by the epidemic. It shows that the EU has tightened its foreign investment policy again. Affected by the epidemic, EU's foreign investment policies tend to be more conservative, especially in corporate mergers and acquisitions. Therefore, investment in Luxembourg still needs to pay close attention to the changes in EU's investment policies. In addition, the EU market believes that competition is the soul and basic mechanism of market economy, so it has strict regulations on monopoly and unfair competition. Since the effect of EU competition law is higher than that of its Member States, the competition law of Member States shall not conflict with EU competition law, otherwise the relevant provisions are invalid. The jurisdiction of EU competition law mainly applies to investment and trade between member states.

**Table 1-6 The key factors considered in the EU foreign direct investment security review**

Key technology	key infrastructure	key product supply
<ul style="list-style-type: none"> <li>• Artificial Intelligence</li> <li>• Robot</li> <li>• Semiconductor</li> <li>• Cyber security</li> <li>• Space technology</li> <li>• Military</li> <li>• Energy</li> <li>• Storage</li> <li>• Quantum and nuclear technology</li> <li>• Nanotechnology</li> <li>• Biotechnology</li> </ul>	<ul style="list-style-type: none"> <li>• Energy</li> <li>• Traffic</li> <li>• Water conservancy</li> <li>• Health</li> <li>• Communication</li> <li>• Media</li> <li>• Data processing or storage</li> <li>• Military</li> <li>• Election</li> <li>• Financial</li> </ul>	<ul style="list-style-type: none"> <li>• Energy</li> <li>• Original material</li> <li>• Food safety</li> </ul>
		<b>Get sensitive information</b>
		<ul style="list-style-type: none"> <li>• Personal data</li> <li>• Ability of control data</li> </ul>
		<b>Media liberalization and diversification</b>

**Preferential policies for investment**

Both domestic and foreign investment in Luxembourg can enjoy the dual incentive policies of the EU and Luxembourg governments equally. The EU's incentive policies for enterprise investment include loans provided by the European Development Bank, government financial subsidies, and credit guarantee for SMEs provided by the European Investment Fund. Part of the financial subsidy is managed and issued by the Luxembourg government (mainly subsidies for SMEs), and the other part is directly issued by the European Commission (investment in environmental protection, R&D, and education). In addition, the credit guarantee provided by the EU is not provided directly by the European Investment Fund, but through authorized financial institutions or investment promotion agencies. The Luxembourg government has formulated multi-field and multi-level incentive policies to encourage investment, including general incentive policies applicable to various types of investment, investment incentive policies in related industries, and incentive policies in related regions. The main channels include financing, fixed asset investment subsidies, and Tax incentives.

**Environmental legal system**

The European Union is generally concerned about environmental protection issues, and the requirements for environmental protection are correspondingly high. At the



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EU level, after the Maastricht Treaty came into force in 1993, environmental protection was clearly listed as one of the purposes and activities of the community. The environmental law will be proposed by the European Commission and will become EU law after being voted by the European Parliament and the European Council with the principle of effective majority. The Member States will convert the EU laws into domestic laws and implement them concretely. At the Luxembourg level, the government attaches great importance to environmental protection and sustainable development. The environmental protection laws are updated every year, covering land remediation, air, noise, hunting, garbage, water, energy, forest, environmental events, nature reserves, dangerous goods and other related aspects. The laws and regulations related to investment environmental impact assessment are the Enterprise Taxonomy issued in 1999. When investing in Luxembourg, in addition to go through the evaluation of the environmental protection department and apply for an environmental business permit before establishment of enterprises, should also take environmental protection measures and make environmental protection budget in accordance with the relevant laws and regulations both of EU and Luxembourg in the process of project operation or production.

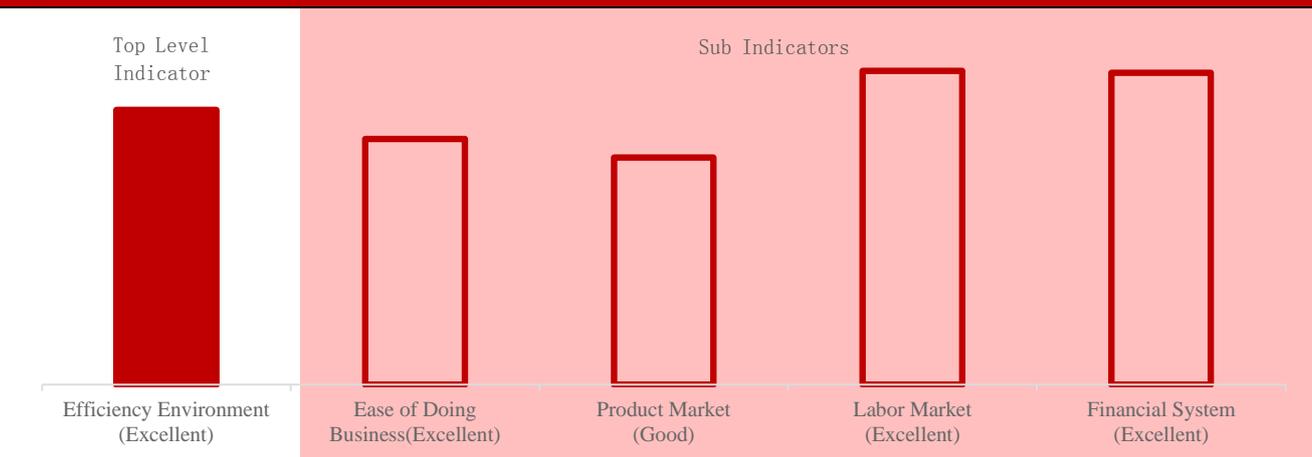


# 02

# Efficiency

# Environment

Figure 2-1 Efficiency Environment Luxembourg 2021



Data Source: Dagong Global

Note: Ease of Doing Business, Product Market, Labor Market and Financial System are the sub index.

## Chapter 2 Efficiency Environment

### I. Ease of Doing Business

Strengths	
✓	Simple, short time-consuming and low-cost administrative procedures.
Challenges	
✓	The process of getting credit needs to be improved.

