

First Supplement
dated 1 April, 2021
to the Debt Issuance Program Prospectus dated September 10, 2020

*This document constitutes a supplement (the "**First Supplement**") within the meaning of Article 23 of Regulation (EU) 2017/1129 of the European Parliament and the Council of June 14, 2017, as amended (the "**Prospectus Regulation**") to two base prospectuses of BASF SE and BASF Finance Europe N.V.: (i) the base prospectus of BASF SE in respect of non-equity securities within the meaning of Art. 2(c) of the Prospectus Regulation ("**Non-Equity Securities**") and (ii) the base prospectus of BASF Finance Europe N.V. in respect of Non-Equity Securities (together, the "**Debt Issuance Program Prospectus**" or the "**Prospectus**").*

This First Supplement is supplemental to, and should only be read in conjunction with the Prospectus dated September 10, 2020. Therefore, with respect to future issues under the Program, references in the Final Terms to the Prospectus are to be read as references to the Prospectus as supplemented by this First Supplement.



BASF SE

(Ludwigshafen am Rhein, Federal Republic of Germany)
as Issuer and, in respect of Notes issued by
BASF Finance Europe N.V., as Guarantor

BASF Finance Europe N.V.

(Arnhem, The Netherlands)
as Issuer

EUR 20,000,000,000
Debt Issuance Program
(the "**Program**")

Each Issuer has requested the *Commission de Surveillance du Secteur Financier* of the Grand Duchy of Luxembourg (the "**CSSF**") in its capacity as competent authority under the Prospectus Regulation and the Luxembourg act relating to prospectuses for securities dated July 16, 2019 (*Loi du 16 juillet 2019 relative aux prospectus pour valeurs mobilières et portant mise en œuvre du règlement (UE) 2017/1129*, as amended - the "**Luxembourg Law**") to approve this First Supplement and to provide the competent authorities in the Federal Republic of Germany ("**Germany**"), the Republic of Austria, the Republic of Ireland and The Netherlands with a certificate of approval attesting that this First Supplement has been drawn up in accordance with the Prospectus Regulation ("**Notification**"). Each Issuer may request the CSSF to provide competent authorities in additional host Member States within the European Economic Area with a Notification.

This First Supplement has been approved by the CSSF, has been filed with said authority and will be published in electronic form on the website of the Luxembourg Stock Exchange (www.bourse.lu) and on the website of BASF Group (www.basf.com), respectively.

BASF SE ("**BASF**" or the "**Guarantor**", together with its consolidated group companies, the "**BASF Group**") with its registered office in Ludwigshafen am Rhein, Germany and BASF Finance Europe N.V. ("**BASF Finance**") with its registered office in Arnhem, The Netherlands (herein each also called an "**Issuer**" and together the "**Issuers**") are solely responsible for the information given in this First Supplement.

Each Issuer hereby declares that to the best of its knowledge the information contained in this First Supplement for which it is responsible is, to the best of its knowledge, in accordance with the facts and that this First Supplement makes no omission likely to affect its import.

Terms defined or otherwise attributed meanings in the Prospectus have the same meaning in this First Supplement.

This First Supplement should only be distributed in connection with the Prospectus. It should only be read in conjunction with the Prospectus.

To the extent that there is any inconsistency between any statement in this First Supplement and any other statement in or incorporated by reference into the Prospectus, the statements in this First Supplement will prevail.

Save as disclosed in this First Supplement, there has been no other significant new factor, material mistake or material inaccuracy relating to information included in the Prospectus which is capable of affecting the assessment of Notes issued under the Program since the publication of the Prospectus.

Each Issuer has confirmed to the Dealers that the Prospectus as supplemented by this First Supplement contains all information with regard to the Issuers and the Notes which is material in the context of the Program and the issue and offering of Notes thereunder, the information contained therein with respect to the Issuers and the Notes is accurate in all material respects and is not misleading, the opinions and intentions expressed therein with respect to the Issuers and the Notes are honestly held, there are no other facts with respect to the Issuers or the Notes the omission of which would make the Prospectus as supplemented by this First Supplement misleading in any material respect, and that all reasonable enquiries have been made to ascertain all facts and to verify the accuracy of all statements contained therein.

No person has been authorised to give any information which is not contained in, or not consistent with, the Prospectus as supplemented by this First Supplement or any other document entered into in relation to the Program or any information supplied by any Issuer or such other information as in the public domain and, if given or made, such information must not be relied upon as having been authorised by or on behalf of the Issuers, the Dealers or any of them.

To the extent permitted by the laws of any relevant jurisdiction, neither the Arranger nor any Dealer nor any other person mentioned in the Prospectus as supplemented by this First Supplement, excluding the Issuers, is responsible for the information contained in the Prospectus as supplemented by this First Supplement or any Final Terms or any other document incorporated therein by reference, and accordingly, and to the extent permitted by the laws of any relevant jurisdiction, none of these persons accepts any responsibility for the accuracy and completeness of the information contained in any of these documents.

In accordance with Article 23 paragraph 2 of the Prospectus Regulation, where the Prospectus relates to an offer of Notes to the public, investors who have already agreed to purchase or subscribe for the Notes to be issued under this Program before this First Supplement is published have the right, exercisable within three working days after the publication of this First Supplement, until 8 April, 2021, to withdraw their acceptances, provided that the significant new factor, material mistake or material inaccuracy referred to in Article 23 paragraph 1 of the Prospectus Regulation arose or was noted before the closing of the offer period or the delivery of the Notes, whichever occurs first. Investors wishing to exercise their right of withdrawal may contact the relevant Issuer.

The amendments contained in this First Supplement shall only apply to Final Terms, the date of which falls on or after the approval of this First Supplement.

The purpose of this First Supplement is to (i) update the description of the Issuers due to the publication of the audited consolidated financial statements of BASF Group for the fiscal year ended on December 31, 2020 and the audited financial statements of BASF Finance for the fiscal year ended on December 31, 2020 and further due to the occurrence of certain developments and recent events with regard to BASF Group, changes in the organizational structure of BASF and their outlook for the 2021 business year and to (ii) to amend certain sections in the Terms and Conditions of the Notes.

