

BASF Group as the prominent enterprise in light of the COVID-19 pandemic-overview of the selected financial indicators

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Abstract

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Purpose of the study: The research regards the selected financial indicators: employment, personnel costs, and sales in BASF Group in terms of the COVID-19 pandemic. The paper's fundamental aim is to assess the financial situation of the BASF Group in light of the COVID-19 pandemic from 2016 to 2021.

Methodology: The paper uses statistical, dynamics, comparative, and documentation analysis.

Main findings: The discussion shows that the prominent company within the chemistry sector succeeded in the research period. BASF implemented the suitable mechanisms, solutions, and actions that mitigated the impact of the COVID-19 pandemic and, in consequence, positioned the world pioneer in chemistry in the leading rank against the rest of the entities competing in that diversified market.

Application of the study: The presented paper regards the leading company in the chemistry sector. It focuses on the considerations in such scientific areas as employment, personnel costs, and sales. Applying the instruments and measures of financial analysis enables one to examine the crucial problems of the enterprise. The issues pointed out in the paper can be profitable for practitioners, decision-makers, and managers.

Originality/Novelty of the study: The pandemic's trajectory is challenging to forecast. The COVID-19 pandemic modifications can cause the growth of infected people. Furthermore, the defined financial activity resulting from additional lockdowns may negatively impact aggregate demand. The paper can motivate further study and examination of the financial indicators of the BASF and other inspiring scientific research.

INTRODUCTION

The global economy is still reeling from the effects of the COVID-19 pandemic. Following the shutdowns of 2020 and the supply chain challenges of 2021, a new wave of disruptions is now sweeping the world's businesses. Despite the ongoing coronavirus pandemic, widespread supply bottlenecks, and rising energy and raw material prices, Baden Aniline and Soda Factory (BASF) achieved record sales and earnings. BASF's financial growth demonstrates that it is on the right track, thanks to strategic direction, adapted organizational structure, and ongoing cost discipline. The central challenges of BASF's time are adequate climate protection and scarce resources. BASF wants to cut BASF's global CO₂ emissions by 25% by 2030 compared to 2018. The company's goal for 2050 is to achieve net-zero emissions. These are lofty objectives. Production is energy-intensive, and BASF wants to grow at the same time. To meet BASF's 2030 emission reduction targets, BASF will invest approximately €4 billion ([Management's Report-BASF, 2021](#)). Through recycling, BASF is also redefining raw material cycles. BASF also secures access to green power in other regions, such as the United States and China. In such a way, BASF is planning ahead of time and laying the groundwork for a stable renewable energy supply.

CO₂-free production constitutes the new solution. The enterprise wants to be prominent, providing its customers with Product Carbon Footprints (PCF) for each of its 45000 sales products- the carbon footprint associated with production per kilogram of sales product ([Responsibility for Human Rights-BASF, 2021](#)).

Furthermore, BASF assists its customers in developing strategies to reduce their carbon footprint, use resources more efficiently, and manufacture environmentally friendly products. BASF anticipates that demand for emission-free or emission-reduced products will outstrip supply in the medium term, and their market value will compensate for the higher production costs. As a result, taking the lead here makes good financial sense. Consequently, the enterprise focuses on being high ranked to deliver products included in BASF's portfolio with a lower carbon footprint in significant quantities by 2030. It distinguishes BASF, boosts its competitiveness, and allows it to grow above the market. Profitable expansion lays the groundwork for a successful transformation. The company continues to prioritize organic growth in its portfolio and business activities. Neither future prosperity nor climate neutrality is possible without a competitive chemical industry and innovative chemical products. The regulations imposed by policymakers and society

pose an important problem to the sector, particularly the chemical sector. Having said that, they open up new company prospects ([Factbook- BASF, 2021](#)). China already has the world's largest chemical market and has significant long-term growth potential. BASF intends to accelerate its profitable growth in the region with the construction of its new Verbund site in Zhanjiang, in the southern Chinese province of Guangdong. BASF is also setting new standards in energy transformation. Sustainable solutions and innovative products across BASF's entire portfolio enable it to stay on track for growth while systematically driving the transition to greater sustainability. BASF implements its long-term strategy for profitable growth in a timely and systematic manner ([Ten-Year Summary-BASF, 2021](#)). Climate neutrality and sustainable resource use are impossible without a competitive chemical industry. The company is in an excellent position. BASF contributes to society while also ensuring its long-term competitiveness.

Research questions

The paper regards the financial situation of the BASF Group in light of the COVID-19 pandemic. The paper's fundamental aim is to assess the financial situation of the BASF Group in light of the COVID-19 pandemic from 2016 to 2021.