According to the World Bank's *Doing Business 2020*, Luxembourg ranks 72th among 190 countries in ease of doing business in 2020 (Figure 2-2). Luxembourg is quite attractive to investors in dealing with construction permits (14<sup>th</sup>), paying taxes (23<sup>rd</sup>), trading across borders (1<sup>st</sup>) and enforcing contracts (18<sup>th</sup>), but there is still a lot of room for improvement in terms of getting credit, protecting minority investors and registering property. Throughout the entire process of investing in Luxembourg, Luxembourg is attractive to foreign investors mainly due to its simple, short time-consuming and low cost administrative procedures. Luxembourg ranks the 2<sup>nd</sup> place in EU Statistical Office's administrative efficiency ranking for EU countries.

Specifically (Table 2-1), the cost of obtaining a construction permit in Luxembourg accounts for about 0.7% of the warehouse value, which is less than 1/3 of EU countries (1.9%) or OECD high-income economies (1.5%). In terms of paying taxes, the time to comply with tax laws (55 hours) is much shorter than that of EU countries (171.5 hours) and OECD high-income economies (158.8 hours). Luxembourg ranks first in trading across borders among 190 countries, The border compliance requires almost no cost, which costs about US\$28 in the OECD high-income economy. In terms of enforcing contracts, it takes 321 days and 9.7% of claims to enforce contracts in Luxembourg, which are far below the average level of the EU and OECD high-income economies. Luxembourg's performance in getting credit is not optimistic. The strength of legal rights index values 3, which indicates that its legal system has a limited support for credit. The depth of credit information index values 0, reflecting the difficulty in obtaining large-scale and high-quality information. The credit registry coverage rate is extremely low in adult population.

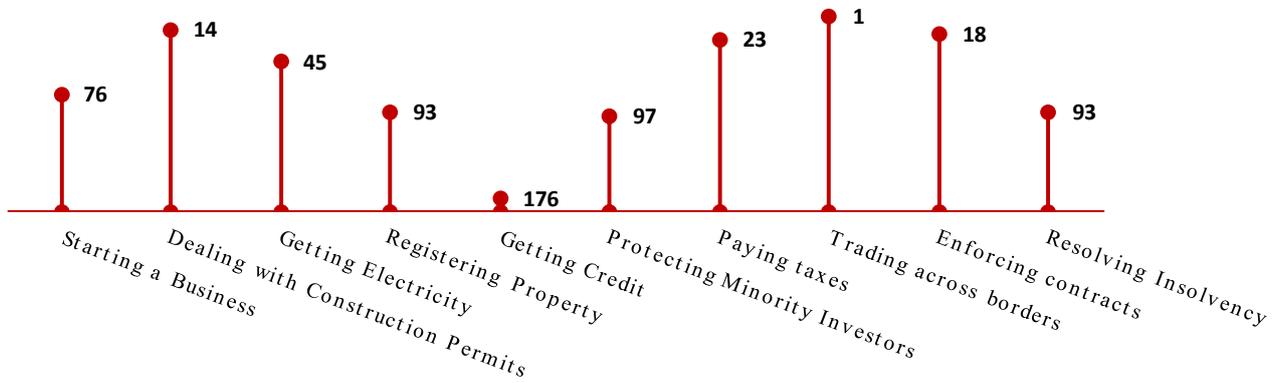
The strength of legal rights index measures whether certain features that facilitate lending exist within the applicable collateral and bankruptcy laws. The index ranges from 0 to 12. The depth of credit information index measures the coverage, scope and accessibility of credit information available through credit reporting service providers such as credit bureaus or credit registries. The index ranges from 0 to 8. The credit registry coverage reports the number of individuals and firms listed in a credit registry's database as of January 1 with information on their borrowing history from the past five years, and the number of individuals and firms that have had no borrowing history in the past five years but for which a lender requested a credit report from the registry in the previous calendar year. The number is expressed as a percentage of the adult



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population. The credit bureau coverage reports the number of individuals and firms listed in a credit bureau's database as of January 1 with information on their borrowing history from the past five years, and the number of individuals and firms that have had no borrowing history in the past five years but for which a lender requested a credit report from the bureau in the previous calendar year. The number is expressed as a percentage of the adult population.

Figure 2-2 Rankings on Doing Business Topics - Luxembourg



Data Source: World Bank, Dagong Global

**Table 2-1 Ease of Doing Business- Luxembourg 2021**

Topics	Luxembourg	European Union	OECD high income
<b>Starting a business</b>	<b>88.8</b>	<b>89.9</b>	<b>91.3</b>
Procedures (number)	5.0	5.3	4.9
Time (days)	16.5	11.9	9.2
Cost (% of income per capita)	1.6	3.1	3.0
Paid-in Minimum capital (% of income per capita)	17.2	8.1	7.6
<b>Dealing with construction permits</b>	<b>83.9</b>	<b>72.6</b>	<b>75.6</b>
Procedures (number)	11.0	13.7	12.7
Time (days)	155.0	176.5	152.3
Cost (% of warehouse value)	0.7	1.9	1.5
<b>Getting Electricity</b>	<b>84.3</b>	<b>83.4</b>	<b>85.9</b>
Procedures (number)	5.0	4.6	4.4
Time (days)	109.0	91.4	74.8
Cost (% of income per capita)	158.4	111.6	61.0
<b>Registering Property</b>	<b>63.9</b>	<b>74.3</b>	<b>77.0</b>
Procedures (number)	7.0	5.1	4.7
Time (days)	26.5	27.1	23.6
Cost (% of property value)	10.1	4.8	4.2
<b>Getting Credit</b>	<b>15.0</b>	<b>60.0</b>	<b>64.3</b>
Strength of legal rights index (0-12)	3	5.7	6.1
Depth of credit information index (0-8)	0.0	6.3	6.8
Credit registry coverage (% of adults)	0.0	-	24.4
Credit bureau coverage (% of adults)	0.0	-	66.7
<b>Protecting minority investors</b>	<b>54.0</b>	<b>67.1</b>	<b>68.2</b>
Extent of disclosure index (0-10)	6.0	-	6.5
<b>Paying Taxes</b>	<b>87.4</b>	<b>83.1</b>	<b>84.3</b>
Time (hours per year)	55.0	171.5	158.8
Payments (number per year)	23.0	10.3	10.3
<b>Trading across Borders</b>	<b>100.0</b>	<b>97.3</b>	<b>94.3</b>
Time to export (hours)	1.0	1.8	2.3
Time to import (hours)	1.0	0.6	3.4
Cost to export (USD)	0.0	17.0	33.4
Cost to import (USD)	0.0	4.5	23.5
<b>Enforcing contracts</b>	<b>73.3</b>	<b>66.5</b>	<b>67.8</b>
Time (days)	321.0	637.4	589.6
Cost (% of claim)	9.7	21.2	21.5
<b>Resolving Insolvency</b>	<b>45.5</b>	<b>70.5</b>	<b>74.9</b>
Time (years)	2.0	-	1.7
Cost (% of estate)	14.5	-	9.3
Recovery rate (%)	43.9	63.2	70.2



## II. Product Market

Strengths	
✓	Complete tax structure;
✓	Reasonable tax settings;
✓	Low tax rate;
✓	Tax incentives for foreign investors;
✓	Free domestic public transportation.
Challenges	
✓	Public utility fees are slightly higher than other EU countries;
✓	High and rising housing prices;
✓	EU tariff protection on specific products.