SUPPLEMENTAL AND REPLACEMENT INFORMATION

I. Supplemental and replacement information pertaining to BASF SE AS ISSUER AND GUARANTOR

- 1. The section "STATUTORY AUDITORS" on p. 24 of the Prospectus shall be supplemented by inserting the following after the first paragraph:**

"The following selected financial data for the year 2020 are excerpted from the Consolidated Financial Statements of BASF Group, which have been audited by KPMG AG Wirtschaftsprüfungsgesellschaft, THE SQUAIRE, Am Flughafen, 60549 Frankfurt am Main, Germany, as the independent registered public accounting firm for BASF and for which an unqualified auditor's report has been issued."

- 2. The second paragraph of the section "STATUTORY AUDITORS" on p. 24 of the Prospectus shall be supplemented by the following:**

"For further information, please see Note 1 of the Consolidated Financial Statements 2020 incorporated by reference into this Prospectus."

- 3. The first and the second table in the section "SELECTED FINANCIAL INFORMATION – BASF GROUP" on p. 24 and 25 of the Prospectus shall be supplemented by the following:**

	"January 1, 2020 – December 31, 2020	January 1, 2019 – December 31, 2019 (restated)*	January 1, 2019 – December 31, 2019
	million EUR audited	million EUR	million EUR audited
Sales**	59,149	59,316	59,316
Income from operations before depreciation and amortization (EBITDA)**	6,494	8,185	8,036
Income from operations (EBIT)**	(191)	4,052	4,052
Net income	(1,060)	8,421	8,421
Cash provided by operating activities	5,413	7,474	7,474
	December 31, 2020	December 31, 2019	
	million EUR		
Total assets		80,292	86,950
Stockholders' equity		34,398	42,350

Noncurrent liabilities	29,614	27,996
Current liabilities	16,280	16,604

* Restated figures 2019 reflecting the reclassification of non-integral equity-accounted companies; for more information, see page 4 and page 18 of the Quarterly Statement Q1 2020. (Restated figures not audited).

** Restated figures 2019; for more information, see the Notes to the Consolidated Financial Statements from page 204 onward of the BASF Report 2019."

4. The section "ALTERNATIVE PERFORMANCE MEASURES ("APM")" on p. 25 to 26 of the Prospectus shall be supplemented by the following:

- a) After the seventh paragraph on p. 25 of the Prospectus, it shall be inserted:

"The values for the respective APM for the full year 2019/2020 are shown below."

- b) After the table "Income from operations (EBIT) before special items (million EUR)" and after the table "Income from operations before depreciation and amortization (EBITDA) (million EUR)" on p. 25 to 26 of the Prospectus, it shall be inserted:

"Income from operations (EBIT) before special items (million EUR)

	January 1, 2020 – December 31, 2020	January 1, 2019 - December 31, 2019 (restated)*	January 1, 2019 – December 31, 2019
Income from operations (EBIT)	(191)	4,201	4,052
Special items	(3,751)	(442)	(484)
EBIT before special items	3,560	4,643	4,536

Income from operations before depreciation and amortization (EBITDA) (million EUR)

	January 1, 2020 – December 31, 2020	January 1, 2019 - December 31, 2019 (restated)*	January 1, 2019 – December 31, 2019
Income from operations (EBIT)	(191)	4,201	4,052
Amortization and depreciation of, and valuation allowances on, intangible assets and property, plant and equipment**	6,685	3,984	3,984
EBITDA	6,494	8,185	8,036

* Restated figures 2019 reflecting the reclassification of non-integral equity-accounted companies; for more information, see page 4 and page 18 of the Quarterly Statement Q1 2020. (Restated figures not audited).

** Excluding depreciation, amortization, impairments and reversals of impairments attributable to the discontinued construction chemicals business."

- c) After the table "Return on capital employed (ROCE) (million EUR)" and after the table "Capital employed (million EUR)" on p. 26 of the Prospectus, it shall be inserted:

"Return on capital employed (ROCE) (million EUR)

	January 1, 2020 – December 31, 2020	January 1, 2019 - December 31, 2019 (restated) *	January 1, 2019 – December 31, 2019
EBIT of BASF Group	(191)	4,201	4,052
EBIT of Other	(1,203)	(518)	(667)
EBIT of Segments	1,012	-	4,719
Cost of capital basis of segments, average of month- end figures	60,111	-	60,900
ROCE in %	1.7	-	7.7

* Restated figures 2019 reflecting the reclassification of non-integral equity-accounted companies; for more information, see page 4 and page 18 of the Quarterly Statement Q1 2020. (Restated figures not audited).

Capital employed (million EUR)

	January 1, 2020 – December 31, 2020	January 1, 2019 – December 31, 2019
Intangible assets	14,249	14,832
Property, plant and equipment	20,210	20,472
Investments accounted for using the equity method	1,395	1,527
Inventories	10,469	11,593
Accounts receivables	9,379	10,061
Current and noncurrent other receivables and other assets*	3,149	1,913
Assets of disposal groups	1,260	502
Cost of capital basis of segments, average of month-end figures	60,111	60,900
Deviation from cost of capital basis at closing rates as of December 31	(3,948)	(1,534)
Assets not included in the cost of capital	24,129	27,584
of which disposal for the construction chemical business	-	2,706
Assets of the BASF Group as of Dec 31	80,292	86,950

* incl. customer/supplier financing and other adjustments."

5. The section "HISTORICAL FINANCIAL INFORMATION" on p. 27 of the Prospectus shall be supplemented by the following:

"The audited consolidated financial statements of BASF Group for the fiscal year ending on December 31, 2020 and the auditors' report thereon, together contained in the BASF Report 2020 on pages 212-312, are incorporated by reference into this Prospectus."

6. The first paragraph of the section "GENERAL INFORMATION ABOUT BASF SE - HISTORY AND DEVELOPMENT OF THE ISSUER – Share capital" on p. 28 of the Prospectus shall be replaced by the following:

"As of the date of this Prospectus as supplemented by the First Supplement, the fully-paid share capital of BASF is unchanged since the date of the last published audited financial statements as of December 31, 2020 and amounts to EUR 1,175,652,728.32 divided into 918,478,694 registered shares with no par value (*Namensaktien*) ("BASF Share(s))."

7. The section "GENERAL INFORMATION ABOUT BASF SE - HISTORY AND DEVELOPMENT OF THE ISSUER – Acquisitions / Divestitures" on p. 29 to 30 of the Prospectus shall be supplemented by the following:

"On September 30, 2020, BASF closed the divestiture of its construction chemicals business to an affiliate of Lone Star, a global private equity firm, as agreed in December 2019. The purchase price on a cash and debt-free basis was EUR 3.17 billion. The divested construction chemicals business had around 7,500 employees and operated production sites and sales offices in more than 60 countries. It generated sales of around EUR 2.6 billion in 2019.

The BASF global pigments business which BASF agreed to sell to DIC, Tokyo, Japan on August 29, 2019 is expected to close in the first half of 2021, subject to the approval of the relevant competition authorities. The purchase price on a cash and debt-free basis is EUR 1.15 billion. The assets and liabilities to be divested were reclassified to a disposal group in the Dispersions & Pigments division as of this date."

8. The section "GENERAL INFORMATION ABOUT BASF SE - HISTORY AND DEVELOPMENT OF THE ISSUER – Capitalization and financial indebtedness" on p. 30 to 33 of the Prospectus shall be supplemented by the following:

"The following table sets forth the consolidated capitalization of BASF Group as of December 31, 2020 and December 31, 2019:

Stockholders' equity and liabilities (million EUR)	December 31, 2020	December 31, 2019
Stockholders' equity		
Subscribed capital	1,176	1,176
Capital reserves	3,115	3,115
Retained earnings	37,911	42,056
Other comprehensive income	(8,474)	(4,850)
Non-controlling interest	670	853
Noncurrent liabilities		
Provisions for pensions and similar obligations	8,566	7,683
Other provisions	1,484	1,340
Deferred tax liabilities	1,477	2,280
Tax provisions*	587	516
Financial indebtedness	15,819	15,015
Other liabilities	1,711	1,678
Current liabilities		
Accounts payable, trade	5,291	5,087

Provisions	2,825	2,938
Tax liabilities	988	756
Financial indebtedness	3,395	3,362
Other liabilities	3,440	3,427
Liabilities of disposal groups	341	1,034
Total stockholders' equity and liabilities	80,292	86,950

*Tax provisions are reported separately as of January 1, 2020. Figure for 2019 restated.

Contingent liabilities (million EUR)	December 31, 2020	December 31, 2019
Bills of exchange	2	6
Guarantees	347	447
Warranties	79	65
Collateral granted on behalf of third-party liabilities	-	1
Total	428	519

Consolidated statement of comprehensive income

Income and expense items (million EUR)	January 1, 2020 – December 31, 2020	January 1, 2019 – December 31, 2019
Income after taxes	(1,075)	8,491
Remeasurement of defined benefit plans	(1,376)	(706)
Deferred taxes on non-reclassifiable gains/losses	422	359
Non-reclassifiable gains/losses after taxes from equity-accounted investments	(19)	(46)
Non-reclassifiable gains/losses	(973)	(393)
Unrealized gains/losses from fair value changes in securities measured at FVOCI*	-	-
Reclassifications of realized gains/losses recognized in the income statement	-	-
Fair value changes in securities measured at FVOCI, net	-	-
Unrealized gains/losses from cash flow hedges	14	25
Reclassifications of realized gains/losses recognized in the income statement	65	54
Fair value changes in derivatives designated as cash flow hedges, net	79	79
Unrealized gains/losses from currency translation	(1,612)	481
Reclassification of realized gains/losses from currency translation recognized in the statement of income	71	834
Deferred taxes for gains/losses that can be reclassified	(5)	(28)
Reclassifiable gains/losses after taxes from equity-accounted shareholdings	(1,286)	(9)

Other comprehensive income after tax	(3,726)	964
Comprehensive income	(4,801)	9,455

* FVOCI: fair value through other comprehensive income"

9. The first paragraph of the section "ORGANIZATIONAL STRUCTURE – Management and Supervisory Bodies - Board of Executive Directors" on p. 34 and 35 of the Prospectus shall be replaced by the following:

"The number of members of the Board of Executive Directors is determined by the Supervisory Board, subject to a minimum of two members. As of the date of this Prospectus as supplemented by the First Supplement, BASF's Board of Executive Directors temporarily has seven members which will be reduced to six members with the departure of Wayne T. Smith as of May 31, 2021."

10. The table in the section "ORGANIZATIONAL STRUCTURE - Management and Supervisory Bodies - Board of Executive Directors" and the paragraph prior to that table on p. 35 of the Prospectus shall be replaced by the following:

"The following table shows the current members of BASF's Board of Directors effective as of the date of this First Supplement, and a list of responsibilities of outside directorships:

Name	Main Area of Responsibility	Membership on supervisory and advisory boards
Dr. Martin Bruder Müller	Chairman of the Board of Executive Directors, responsible for Corporate Legal, Compliance, Tax & Insurance; Corporate Development; Corporate Communications & Government Relations; Corporate Human Resources; Corporate Investor Relations	-
Dr. Hans-Ulrich Engel	Vice Chairman of the Board and Chief Financial Officer, responsible for Corporate Finance; Corporate Audit; Global Business Services; Global Digital Services; Global Procurement	Deputy Chairman of the Supervisory Board of Wintershall Dea, Chairman of the Supervisory Board of Wintershall AG and member of the Shareholders' Committee of Nord Stream AG
Michael Heinz	Responsibilities until May 31, 2021: Industrial Relations Director and Site Director of Ludwigshafen, responsible for Global Engineering Services, Corporate Environmental Protection, Health & Safety, European Site & Verbund Management, Region South America	Member of the Supervisory Board of Wintershall Dea and Chairman of the Administrative Council of BASF Antwerpen N.V.

	<p>Responsibilities from June 1, 2021: Monomers, Performance Materials, Petrochemicals, Intermediates, Region North America and South America</p>	
Dr. Markus Kamieth	<p>Responsible for Catalysts, Coatings, Dispersions & Pigments, Performance Chemicals, Greater China, South & East Asia, ASEAN & Australia/New Zealand, Mega Projects Asia</p>	<p>Member of the Board of Directors of Solenis UK International Ltd.</p>
Dr. Melanie Maas-Brunner (Since February 1, 2021)	<p>Responsibilities until May 31, 2021: Advanced Materials & Systems Research, Bioscience Research, Process Research & Chemical Engineering, BASF New Business Responsibilities from June 1, 2021: Corporate Environmental Protection, Health & Safety, European Site & Verbund Management, Global Engineering Services, Advanced Materials & Systems Research, Bioscience Research, Process Research & Chemical Engineering, BASF New Business</p>	
Saori Dubourg	<p>Responsible for Agricultural Solutions, Care Chemicals, Nutrition & Health, Region Europe</p>	<p>Member of the Supervisory Board of Wintershall Dea</p>
Wayne T. Smith	<p>Responsibilities until May 31, 2021: Monomers; Performance Materials; Petrochemicals; Intermediates; Process Research & Chemical Engineering (until January 31, 2021); Market & Business Development, Site & Verbund Management North America; Country Platforms North America</p>	<p>Member of the Board of Directors of Inter Pipeline Ltd."</p>

11. The second paragraph of the section "ORGANIZATIONAL STRUCTURE – Management and Supervisory Bodies – Supervisory Board" on p. 36 of the Prospectus shall be replaced by the following:

"At the end of the Supervisory Board meeting on July 22, 2020, Dr. Alexander C. Karp, CEO Palantir Technologies Inc., resigned from his position as a member of BASF SE's Supervisory Board for professional reasons.