### Taxation System

Luxembourg has a complete tax structure with reasonable tax setting and low tax rate. The tax system mainly includes 4 direct taxes and more than 10 indirect taxes (Table 2-3). The division of tax collection and management for different tax types is clear, direct taxes are collected by the State Administration of Taxation, customs duties and commodity consumption taxes are collected by the Customs, and municipal taxes and fees such as real estate taxes are collected by the municipal government. Luxembourg is known for its "low taxes", with an average corporate tax rate of 24.94% and an average value-added tax rate of 17%. According to the World Bank's *Doing Business 2020*, Luxembourg ranks 23rd in terms of paying taxes, the total tax burden is about 20.4%, ranking 17th out of 190 countries, and also the lowest tax burden in the EU. Foreign companies and foreigners pay the same taxes as legal and natural persons in Luxembourg, and the tax burden borne by foreign companies investing in Luxembourg is at a relatively low level in the world.

Tax is the main source of Luxembourg's fiscal revenue, tax revenue may account for approximately 60% of fiscal revenue in 2020. In order to improve its domestic investment environment, on the one hand, the government has improved the competitiveness of small and medium-sized enterprises by reducing corporate tax burdens and enhancing the fairness of personal income taxes, on the other hand, the government has provided many preferential tax policies for foreign investors. First, newly established enterprises and manufacturers are allowed to reduce or exempt 25% of corporate income tax and regional government commercial tax during the first 8 years. Second, Luxembourg has formulated specific tax exemptions for different industries. For example, Luxembourg does not tax the dividends and capital gains of investment funds in its territory. Third, foreign companies investing in specific fields can enjoy corresponding preferential tax treatment after obtaining relevant licenses. For example, companies engaged in qualified audiovisual products can enjoy a 30% tax credit after obtaining an investment license issued by the government; by virtue of the venture capital license issued by the government, new production equipment or new technologies can receive a 30% tax exemption for new enterprises suitable for the economic development of Luxembourg. Last, for environmental protection investment, the enterprises can enjoy tax incentives equivalent to 25% of its related costs. In addition, Luxembourg has signed the "Double taxation avoidance treaty" with 77 countries, under which corporate tax can be reduced or exempted.

Table 2-2 Luxembourg's Basic Tax Policy

Tax Type	Tax Rate	Notes
Personal Income Tax	0-40.56%	It includes three types of taxpayers: singles, couples and families with children, and the thresholds increases sequentially.
Corporate Income Tax	24.94%	It mainly includes corporate income tax (tax rate 22.05%) and municipal business tax (6%-12%).
Value-added Tax	17%	The commodity freight between EU countries, exports of goods to countries outside the EU and international passenger transport are exempt from value-added tax.
Others	Direct taxes: personal income tax, corporate income tax, municipal commercial tax, net asset tax;	
	Indirect taxes: value-added tax, inheritance tax, insurance tax, registration tax, mortgage tax, real estate tax, stamp tax, consumption tax, vehicle tax, highway tax.	

### Commodity Market Competitiveness

According to Mercer's 26th annual Cost of Living Survey (Mercer 2020), Luxembourg ranks 83rd out of 209 cities, and the cost of living is at a medium level. Luxembourg's public utility fees are slightly higher than other EU countries, with an



## The Evaluation Report of Luxembourg's Investment Climate 2021

average monthly bills of 150-300 Euros for electricity, gas and water. The supply of water and electricity is sufficient, the water includes ordinary water and recycling water with a uniform price, and the price of electricity and gas is different according to different purposes (Table 2-3). Luxembourg's housing prices (Table 2-4) are at a relatively high level among European cities and continue to rise. As the population grows at a rate of 2.5% per year, Luxembourg's housing supply exceeds demand. Since 2010, the average price of various types of housing has been 4.7% growth rate. The cost of renting and buying a house keeps pace, and the rent for a furnished studio apartment can reach up to 50 Euros/m<sup>2</sup>. Due to the advantages of Luxembourg's steel industry and the geographical location of the center of Europe, the supply of building materials such as steel, cement and plastic steel is relatively abundant, which greatly reduces the construction costs. In addition, Luxembourg is the first country in the world to achieve free public transportation. In order to reduce traffic congestion, air pollution and reduce the burden of low-income people, the government announced the cancellation of train, tram and bus fares on February 29, 2020.

**Table 2-3 Prices of Water, Electricity and Gas-Luxembourg 2020 (EUR)**

Purposes	Water (per cubic meter)	Sewage treatment (per cubic meter)	Gasoline (liter)	Electricity (per kwh)	Gas (per mwh)
Household	2.25	1.4	1.13	0.17	51.36
commercial use				0.077	31.7

**Table 2-4 Land and housing -Luxembourg 2020**

Item	Land	Rent	House prices
Price	Private: 500 Euro/m <sup>2</sup> ; State-owned investment land: 70 Euros/m <sup>2</sup>	Average monthly rent for apartments: 18-35 Euros/m <sup>2</sup> ; single-family houses 19 Euros/m <sup>2</sup> ; Average monthly office rent: 55 Euros/m <sup>2</sup>	Average price: 4,896 euros/m <sup>2</sup> (varies due to the location and grade of the real estate)

### Tariff Policy

The EU countries implement the *Common Customs Tariff (EU)* (Table 2-5), which has unified regulations on commodity classification, tariff rates, GSP (generalized system of preferences), ROO (rules of origin) and customs valuation. As a member of the European Union, Luxembourg has the same tariff requirements as other EU countries. It does not impose tariffs on imports of goods within the European Union, and imports from outside the European Union are subject to tariffs. In order to protect the competitiveness of specific commodities in EU countries, the EU adopts measures such as surveillance, quotas, guarantees or special technical and sanitary standards for trade management. For example, 38% of agricultural products are protected by quota measures. The EU adopts import supervision for part of the steel and agricultural products from the third country, textiles and footwear from China. When shortages of materials, sensitive technologies, and primary product exports may cause damage to the Community's industry, the European Commission will adopt measures such as export quantitative restrictions to reduce the damage.