To replace Dr. Karp, Liming Chen, 60, chairman of IBM Greater China Group joined the Supervisory board by way of resolution dated Oct. 8, 2020., The Supervisory Board intends to propose Chen, the Supervisory Board member now appointed by the court, to the next Annual Shareholders' Meeting of BASF SE on April 29, 2021, for election for the Supervisory Board's remaining term of office, which ends on the conclusion of the Annual Shareholders' Meeting in 2024."

12. The table in the section "ORGANIZATIONAL - STRUCTURE – Management and Supervisory Bodies – Supervisory Board" on p. 36-37 of the Prospectus shall be replaced by the following:

"Name	Main Area of Responsibility
Dr. Kurt Bock Chairman	Chairman of the Supervisory Board of BASF SE
Sinischa Horvat ⁽¹⁾ Vice Chairman	Chairman of the BASF Europe Works Council; Chairman of the Joint Works Council of BASF Group; Chairman of the Works Council of the Ludwigshafen site of BASF SE
Franz Fehrenbach Vice Chairman	Chairman of the supervisory board of Robert Bosch GmbH
Prof. Dr. Thomas Carell	Professor for Organic Chemistry at Ludwig Maximilians University Munich
Tatjana Diether ⁽¹⁾	Member of the Works Council of BASF SE, Ludwigshafen Site and of the BASF Works Council Europe
Dame Alison J. Carnwath DBE	Senior Advisor Evercore Partners
Liming Chen	Chairman of IBM Greater China Group
Waldemar Helber ⁽¹⁾	Deputy Chairman of the Works Council of BASF SE, Ludwigshafen Site
Roland Strasser ⁽¹⁾	Regional Manager of the Rhineland-Palatinate/Saarland branch of IG BCE
Anke Schäferkordt	Member of the supervisory board of Serviceplan Group Management SE Member of supervisory bodies of Wayfair Inc.
Denise Schellemans ⁽¹⁾	Full-time trade union delegate
Michael Vassiliadis ⁽¹⁾	Chairman of the Mining, Chemical and Energy Industries Union

(1) Employee representative"

13. The section "ORGANIZATIONAL STRUCTURE - Employees" on p. 37 of the Prospectus shall be supplemented by the following:

"As of December 31, 2020, BASF Group employed a workforce of 110,302 employees worldwide. About 47% of the workforce is based in Germany. In 2020, BASF Group spent EUR 10,576 million on wages and salaries, social security contributions and expenses for pensions and assistance. Personnel expenses reduced by 3.2% compared to the previous year. The decrease in personnel expenses was primarily due to lower bonus provisions and the lower average number of employees which resulted, in particular, from the divestiture of the construction chemicals business. A higher wage and salary level as well as higher pension expenses because of increased service costs had an offsetting effect.

The following table details BASF Group's workforce on a regional basis as of December 31, 2020 and 2019, respectively:

	2020	2019
Europe	68,849	72,153
Thereof Germany	51,961	54,028
North America	16,948	19,355
Asia Pacific	17,753	18,634
South America, Africa, Middle East	6,752	7,486
Total	110,302	117,628"

14. The section "ORGANIZATIONAL STRUCTURE – Credit Ratings " on p. 37 of the Prospectus shall be replaced by the following:

"Standard & Poor's Global Ratings ("Standard & Poor's")^{1,5} has assigned the long-term credit rating "A"^{3,4} (outlook negative) to BASF. Moody's Investors Service Ltd. ("Moody's")^{2,5} has assigned an "A3"^{4,6} rating (stable). Fitch Ratings ("Fitch")^{7,5} has assigned an "A"^{8,4} rating (stable)."

15. The section "SIGNIFICANT CHANGES/TREND INFORMATION" on p. 59 of the Prospectus shall be replaced by the following:

"There have been no significant changes in the financial position of BASF Group since December 31, 2020. There has been no material adverse change in the prospects of BASF Group since the date of the last published audited financial statements as of December 31, 2020. There has not been any significant change in the financial performance of BASF Group since December 31, 2020, the end of the last financial period for which financial information has been published, to the date of the Prospectus as supplemented by this First Supplement."

16. The heading of the section "OUTLOOK " on p. 59 of the Prospectus shall be supplemented by the following:

¹ Standard & Poor's is established in the European Community and is registered under Regulation (EC) No 1060/2009 of the European Parliament and of the Council of September 16, 2009 on credit rating agencies, as amended (the "CRA Regulation").

² Moody's is established in the European Community is registered under the CRA Regulation.

³ Standard & Poor's has assigned the long-term credit rating A (outlook negative) to BASF, which indicates that the Issuer has a strong capacity to meet its financial commitments but is somewhat susceptible to adverse economic conditions and change in circumstances. The "negative" outlook reflects that Standard & Poor's may lower the rating in the next 6 to 24 months.

⁴ A credit rating assesses the creditworthiness of an entity and informs an investor therefore about the probability of the entity being able to redeem invested capital. It is not a recommendation to buy, sell or hold securities and may be revised or withdrawn by the rating agency at any time.

⁵ The European Securities and Markets Authority publishes on its website (<https://www.esma.europa.eu/supervision/credit-rating-agencies/risk>) a list of credit rating agencies registered in accordance with the CRA Regulation. That list is updated within five working days following the adoption of a decision under Article 16, 17 or 20 CRA Regulation. The European Commission shall publish that updated list in the Official Journal of the European Union within 30 days following such update.

⁶ Moody's has assigned an "A3" rating (stable) which means that obligations of the Issuer are judged to be upper-medium grade and are subject to low credit risk and that the Issuer has a strong ability to repay short-term debt obligations.

⁷ Fitch is established in the European Community and is registered under the CRA Regulation.

⁸ Fitch has assigned an "A" rating (stable) which denotes a high credit quality. The capacity for payment of financial commitments is considered strong. This capacity may, nevertheless, be more vulnerable to adverse business or economic conditions than is the case for higher ratings

"BASF expects the global economy to recover in 2021 after the sharp downturn resulting from the coronavirus pandemic. However, uncertainty about future developments remains exceptionally high. BASF's forecast therefore includes wide ranges to account for the possibility of significant disruptions to global supply chains and negative effects on the entire economy. At the same time, BASF is confident that without such negative impacts, BASF will be able to achieve earnings at the upper end of the forecast range. BASF's forecast assumes growth in our customer industries. For the automotive industry in particular, BASF is forecasting significant production growth compared with 2020. The global economy should see significant growth of 4.3% compared with 2020 (-3.7%). Global chemical production is expected to expand by 4.4%, well above the prior-year level (2020: -0.4%). BASF anticipates an average oil price of USD 50 for a barrel of Brent crude and an exchange rate of USD 1.18 per euro.

Based on these assumptions, BASF aims to increase its sales to between EUR 61 billion and EUR 64 billion (2020: EUR 59,149 million). The BASF Group's income from operations (EBIT) before special items is expected to be between EUR 4.1 billion and EUR 5.0 billion (2020: EUR 3,560 million). The return on capital employed (ROCE) should be between 8.0% and 9.2% (2020: 1.7%)."

17. The section "RECENT EVENTS" on p. 60 to 61 of the Prospectus shall be supplemented by the following:

"On September 30, 2020, BASF completed the divestiture of its construction chemicals business to an affiliate of Lone Star, a global private equity firm, as agreed in December 2019. The purchase price on a cash and debt-free basis was EUR 3.17 billion.

On October 9, 2020, having withdrawn its outlook for the 2020 business year on April 29, 2020, BASF gave a new outlook: Sales of EUR 57 billion to €58 billion in 2020 as well as EBIT before special items of between EUR 3.0 billion and EUR 3.3 billion.

On December 17, 2020, BASF appointed Dr. Melanie Maas-Brunner as a member of the Board of Executive Directors while also announcing the departure of Wayne T. Smith as of May 31, 2021.

On February 26, 2020, BASF published its annual report which included final year results for 2020 as well as the BASF outlook for 2021.

On February 26, 2020, a dividend of EUR 3.30 per share as proposed by the Board of Executive Directors and Supervisory Board for the 2020 business year was announced. This dividend will be voted on by shareholders at the Annual Shareholders Meeting on April 29, 2021.

On February 26, 2020, an update on the closure of the BASF Pigments business to the Japanese fine chemicals company DIC was given. BASF expect the closure to occur in the first half of 2021, subject to the pending approval of the U.S. competition authorities."

II. Supplemental and replacement information pertaining to BASF FINANCE EUROPE N.V. AS ISSUER

1. The first paragraph of the section "STATUTORY AUDITORS" on p. 62 of the Prospectus shall be replaced by the following:

"The independent auditors of BASF Finance are BDO Audit and Assurance B.V., P.O. Box 71730, 1008 DE Amsterdam, Krijgsman 9, 1186 DM Amstelveen, The Netherlands. They are members of

The Netherlands Institute of Chartered Accountants (*Nederlandse Beroepsorganisatie van Accountants*). They have audited the financial statements of BASF Finance for the years 2020 and 2019 which was prepared in accordance with Dutch GAAP, and have issued an unqualified opinion."

2. The section "SELECTED FINANCIAL INFORMATION" on p. 62 and 63 of the Prospectus shall be supplemented by the following:

"The financial information below was extracted from the audited financial statements of BASF Finance for the years ended December 31, 2020 and 2019. All statements have been prepared in accordance with Dutch GAAP.

	January 1, 2020 – December 31, 2020	January 1, 2019 – December 31, 2019
	thousand EUR	thousand EUR
Sales	-	-
Financial result	(2,067)	(2,241)
Other operating expenses	211	174
Tax on result from ordinary activities	564	547
Net income	(1,714)	(1,868)
	December 31, 2020	December 31, 2019
	thousand EUR	thousand EUR
Total assets	680,054	1,695,729
Stockholders' equity	8,637	10,351
Provisions	-	-
Noncurrent liabilities	658,725	681,997
Current liabilities	12,692	1,003,381

	for the Financial Year ended Dec. 31	
EUR thousand	2020	2019
Cash flows from operating activities	989	534
Cash flows from financing activities	(1,000,000)	(1,650,000)
Cash flows from investing activities	1,000,000	1,650,000"

3. The section "HISTORICAL FINANCIAL INFORMATION" on p. 63 of the Prospectus shall be supplemented by the following:

"The audited financial statements of BASF Finance for the fiscal year ending on December 31, 2020 and the auditor's report thereon, contained in the Financial Report on pages 9-33, are incorporated by reference into this Prospectus."

4. The section "SIGNIFICANT CHANGES/TREND INFORMATION" on p. 64 of the Prospectus shall be replaced by the following:

"There have been no significant changes in the financial position of BASF Finance since December 31, 2020. There has been no material adverse change in the prospects of BASF Finance since the date of the last published audited financial statements as of December 31, 2020. No developments are currently foreseen that are reasonably likely to have a material negative effect on BASF Finance's prospects. There has not been any significant change in the financial performance of BASF Group since

December 31, 2020, the end of the last financial period for which financial information has been published, to the date of the Prospectus as supplemented by the First Supplement."

III. Replacement information pertaining to the section "TERMS AND CONDITIONS OF THE NOTES (ENGLISH LANGUAGE VERSION)"

1. Paragraph ~~[(9)]~~ under the heading "OPTION I – Terms and Conditions that apply to Notes with fixed interest rates – § 5 REDEMPTION" on p. 77 and 78 of the Prospectus shall be replaced by the following:

"If the Notes are subject to Early Redemption at the Option of the Issuer upon publication of a Transaction Trigger Notice at the Trigger Call Redemption Amount the following applies

~~[(9)]~~ *Early Redemption at the Option of the Issuer upon publication of a Transaction Trigger Notice.*

- (a) The Issuer may, upon a Transaction Trigger Notice given in accordance with clause (b), redeem all or some only of the Notes at any time at the Trigger Call Redemption Amount together with accrued interest, if any, to (but excluding) the respective redemption date. "Trigger Call Redemption Amount" means **[Trigger Call Redemption Amount]**.