**Table 2-5 Tariff Rates of Major EU Products 2020 (%)**

Item	Food	Agricultural production	Metal	Fuel	Chemicals	Leather	Textile	Others	Total
Rate	4.4	0.4	0.7	0.3	3.4	2.1	5.3	0.1	2.5



### III. Labor Market

Strengths	
✓	High-quality, professional and international workforce;
✓	The social security taxes and fees paid by employers are more competitive than neighboring countries;
✓	Good labor relations.
Challenges	
✓	Large demand for foreign workers;
✓	High redundancy cost;
✓	Restricted conditions for the introduction of foreign workers and protection for EU workers.

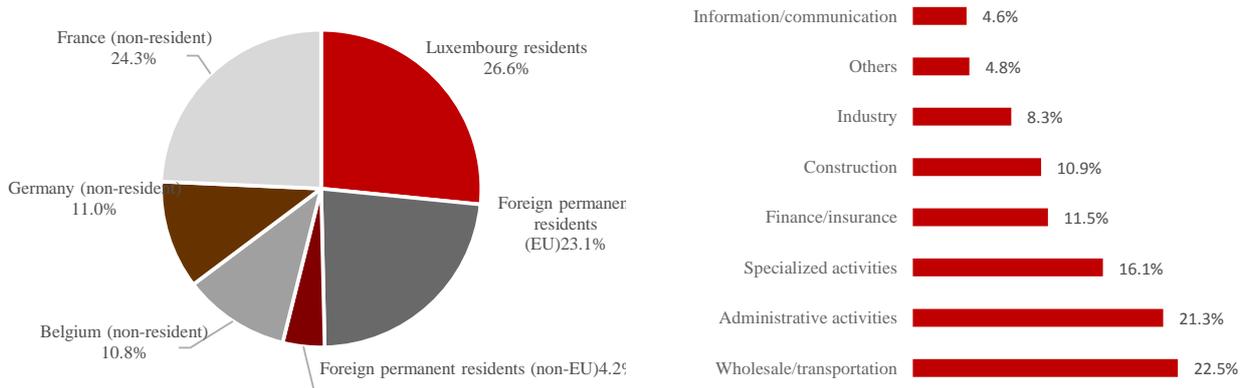
#### Labor Resources

Luxembourg has a large demand for foreign labor due to insufficient domestic labor resources. The labor market shows the coexistence of domestic labor (including foreign residents) and cross-border labor (Figure 2-3). More than 45% of Luxembourg's permanent population are foreigners, and the labor market is dominated by non-nationals. Luxembourg's total labor force in 2020 is approximately 445,000, in which foreign labor accounts for 73.4%. Foreign workers mainly come from 3 neighboring countries (France, Germany and Belgium) and other EU countries, mainly in real estate agencies, financial intermediaries, commerce, industrial manufacturing, construction, transportation and communications, while domestic workers are mainly concentrated in government departments, medical and health, education, energy and water conservancy. Luxembourg has a high-quality labor force and a complete social security system. The social security taxes and fees paid by employers are relatively competitive compared with neighboring countries, which has a positive impact on labor costs. Due to the diversified environment, Luxembourg's workforce is highly international and professional, 41% of the employees have higher education qualifications. There are 7.12 researchers per 1,000 employed persons. The number of employees in the R&D industry exceeds 5,000, which has grown by 40% in the past 15 years. According to EU statistics, Luxembourg has repeatedly ranked first in the EU's rankings on unit labor productivity. In order to maintain and further develop the skills and qualifications of the workforce, Luxembourg invests a lot of money in education, training and research every year. Luxembourg's salary is relatively high, and the government determines the minimum wage level from time to time. In January 2020, Luxembourg's minimum wage was 2,570.4 euros. The top five high-income industries in terms of average annual income are automotive, business and management, engineering technology, construction and law. Luxembourg has strict requirements on working hours. In general, It shall not exceed 8 hours a day and 40 hours a week. Employers who require employees to work overtime must report to the labor supervision department, but the working hours shall not exceed 10 hours a day and 48 hours a week. Overtime wages must be paid according to different groups of employees<sup>11</sup>. Luxembourg's social insurance includes pension insurance, medical, maternity and work-related injury insurance. According to different insurance types, employers and employees are required to pay corresponding proportions (Figure 2-6). In addition to the above favorable factors, it is noted that the redundancy cost for companies is high. According to the Global Competitiveness Report 2019 released by the World Economic Forum, Luxembourg's "redundancy cost" index item ranks 100th among 141 countries. Employees who are dismissed by the employer can receive dismissal subsidies. The redundancy cost is generally 21.6 times the employee's weekly salary. To a certain extent, the high redundancy cost limits the employer's employment flexibility.

<sup>11</sup> Overtime wages: 125% of normal hourly wages for workers, 150% for employees, and 200% for teenagers (15-18 years old). Overtime wages on Sundays are 170% of the normal hourly wage. If overtime is worked on statutory holidays, vacation compensation must be given.



Figure 2-3 The composition of Luxembourg's employment population (person) and proportion of employment (by industry, right)



Data Source: Luxembourg Statistical Office, Dagong Global

Table 2-6 Main types and rates of social insurance in Luxembourg

Type	Medical	Pension	Subordinate insurance	Work health	Accidents	Mutual insurance
Employer	In cash: 0.5% In kind: 2.8%	8%	1.4%	-	-	-
Employee	In kind: 2.8%	8%	-	0.11%	1.15% ( Depends on type of work)	Depends on type of work

#### Labor Relations

Luxembourg's complete labor laws and various trade unions provide strong protection for workers, ensuring rather good labor relations. The labor law has strict regulations on the working hours, salary, holidays, dismissal, labor unions, strikes and social security. Luxembourg has four major trade unions, the participation rate of employees in the trade union is as high as 65%, which is higher than other EU countries. In addition to actively defending labor rights and interests, the four major trade unions have their respective focuses on advancing labor equality, labor-management negotiations, safeguarding the rights of employees in the financial industry, and actively participating in political policy issues. Besides, all employees must join the Luxembourg Employees' Association. In addition to communicating with the government on overall labor rights, the association is mainly to help the foreign labor maintain their legal rights and supervise the implementation of labor contracts.