"Transaction Trigger Notice" means a notice that the Transaction Trigger Event has occurred. The Transaction Trigger Notice can only be given within 30 days after the Transaction Trigger Event has occurred and only if the Transaction Trigger Event has occurred within the Transaction Trigger Event Period.

"Transaction Trigger Event Period" means the period from **[issue date]** to **[end of period date]**.

"Transaction" means **[description of transaction in respect of which the Notes are issued for refinancing purposes or in relation to which the occurrence of a Transaction Trigger Event shall give rise to the redemption right]**.

"Transaction Trigger Event" means **[Transaction has been terminated prior to completion or that the Transaction will not be settled for any reason whatsoever or that the Issuer has publicly stated that it no longer intends to pursue the Transaction.]****[description of the event in the context of the Transaction the occurrence of which shall give rise to a redemption right]**.

[If Notes are subject to Early Redemption at the Option of the Holder the following applies: The Issuer may not exercise such option in respect of any Note which is the subject of the prior exercise by the Holder thereof of its option to require the redemption of such Note under subparagraph ~~[(6)]~~ of this § 5.]

- (b) The Transaction Trigger Notice shall be given by the Issuer to the Holders of the Notes in accordance with § 13. Such notice shall specify:
- (i) the Series of Notes subject to redemption;

- (ii) whether such Series is to be redeemed in whole or in part only and, if in part only, the aggregate principal amount of the Notes which are to be redeemed; and
 - (iii) the respective redemption date, which shall be not less than 30 days nor more than 60 days after the date on which notice is given by the Issuer to the Holders.
- (c) In the case of a partial redemption of Notes, Notes to be redeemed shall be selected in accordance with the rules of the relevant Clearing System. **[In the case of Notes in NGN form the following applies:** Such partial redemption shall be reflected in the records of CBL and Euroclear as either a pool factor or a reduction in the aggregate principal amount, at the discretion of CBL and Euroclear.]"

2. Paragraph [(4)] under the heading "OPTION II – Terms and Conditions that apply to Notes with floating interest rates - § 5 – REDEMPTION" on p. 97 of the Prospectus shall be replaced by the following:

"If the Notes are subject to Early Redemption at the Option of the Issuer at Specified Call Redemption Amounts the following applies

[(4)] Early Redemption at the Option of the Issuer.

- (a) The Issuer may, upon notice given in accordance with clause (b), redeem all or some only of the Notes on the Interest Payment Date following [number] years after the Interest Commencement Date **[in the case that the Notes may also be redeemed on any Interest Payment Date thereafter, insert:** and on each Interest Payment Date thereafter] ([each a] [the] "Call Redemption Date") at the [respective] Call Redemption Amount[s] set forth below together with accrued interest, if any, to (but excluding) the respective Call Redemption Date.

[Call Redemption Date[s]]	[Call Redemption Amount [s]]
[_____]	[_____]
[_____]	[_____]

- (b) Notice of redemption shall be given by the Issuer to the Holders of the Notes in accordance with § 13. Such notice shall specify:
- (i) the Series of Notes subject to redemption;
 - (ii) whether such Series is to be redeemed in whole or in part only and, if in part only, the aggregate principal amount of the Notes which are to be redeemed; and
 - (iii) the Call Redemption Date, which shall be not less than 30 days nor more than 60 days after the date on which notice is given by the Issuer to the Holders.
- (c) In the case of a partial redemption of Notes, Notes to be redeemed shall be selected in accordance with the rules and procedures of the relevant Clearing System. **[In the case of Notes in NGN form the following applies:** Such partial redemption shall be reflected in the records of CBL and Euroclear as either a pool factor or a reduction in aggregate principal amount, at the discretion of CBL and Euroclear.]"

IV. Replacement information pertaining to the section "TERMS AND CONDITIONS OF THE NOTES (GERMAN LANGUAGE VERSION)"

1. Paragraph ~~[[9]]~~ under the heading "OPTION I – Anleihebedingungen für Schuldverschreibungen mit fester Verzinsung - § 5 – RÜCKZAHLUNG" on p. 120 and 121 of the Prospectus shall be replaced by the following:

"Falls die Emittentin das Wahlrecht hat, die Schuldverschreibungen vorzeitig nach Veröffentlichung einer Transaktions-Mitteilung zum Ereignis-Wahlrückzahlungsbetrag zurückzuzahlen, ist folgendes anwendbar

~~[[9]]~~ Vorzeitige Rückzahlung nach Wahl der Emittentin nach Veröffentlichung einer Transaktions-Mitteilung.

(a) Die Emittentin kann, nachdem sie gemäß Absatz (b) mittels einer Transaktions-Mitteilung gekündigt hat, die Schuldverschreibungen insgesamt oder teilweise am jeweiligen Rückzahlungstag zum Ereignis-Wahl-Rückzahlungsbetrag nebst etwaigen bis zum jeweiligen Rückzahlungstag (ausschließlich) aufgelaufener Zinsen zurückzahlen. "Ereignis-Wahl-Rückzahlungsbetrag" bezeichnet **[Ereignis-Wahl-Rückzahlungsbetrag]**.

"**Transaktions-Mitteilung**" bezeichnet eine Mitteilung, dass das Transaktionsauslösende Ereignis eingetreten ist. Die Transaktions-Mitteilung kann nur innerhalb von 30 Tagen nach dem Eintreten des Transaktionsauslösenden Ereignisses und nur, wenn das Transaktionsauslösende Ereignis innerhalb der Transaktionsauslösenden Ereignisfrist eingetreten ist, zugestellt werden.

"**Transaktionsauslösende Ereignisfrist**" bezeichnet den Zeitraum vom **[Begebungstag]** bis zum **[Datum Ende des Zeitraums]**.

"**Transaktion**" bezeichnet **[Beschreibung der Transaktion bezüglich derer die Schuldverschreibungen zu Finanzierungszwecken begeben wurden oder in Bezug auf die das Eintreten eines Transaktionsauslösenden Ereignisses das Kündigungsrecht auslöst]**.