Luxembourg's employment review for foreign workers is relatively strict, and there are certain protection measures for EU workers. Except for special groups such as EU workers and diplomats, Luxembourg implements a very strict work permit approval system for foreigners. Although there is no quota, it needs to be checked at various levels and the approval time is long. For the job vacancy report provided by the employer, the labor department will give priority to job matching for EU workers. If there is no candidate in the EU worker database that meets the employer's requirements, the employer may be allowed to hire employees outside the EU.

## IV. Financial System

#### Financial Environment

Luxembourg has a sound financial system and a loose financing environment. Luxembourg is the world's third largest financial center, the most important private banking center in the Eurozone, and the world's second largest investment trust center after the United States. Luxembourg's financial services industry is developed, involving a complete range of



## The Evaluation Report of Luxembourg's Investment Climate 2021

Strengths	
✓	Developed financial system;
✓	Loose financing environment and low financing cost;
✓	Strong financial stability.
Challenges	
✓	The asset quality and profitability of the banking industry declined slightly.

products, including private banking, corporate finance, asset-backed bonds, securitization, international retirement funds, investment funds, and the export of locally developed insurance (reinsurance) products is active. As of the end of 2019, Luxembourg has 127 listed banks, 91 insurance companies and 208 reinsurance companies. The total assets of Luxembourg's banking industry reached 815.054 billion euros, which is about 11 times the total economic output. Banks established in Luxembourg are particularly skilled in private banking, life insurance and investment fund management. Luxembourg's financial industry has a relatively high degree of openness, and a series of preferential policies have been formulated to attract foreign financial companies, giving Luxembourg a superior and relaxed financial environment. Most of the world's top 500 banks have branches in Luxembourg. Luxembourg has become a hub for Chinese banks in Europe. Up to now, eight Chinese banks, including Bank of China, Industrial and Commercial Bank of China, and China Construction Bank, have established their European headquarters in Luxembourg.

Luxembourg has a well-developed securities industry. Thanks to a stable legal and regulatory system, a huge financial system and attractive tax policies, the Luxembourg Stock Exchange has a good reputation in the issuance of international debt, investment funds and global depository receipts. It is now recognized as a world leader in bond issuance, which is also known as the "barometer" of Eurobonds. At the same time, Luxembourg is the offshore RMB center in Europe, with its core business concentrated in the securities investment fields such as dim sum bonds, RMB qualified foreign investor (RQFII) funds and RMB investment funds. Particularly, Luxembourg has become the center of European dim sum bond issuance. In addition, Luxembourg is the largest investment fund center in Europe, with an asset management scale of more than 3.4 trillion euros, second only to the United States. Luxembourg funds account for 23% of global assets.

### Financing Method and Cost

Luxembourg has a well-developed banking industry, with relatively low financing costs and high convenience. As of December 2020, the consumer loan interest rate for household consumers in Luxembourg is 2.73% (1-5 years), 2.48% (over 5 years), and the housing loan interest rate 1.32% (less than 1 year); the loan interest rate for non-financial institutions 1.46% (under 1 million euros) and 1.12% (over 1 million euros). Foreign-funded enterprises and local enterprises enjoy the same treatment in terms of financing, as long as they meet certain requirements in terms of credit rating, mortgage guarantee, cash flow, integrity records, and project feasibility. Chinese-funded enterprises can use RMB to carry out cross-border trade and investment cooperation in the local area. RMB trade financing activities including import and export financing, letters of credit and other loan guarantees have been carried out smoothly in Luxembourg.

### Financial Stability

Luxembourg has a developed financial industry and a robust banking system (Table 2-7). In terms of adequacy, the capital adequacy ratio and core capital adequacy ratio of Luxembourg's banking industry in 2020 are 22.8% and 22.1%, respectively, up 0.9 and 0.7 percentage points year-on-year, which are far higher than the minimum regulatory requirements of Basel III. In terms of asset quality, due to the obvious export-oriented characteristics of Luxembourg's banking industry and mainly serving European countries, the economic downturn caused by the epidemic has caused the non-performing loan ratio of Luxembourg's banking industry to increase by 0.2 percentage points year-on-year to 0.9%, but it is still at a low level. In terms of profitability, the recession of the European economy has also led to a decline in Luxembourg's banking industry's return on equity and the ratio of income from spreads to total revenue, but the return on assets remains at the level of 0.5%. The liquidity has improved, the liquid assets to short-term liabilities of the Luxembourg banking industry in 2020 increased by 0.9 percentage points year-on-year to 34.1%. On the whole, though the asset quality and profitability of Luxembourg's banking industry have declined slightly, the overall risk is under control and the banking system remains sound.



Table 2-7 Luxembourg's Banking Industry (%)

Time	Non-performing Loan Ratio	Leverage	Return on Asset	liquid assets to short-term liabilities	Domestic credit provided by financing sector/GDP
2016	0.9	7.4	0.8	31.8	215.9
2017	0.8	8.4	0.7	31.7	200.8
2018	0.9	8.0	0.6	34.6	199.3
2019	0.7	7.4	0.5	33.2	181.3
2020e	0.9	7.5	0.5	34.1	239.4



# 03

# Investment Opportunities Focus



## Chapter 3 Investment Opportunities Focus

### I. Finance

Strengths	
✓	A number of financial businesses are in a leading position in the world;
✓	Strong financial assets;
✓	Strict supervision and law enforcement in the financial industry.
Challenges	
✓	The financial industry is highly export-oriented.

#### Own Advantages

Luxembourg is one of the international financial centers and investment fund management centers. The financial industry is highly developed. Banking and investment funds are two important parts of Luxembourg's financial industry. However, Luxembourg's foreign financial assets are higher than local financial assets, and the financial industry's export-oriented characteristics are also obvious. In the field of banking sector, Luxembourg is the operating center of many international banking institutions and has a number of cross-border financial services. At present, Luxembourg has the headquarters of about 140 international banks (including the European headquarters). The total assets of the banking industry are more than 10 times the nominal GDP, and the employees account for about 8% of the total population. The main businesses include private bank management, commercial financial services, investment fund management, wealth management and capital activities. Luxembourg's banking industry is a world leader in private banking, life insurance and investment fund management. In addition, Luxembourg is also an important gateway for banking groups outside the EU to the EU.

In terms of investment funds, Luxembourg has strong assets and is the second largest investment fund management center in the world after the United States. At the end of 2020, the net assets of Luxembourg investment funds exceeded 4.97 trillion EUR, which was about 77.5 times the nominal GDP of the year. According to the statistics from the Luxembourg Financial Promotion Agency, Luxembourg funds account for approximately 23% of global assets and 68% of European assets invested in China mainland. Luxembourg's investment funds are mainly divided into two types: Undertakings for Collective Investment in Transferable Securities (UCITS) and Alternative Funds. Funds that comply with the Undertakings for Collective Investment in Transferable Securities can be sold in all EU member states, while investment institutions under the Alternative Fund must be approved by each member country where the target market is located before they can be sold. But the Alternative Fund is more flexible in terms of the types of investable assets, available investment strategies and risk diversification regulations than the Undertakings for Collective Investment in Transferable Securities.

In addition, "Green Finance" and financial technology have also been the main directions for the development of Luxembourg's financial industry in recent years. In terms of "Green Finance", the Luxembourg Stock Exchange established a new green department-the Luxembourg Green Exchange in 2016, which is the first platform fully dedicated to green, social and sustainable financial instruments, with 133 green bonds under it and a total value of 63 billion EUR. At the same time, in order to support the relevant action plan of the Paris Agreement, the Luxembourg government and the European Investment Bank (EIB) launched a cooperative project in October 2016-the EIB Climate Finance Platform, which has already allocated more than 30 million EUR for projects that have a major impact on climate change. In terms of financial technology, Luxembourg continues to have emerging financial technology companies established since 2013. At the end of 2016, there were about 150 financial technology companies in Luxembourg, of which nearly 100 were established less than three years ago.

#### Laws and regulations

Luxembourg has strict supervision and enforcement mechanisms in the financial sector. The Currency Bureau and the Financial Supervision Commission are Luxembourg's main financial supervisory institutions. First of all, Luxembourg law stipulates that foreign financial institutions that establish branches in Luxembourg



need to meet the following requirements in terms of reputation, number of managers, minimum capital, and shareholder structure: the institution should have a good level of credibility, if there are fewer than 3 partners, a professional reputation certificate is required; the management staff of a corporate enterprise cannot be less than 2; if the applicant does not involve management funds, only a capital reserve of 123,900 EUR is required, otherwise a capital reserve of at least 495,800 EUR must be provided; the board of directors of the institution must be established in Luxembourg, and the shareholder structure must also be transparent. Second, Luxembourg law requires financial institutions to establish a strict internal supervision mechanism, including: in order to prevent financial speculation, all operations of the bank need to be reviewed; a system of separation of audit and loan should be established, and the management personnel for loan review and granting must be separated and perform their own duties. Also, a triple audit system is needed: the first is internal audit, the second is the parent company’s regular on-site audits, and the third is that an audit company registered in Luxembourg must be invited to do external audits. The external auditor is not only responsible for financial institutions, but also responsible to regulatory agencies. Third, every financial institution must submit weekly, monthly, quarterly, semi-annual and annual reports to the regulatory agency on time. At the same time, the regulatory agencies will also conduct random inspections of financial institutions. Once problems are found, they will call or send emails to the financial institutions at any time, and they will always follow the problems to the end. In addition, Luxembourg implements a policy of free exchange of foreign exchange and free flow of capital. If an institution carries out offshore fund business in Luxembourg, its investment funds can enjoy preferential policies with low fees and low taxes.

**China-Luxembourg Cooperation Potential**

China and Luxembourg have great potential for cooperation in the financial field. First of all, Luxembourg is the largest investment fund center in Europe, as well as a transit point and capital allocation center for Chinese-funded enterprises to invest in third countries in Europe. Luxembourg not only has a large number of Chinese banks, but also a number of offshore RMB deposits and loans. Luxembourg also has the most RMB-denominated investment funds. Up to now, Chinese banks such as Bank of China, Industrial and Commercial Bank of China, China Construction Bank, Agricultural Bank of China, Bank of Communications, China Merchants Bank and China Everbright Bank have European headquarters in Luxembourg. In addition, Shanghai Pudong Development Bank also has a branch in Luxembourg. Second, Luxembourg funds account for as much as one-third of the global assets invested in mainland China. At the same time, Chinese companies tend to use Luxembourg as their fund domicile in the process of "going out", and provide funds to invest in North America, Africa, the European Union and other countries and regions. Third, Luxembourg is also the main registration place of Chinese stock exchange-traded funds in Europe, ranking third in the world after Hong Kong and the United States (outside the Chinese mainland). In addition, as China’s environmental protection policies continue to increase, "green finance" has also become an important branch of the development of China’s financial industry, which is consistent with Luxembourg’s development of "green finance". The two countries have a certain potential for the cooperation in the development of "green finance".

**II. Information and Communication**

Strengths	
✓	Advanced information and communication technology;
✓	Attaches great importance to network information security;
✓	Great potential for China-Luxembourg cooperation.

**Own advantages**

Luxembourg is one of the most developed countries in Europe in terms of information technology. Artificial Intelligence (AI), 5G technology and network security are the core areas of Luxembourg’s digital strategy. First of all, Luxembourg is determined to play a pioneering role in artificial intelligence. Luxembourg is the first country in Europe to establish an artificial intelligence partnership with NVIDIA. The High Performance Computing Center of the University of



Luxembourg, the Luxembourg System Biomedicine Center, the Luxembourg Interdisciplinary Security Center, and the Luxembourg Institute of Science and Technology have close cooperation with NVIDIA. Second, in terms of 5G technology, Luxembourg has invested more funds in order to make the Grand Duchy one of the first countries in the European Union to have a 5G network covering the entire territory. At present, the Ericsson 5G core network and 5G wireless access network have been deployed in Luxembourg. Third, in terms of cyber security, the Luxembourg government believes that information security is the main factor of economic attractiveness, and improves the level of information management through cooperation with cyber insurance departments. At present, Luxembourg has formed a mature cyber security ecosystem. Finally, the Luxembourg government is also actively attracting top international Internet companies to invest in Luxembourg. At present, well-known Internet companies such as eBay, Google, Amazon, and Paypal have branches in Luxembourg. Finally, the Luxembourg government is also actively attracting top international Internet companies to invest in Luxembourg. At present, well-known Internet companies such as eBay, Google, Amazon, and Paypal have branches in Luxembourg. In addition, the radio and television industry is also one of the pillar industries of Luxembourg's economy. The European satellite company is headquartered in Luxembourg, with its satellite signal global coverage rate of 99.999%. It also has 40 satellites, which can promote the development of Luxembourg's information communication and digital economy to a certain extent.