"**Transaktionsauslösendes Ereignis**" bedeutet **[die Transaktion wurde vor ihrem Abschluss beendet oder die Transaktion wird aus irgendeinem anderen Grund nicht abgewickelt oder die Emittentin hat öffentlich erklärt, dass sie nicht länger beabsichtigt, die Transaktion zu verfolgen] [Beschreibung des Ereignisses im Zusammenhang mit der Transaktion, dessen Eintritt ein Kündigungsrecht auslöst]**.

[Falls der Gläubiger ein Wahlrecht hat, die Schuldverschreibungen vorzeitig zu kündigen, ist folgendes anwendbar: Der Emittentin steht dieses Wahlrecht nicht in Bezug auf eine Schuldverschreibung zu, deren Rückzahlung bereits der Gläubiger in Ausübung seines Wahlrechts nach Absatz ~~[[6]]~~ dieses § 5 verlangt hat.]

(b) Die Transaktions-Mitteilung ist den Gläubigern der Schuldverschreibungen durch die Emittentin gemäß § 13 bekanntzugeben. Sie beinhaltet die folgenden Angaben:

(i) die zurückzuzahlende Serie von Schuldverschreibungen;

- (ii) eine Erklärung, ob diese Serie ganz oder teilweise zurückgezahlt wird und im letzteren Fall den Gesamtnennbetrag der zurückzuzahlenden Schuldverschreibungen; und
 - (iii) den jeweiligen Rückzahlungstag, der nicht weniger als 30 Tage und nicht mehr als 60 Tage nach dem Tag der Kündigung durch die Emittentin gegenüber den Gläubigern liegen darf.
- (c) Wenn die Schuldverschreibungen nur teilweise zurückgezahlt werden, werden die zurückzuzahlenden Schuldverschreibungen in Übereinstimmung mit den Regeln des betreffenden Clearing Systems ausgewählt. **[Falls die Schuldverschreibungen in Form einer NGN begeben werden, ist folgendes anwendbar:** Die teilweise Rückzahlung wird in den Registern von CBL und Euroclear nach deren Ermessen entweder als Pool-Faktor oder als Reduzierung des Gesamtnennbetrags wiedergegeben.]"

2. Paragraph [(4)] under the heading "OPTION II – Anleihebedingungen für Schuldverschreibungen mit variabler Verzinsung - § 5 – RÜCKZAHLUNG" on p. 142 of the Prospectus shall be replaced by the following:

"Falls die Emittentin das Wahlrecht hat, die Schuldverschreibungen vorzeitig zu festgelegten Wahl-Rückzahlungsbeträgen (Call) zurückzuzahlen, ist Folgendes anwendbar

[[(4)] Vorzeitige Rückzahlung nach Wahl der Emittentin.

- (a) Die Emittentin kann, nachdem sie gemäß Absatz (b) gekündigt hat, die Schuldverschreibungen insgesamt oder teilweise am **[Zahl]** Jahre nach dem Verzinsungsbeginn folgenden Zinszahlungstag **[Für den Fall, dass die Schuldverschreibungen auch zu jedem darauffolgenden Zinszahlungstag gekündigt werden können, einfügen:** und danach an jedem darauf folgenden Zinszahlungstag] ([jeder ein] [der] "**Wahl-Rückzahlungstag (Call)**") zum/zu den Wahl-Rückzahlungsbetrag/beträgen (Call), wie nachstehend angegeben, nebst etwaigen bis zum jeweiligen Wahl-Rückzahlungstag (Call) (ausschließlich) aufgelaufenen Zinsen zurückzahlen.

[Wahl-Rückzahlungstag[e]]	[Wahl-Rückzahlungs[betrag][beträge]
[_____]	[_____]
[_____]	[_____]

- (b) Die Kündigung ist den Gläubigern der Schuldverschreibungen durch die Emittentin gemäß § 13 bekannt zu geben. Sie beinhaltet die folgenden Angaben:
- (i) die zurückzuzahlende Serie von Schuldverschreibungen;
 - (ii) eine Erklärung, ob diese Serie ganz oder teilweise zurückgezahlt wird und im letzteren Fall den Gesamtnennbetrag der zurückzuzahlenden Schuldverschreibungen; und
 - (iii) den Wahl-Rückzahlungstag (Call), der nicht weniger als 30 Tage und nicht mehr als 60 Tage nach dem Tag der Kündigung durch die Emittentin gegenüber den Gläubigern liegen darf.
- (c) Wenn die Schuldverschreibungen nur teilweise zurückgezahlt werden, werden die zurückzuzahlenden Schuldverschreibungen in Übereinstimmung mit den Regeln des betreffenden Clearing Systems ausgewählt. **[Falls die Schuldverschreibungen in Form einer NGN begeben werden, ist Folgendes anwendbar:** Die teilweise Rückzahlung wird in den Registern von

CBL und Euroclear nach deren Ermessen entweder als Pool-Faktor oder als Reduzierung des Gesamtnennbetrags wiedergegeben.]]"

V. Replacement information pertaining to the section "FORM OF FINAL TERMS"

The whole section "Early Redemption – Vorzeitige Rückzahlung" under the heading "REDEMPTION (§ 5) - RÜCKZAHLUNG (§ 5)", sub-heading on page 163 and 164 of the Prospectus shall be replaced by the following:

"Early Redemption

Vorzeitige Rückzahlung

Early Redemption for Reasons of a Change of Control <i>Vorzeitige Rückzahlung aufgrund eines Kontrollwechsels</i>	[Yes/No] [Ja/Nein]
Early Redemption at the Option of the Issuer at Specified Call Redemption Amount(s) ⁽²⁾ <i>Vorzeitige Rückzahlung nach Wahl der Emittentin zu festgelegtem(n) Wahlrückzahlungsbetrag/-beträgen (Call)</i>	[Yes/No] [Ja/Nein]
<input type="checkbox"/> Specified Call Redemption Date(s) <i>festgelegte Wahlrückzahlungstag(e) (Call)</i>	[]
<input type="checkbox"/> Specified Call Redemption Amount(s) <i>festgelegte Wahlrückzahlungsbetrag/-beträge (Call)</i>	[]
Early Redemption at the Option of the Issuer at Early Redemption Amount ⁽³⁾ <i>Vorzeitige Rückzahlung nach Wahl der Emittentin zum Vorzeitigen Rückzahlungsbetrag</i>	[Yes/No] [Ja/Nein]
Early Redemption at the Option of the Issuer at Specified Call Redemption Amount ⁽⁴⁾ <i>Vorzeitige Rückzahlung nach Wahl der Emittentin zu festgelegtem(n) Wahlrückzahlungsbetrag/-beträgen (Call)</i>	[Yes/No] [Ja/Nein]
<input type="checkbox"/> Interest payment date [number] years after the Interest Commencement Date and each Interest Payment Date thereafter <i>Zinszahlungstag [Zahl] Jahre nach dem Verzinsungsbeginn und an jedem darauf folgenden Zinszahlungstag</i>	
Early Redemption at the Option of a Holder at Specified Put Redemption Amount(s) ⁽⁵⁾ <i>Vorzeitige Rückzahlung nach Wahl des Gläubigers zu festgelegtem(n) Wahlrückzahlungsbetrag/-beträgen (Put)</i>	[Yes/No] [Ja/Nein]
<input type="checkbox"/> Put Redemption Date(s) <i>Wahlrückzahlungstag(e) (Put)</i>	[]
<input type="checkbox"/> Put Redemption Amount(s) <i>Wahlrückzahlungsbetrag/-beträge (Put)</i>	[]
Early Redemption at the Option of the Issuer for Inconvertibility, Non-transferability or Illiquidity ⁽⁶⁾	[Yes/No]