#### **Laws and regulations**

Luxembourg is one of the countries that implement the highest data protection standards in the world, and strictly implements the European Union's laws and regulations on cyber information security. Up to now, there are more than 20 laws or guidelines related to cyber information security at the EU level, among which the more important ones are the *General Data Protection Regulation (GDPR)*, the *Regulation on the Free Flow of Non-Personal Data*, and the *Cyber Security Act*. In addition, Luxembourg also has some laws and regulations concerning data security, mainly including the *Organizational Law of the National Data Protection Commission* and the *Law on the Protection and Free Movement of Personal Data of Natural Persons*. The *General Data Protection Regulation* came into effect in May 2018, and its provisions mainly apply to the collection and processing of personal data. The main provisions of the regulations are as follows: security measures such as pseudonymization shall be adopted for personal data, the disclosure of private information such as ethnic origin, political outlook, religious beliefs, etc. is prohibited; reasonably determine the scope of data collection, for high-risk data processing activities, conduct data protection impact assessment and prior consultation; important data must be updated in time, unnecessary data must be destroyed in time; in the event of data leakage, regulatory agencies must be notified in time. If the above regulations are violated, the maximum penalty can be up to 20 million EUR or 4% of the company's global operating income in the previous year (whichever is higher). The *Regulation on the Free Flow of Non-Personal Data* was voted through in October 2018, and its provisions mainly apply to non-personal data. First of all, the regulation ensures free flow of non-personal data across borders and prohibit member states from restricting data localization. Second, when regulatory requirements are required, each member country must ensure that data can be used across borders within the EU, and the member country may impose sanctions on companies that do not provide data to the relevant agencies of the member state. Third, if a data set consists of personal data and non-personal data, this regulation only applies to the non-personal data part of the data set; if there is an inseparable connection between personal data and non-personal data in the data set, the implementation of the *EU General Data Protection Regulation* should not be hindered. The *EU Cybersecurity Act* was formally implemented in June 2019. It is one of the EU's top-level cybersecurity design laws and covers a comprehensive range of content. First of all, the act designates the European Union Network and Information Security Agency (ENISA) as the permanent EU cybersecurity agency responsible for



improving EU-level cybersecurity capabilities, developing and maintaining EU "information centers", developing expertise in the field of infrastructure network security and helping the public raise awareness of network security risks. Second, the act requires EU member countries to formulate a national strategy for cyber security, requires strengthening of cooperation among member countries and international cooperation, and requires increased funding and support for cyber security technology research and development, in order to strengthen the joint handling of cross-border information security incidents. Third, the Act also stipulates the nature of cybersecurity assessment agencies and the standards of qualified assessors. A qualified assessment agency is a third-party organization established in accordance with national laws, with legal personality, independent of the organization or information and communication technology (ICT) products, services, and processes that it assesses. Qualified assessors must have solid technical and professional training capabilities, and they must also fully understand the assessment requirements and standards.

### China-Luxembourg Cooperation Potential

Promoting the development of the digital economy and vigorously developing information and communications are in line with the development strategies of China and Luxembourg, and the two countries have extensive room for cooperation. First of all, the fight against the epidemic has brought new opportunities for the development of information and communications between China and Luxembourg. The epidemic has caused a large amount of consumer demand to shift from offline to online. At the same time, home office and video conferencing have become the mainstream office methods in various countries during the "shutdown" period. Home office and online transactions are inseparable from the support of the information and communication industry. Second, the development of information and communication is also uncertain, which is likely to bring new challenges. For example, China is currently facing issues such as personal privacy leakage and infringement in the process of developing a digital economy, and Luxembourg's mature cyber security ecosystem is of great significance to China. Third, the current coverage of digital infrastructure in China and Luxembourg is not high enough. At the same time, the governments of both countries also attach great importance to digital infrastructure. China has advantages in 5G technology and infrastructure. The two countries have great potential for cooperation in the construction and application of 5G base stations, big data and cloud computing centers.

## III. Steel Industry

Strengths	
✓	"Steel kingdom";
✓	High value-added steel products.
Challenges	
✓	Poor domestic natural resources;
✓	Import protection on steel products.

### Own Advantages

Luxembourg is known as the "steel kingdom". The steel industry is Luxembourg's traditional industry and the most important sector in its industrial field. Luxembourg has a small land area and poor natural resources. The most important mineral resources are the iron ore resources distributed in the "red soil area" in southern Luxembourg, the proven iron ore reserves were 270 million tons in 2010. However, Luxembourg is close to the Alsace-Lorraine iron mine in northern France and the Saarland coal mine in Germany, which is its natural advantage for the development of the steel industry. Since the middle of the 19th century, the steel industry has always occupied an absolute dominant position in Luxembourg's industrial structure. Especially after World War II, the steel industry has become the main driving force of Luxembourg's economic growth after the war. In 1960, the output value of the iron and steel industry accounted for 31.1% of GDP. In 1974, there were about 25,000 employees in the iron and steel industry. Luxembourg's steel industry suffered a heavy blow by the steel crisis triggered by the oil crisis in 1975. The Luxembourg steel industry had to undergo difficult transformation and reorganization, and strive to innovate and develop new technologies. Since then, the steel industry has successfully transformed and developed into the most competitive and important industrial sector. As the economic structure continues to diversify, the



proportion of the steel industry in the national economy has declined accordingly. At present, the local steel industry in Luxembourg is good at designing and manufacturing steelmaking equipment as a whole, and developing production technology program software. In 2019, Luxembourg's domestic steel production was 2.228 million tons, the output value accounted for 1.5% of GDP, and there were about 6,000 employees. ArcelorMittal, the world's largest steel group, is headquartered in Luxembourg, with an annual output of 97,300 million tons in 2019.

#### **Preferential Policies**

Luxembourg has no restrictions on foreign investment industries. However, foreign enterprises invest in certain industries need to be approved by the government. As for steel industry, the investors only need to accept general investment review as the domestic investors. It is noted that the European Union sets quota on imported steel products. The European Commission (EC) implemented clear protection measures on 26 imported steel products in February 2019, which replaced the temporary protection measures implemented since July 2018. The new annual protection quota imposed on July 1, 2019 is an increase of 5% on the average import volume of each product in 2015-2017, which has caused European steel companies to worry about the increase in the market share of imported products. At present, European steel companies are currently discussing with the European Commission, requesting strengthened protection measures on local steel companies from greater import competition.

In addition, as the European Union advocates the development of green and clean energy, the steel industry cannot enjoy Luxembourg's regional incentive policies. Investors in the steel industry must get approval by submitting an environmental assessment application to Luxembourg's environmental protection department in advance.

#### **China-Luxembourg Cooperation Potential**

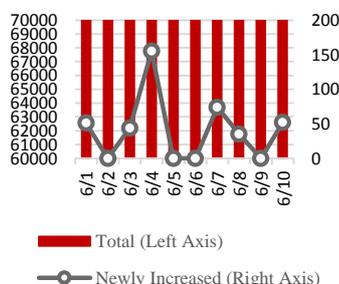
Luxembourg is actively engaged in international cooperation in iron and steel. In 2002, the formerly the world's third largest steel group Alberto merged with the French Norte Steel Company and the Spanish Aceraria Company to form the Arcelor Company, which became the world's second largest steel group. In July 2006, Arcelor and the world's largest steel company Mittal formed the world's largest steel group Arcelor-Mittal.

China-Luxembourg cooperation in iron and steel has a history of more than 100 years. It can be traced back to the end of the 19th century when Luxembourg engineers assisted China in establishing the first modern steel base-Hanyang Iron and Steel Plant. China and Luxembourg have great potential for cooperation in the steel industry. On the one hand, Luxembourg's Iron and Steel Company established a joint venture with China's Iron and Steel Company by virtue of its technological advantages. For example, Luxembourg Arcelor-Mittal Steel Company and Abelde Steel Company are deeply involved in the construction of Baosteel's steel industry; Arcelor acquired 29.97% of the shares of Hunan Valin Steel Group and established two joint ventures with Valin Group, namely Valin Arcelor-Mittal Electrical Steel Co., Ltd. and China Oriental Group. On the other hand, China imports high value-added steel products from Luxembourg. Although China's steel production has been ranked first in the world for 10 consecutive years, the share of steel products in the world market is only about 2%. Steel products emphasize high energy consumption and low value-added products. Therefore, the Chinese market has a greater demand for Luxembourg's high-value-added special steel imports.

# Special Column- the Impact of COVID- 19 Epidemic on Luxembourg's Investment Climate

## Special Column-the Impact of COVID-19 Epidemic on Luxembourg's Investment Climate

**Figure Special-1 The Latest Cumulative and Newly Confirmed Cases in Luxembourg (case)**



Resources: Baidu Fighting Pneumonia Column, Dagong Global

As of June 10, 2021, the total number of confirmed COVID-19 cases in Luxembourg is about 70,000 and the number of newly confirmed cases in a single day is less than 100. There is a significant decrease compared with the daily increase of 600-800 cases in the fourth quarter of 2020 (Figure Special-1):

### The Impact of the Epidemic on the Luxembourg's Economy

The epidemic caused a decrease in Luxembourg's economic activities in the first half of 2020, and the real GDP growth rate declined slightly, but the economic recovery in the second half of the year was obvious. First of all, the "shutdown" measures in the first half of 2020 caused Luxembourg's real consumption and real investment to decline, and the unemployment rate rose by 0.4% year-on-year. The real economic growth rate for the whole year was -1.3%, but it was still higher than other European countries such as France, Germany and Italy. Second, the epidemic caused the composite PMI index of the Eurozone to be lower than 50.0 from March to June 2020, of which it was only 13.6 in April, and the manufacturing industry was more severely affected. In 2020, the share of Luxembourg's manufacturing industry in GDP also decreased by 0.9 percentage points year-on-year to 4.1%. Third, the current cumulative number of confirmed cases in Luxembourg accounts for about 10.0% of the country's total population, which is at a high level in the world and has a certain inhibitory effect on private consumption. However, with the European Central Bank's active use of quantitative easing and other stimulus measures, the economy of the Eurozone recovered in the second half of 2020, which drove Luxembourg's service trade exports to grow rapidly. The Luxembourg's economic growth rate stopped falling in the third quarter, and turned positive in the fourth quarter, reaching 0.7%.

### The Impact of the Epidemic on the Luxembourg's Finance

In order to fight against the COVID-19 outbreak, the Luxembourg government's fiscal revenue has decreased, while expenditure has increased, and fiscal pressure has increased. On the one hand, the epidemic caused a slight decline in Luxembourg's economic growth rate in 2020, and a reduction in the government's tax sources. Luxembourg government's fiscal revenue of 2020 fell by 1.1% year-on-year, of which the second quarter fell by 10.1%. On the other hand, in response to the economic downturn and rising unemployment caused by the epidemic, the Luxembourg government has also increased expenditures on social benefits and transfers, which has increased the fiscal expenditures. In 2020, the fiscal expenditure of the Luxembourg general government increased by 14.3% year-on-year, and the fiscal balance turned from surplus to deficit.

### The Luxembourg Government's Response to the Epidemic

During the epidemic, the Luxembourg government implemented the "shutdown" measure several times and achieved certain results. First of all, during the spread of the epidemic in European countries in March 2020, the Luxembourg government announced the cancellation of all major cultural and sports activities in the next three months on March 23, including the night marathon originally scheduled for May 23. Second, in October 2020, the global epidemic rebounded. The Luxembourg government announced on October 23 that the control measures would be tighten again, including that each family can only contacted with 4 outsiders at most, a curfew will be imposed from 23:00 to 6:00 the next day, and sports competitions will be postponed. Third, as the Luxembourg's epidemic situation showed a deteriorating trend in November 2020, the government implemented more stringent prevention and control measures on November 26, including extending the curfew from 23:00 to 6 a.m. to December 15, closing bars and restaurants until December 15, closing indoor sports venues and cultural venues, closing schools, limiting the number of family gatherings and prohibit sports activities with more than 4 people and so on. Overall, the prevention and control measures have reduced the number of new cases in a single day in Luxembourg from 600-800 in November-December 2020 to the current 100-300, indicating that the domestic epidemic control has achieved phased results. The next phase of policy



The Evaluation Report of Luxembourg's Investment Climate 2021 will tend to balance the anti-epidemic and boost the economy. However, the current global epidemic situation is still not optimistic, and Luxembourg is still facing potential risks and pressures from external inputs of the epidemic.