⁽²⁾ Complete for all Notes.
Für alle Schuldverschreibungen auszufüllen.

⁽³⁾ Complete for fixed rate Notes.
Für fest verzinsliche Schuldverschreibungen auszufüllen.

⁽⁴⁾ Complete for floating rate Notes.
Für variabel verzinsliche Schuldverschreibungen auszufüllen.

⁽⁵⁾ Complete for fixed rate Notes.
Für fest verzinsliche Schuldverschreibungen auszufüllen.

⁽⁶⁾ Complete for fixed rate Notes denominated in Renminbi.

<i>Vorzeitige Rückzahlung nach Wahl der Emittentin wegen Fehlender Konvertierbarkeit, Fehlender Übertragbarkeit oder Illiquidität</i>	<i>[Ja/Nein]</i>
Purchase; Early Redemption at the option of the Issuer for Reason of Minimal Outstanding Amount	[Yes/No]
<i>Rückkauf; Vorzeitige Rückzahlung nach Wahl der Emittentin bei geringem ausstehendem Nennbetrag</i>	<i>[Ja/Nein]</i>
Early Redemption at the Option of the Issuer upon publication of a Transaction Trigger Notice ⁽⁷⁾	[Yes/No]
<i>Vorzeitige Rückzahlung nach Wahl der Emittentin nach Veröffentlichung einer Transaktions-Mitteilung</i>	<i>[Ja/Nein]</i>
Trigger Call Redemption Amount	[]
<i>Ereignis-Wahl-Rückzahlungsbetrag</i>	
Transaction Trigger Event Period	from [issue date] to [date end of period]
<i>Transaktionsauslösende Ereignisfrist</i>	<i>vom [Begebungstag] bis zum [Datum Ende des Zeitraums]</i>
Description of transaction in respect of which the Notes are issued for refinancing purposes or in relation to which the occurrence of a Transaction Trigger Event shall give rise to the redemption right	[specify details]
<i>Beschreibung der Transaktion bezüglich derer die Schuldverschreibungen zu Finanzierungszwecken begeben wurden oder in Bezug auf die das Eintreten eines Transaktionsauslösenden Ereignisses das Kündigungsrecht auslöst [Einzelheiten einfügen]</i>	
Transaction Trigger Event	[specify details as determined in the applicable Final Terms]
<i>Transaktionsauslösendes Ereignis</i>	<i>[Einzelheiten einfügen wie in den geltenden Endgültigen Bedingungen festgelegt]"</i>

VI. Supplemental information pertaining to GENERAL INFORMATION

The list in the section "Documents Available" on p. 181 of the Prospectus shall be supplemented by inserting the following additional items:

- "(viii) the audited consolidated annual financial statements of BASF Group in respect of the financial year ended 2020;
- (ix) the audited annual financial statements of BASF Finance in respect of the financial year ended 2020."

VII. Supplemental information pertaining to DOCUMENTS INCORPORATED BY REFERENCE

1. The list in the section "DOCUMENTS INCORPORATED BY REFERENCE" on p. 182 of the Prospectus shall be supplemented by inserting the following additional items:

- "(h) the published audited consolidated annual financial statements of BASF Group (English language version) dated December 31, 2020, including the auditors' report thereon;
- (i) the published audited financial statements 2020 of BASF Finance as well as the auditor's report thereon."

Für fest verzinsliche Schuldverschreibungen auszufüllen, die auf Renminbi lauten.

⁽⁷⁾ Complete for fixed rate Notes.

Für festverzinsliche Schuldverschreibungen auszufüllen.

2. The following tables shall be added to the table "Cross-reference list of Documents incorporated by Reference" on p. 182 of the Prospectus:

"Page"	Section of Prospectus	Document incorporated by reference
24	BASF Group, Financial Information	Financial Report 2020 of BASF Group (p. 212 – p. 312) Consolidated balance sheet (p. 224 – p. 225) Consolidated statement of income (p. 222) Consolidated statement of cash flows (p. 226) Notes (p. 228 – p. 312) Auditors' report (p. 214 – p. 221) https://www.basf.com/global/documents/en/news-and-media/publications/reports/2021/BASF_Report_2020.pdf
57	BASF Finance, Financial Information	Financial Report 2020 of BASF Finance Balance Sheet (p. 10) Profit & Loss Account (p. 11) Cash Flow Statement (p. 12) Notes (p. 13 – p. 26) Auditors' Report (p. 29 – p. 33) https://www.basf.com/global/documents/en/investor-relations/creditor-relations/bonds/reports-basf-finance-europe-nv/BASF_Finance_Europe_NV_Annual-Report_2020.pdf

NAMES AND ADDRESSES

THE ISSUERS

BASF SE
Carl-Bosch-Str. 38
67056 Ludwigshafen am Rhein
Germany

BASF Finance Europe N.V.
Groningensingel 1
6835 EA Arnhem
The Netherlands

FISCAL AGENT AND PAYING AGENT

Deutsche Bank Aktiengesellschaft
Taunusanlage 12
60325 Frankfurt am Main
Federal Republic of Germany

LUXEMBOURG LISTING AGENT

Deutsche Bank Luxembourg S.A.
2, Boulevard Konrad Adenauer
L- 1115 Luxembourg
Grand Duchy of Luxembourg