The author presents the following research problems:

1. What is the diversification of the financial situation of the BASF Group in light of the COVID-19 pandemic from 2016 to 2021?
2. Which of the research financial indicators of the BASF Group in light of the COVID-19 pandemic have the highest, middle, and lowest levels?

METHODOLOGY

The theoretical part of the paper is depicted the Portfolio of BASF, the particular segments of operation of the company. The studies are carried out within the documentation, statistical, comparative, dynamics analysis. The results showed that the research financial indicators of the BASF Group have different tendencies from 2016 to 2021. The inference process took place in a deductive way.

Theoretical Analysis

Portfolio of BASF

BASF develops chemistry for more unceasing prospects. It combines financial prosperity with stewardship of the environment and the issue of social responsibility. It is worth adding that nearly 111,000 of the employed staff contribute to the company's customers' achievement in almost every industry and country worldwide. Moreover, BASF has subsidiaries in 90 countries, six Verbund sites, and 232 additional production sites worldwide. In terms of BASF's Verbund site in Ludwigshafen, Germany, is the world's largest single-company-owned integrated chemical complex. The Verbund approach was advanced and improved before being implemented worldwide. The erection of the first manufactories of the company's projected new innovative Verbund area in Zhanjiang, China, has been maintained.

It is important to mention that BASF's Verbund system is one of its key strengths. Chemicals, Materials, Industrial Solutions, Surface Technologies, Nutrition & Care, and Agricultural Solutions comprise BASF's portfolio. The Chemicals area is central to the Verbund ([Company Limited Factsheet-BASF, 2021](#)). It consistently supplies chemicals to BASF's other areas of operation, allowing them to deliver higher-value-added products. It is worth accent that the enterprise sells premium quality elemental chemicals and intermediates to potential downstream purchasers. As a result, the Chemicals segment contributes significantly to BASF's organic growth. It is significant to notice that BASF creates value by innovating processes and products and investing in research and development to implement new, sustainable technologies and improve the efficiency of BASF's existing ones. When comes to BASF most critical competitive advantages include technological leadership, operational excellence, and a clear focus on individual value chains. BASF focus on the traditional chemicals industry's critical success factors: leveraging economies of scale and the profits of BASF's Verbund, assets of high reliability, ever-lasting advancement of raw material access, lean and energy-efficient processes, and dependable, cost-effective logistics ([Compliance-BASF, 2021](#)). BASF continually improves its value chains and develops its competitive position, particularly in Asia, through financial contribution and cooperation in growing markets. Moreover, BASF is continually advancing its worldwide production systems and adjusting them to the needs of local markets.

The Materials segment is responsible for developing new plastics applications, high-performance materials, systems, and digital solutions. BASF's product portfolio is one of a kind in the industry. The fact is that BASF intends to grow primarily organically by distinguishing itself from competitors through systems-oriented application expertise and industry knowledge, generating the biggest value in its isocyanate and polyamide chains of value. BASF's developed material simulation possibilities are an uncommon selling point in the sector, allowing it to work near its purchasers. BASF's products contributing to the circular economy, and its more sustainable manufacturing processes, constitute the additional differentiators ([Economic Environment-BASF, 2021](#)). BASF is involved in many aspects of the plastics value chain, from monomers to polymers and their formulated specialities.

The Industrial Solutions segment markets and develops industrial ingredients and additives. These include fuel and lubricant solutions, paint and coating ingredients, electronic materials, and plastic additives. Interestingly, the BASF

focuses on research and development and invests in the development of innovations to enable more efficient resource use. BASF provides sustainable products and processes, such as polymer dispersions, resins, and plastic additives, and it enables its customers to contribute to sustainability through their applications and processes. Other areas of emphasis include efficient manufacturing setups, backward integration in BASF's Production Verbund's value chains, capacity management, and technology and cost leadership ([Corporate Governance-BASF, 2021](#)). Because of BASF's global presence, BASF can operate close to its customers and industries. As a dependable partner, BASF provides high-quality products at a reasonable price.

The Surface Technologies segment focuses on surface protection, modification, and development. In close collaboration with BASF's customers in the catalysts, coatings, and battery materials sectors, BASF develops innovative products and technologies. Furthermore, the company also provides precious and base metal services and surface treatment. BASF's goal is to drive growth by leveraging its portfolio of technologies to find the best solution in terms of functionality and cost for its customers. It assists BASF's customers in driving forward innovation in its industries and contributing to long-term development. The positive medium-term growth of the automotive market, particularly in Asia, the trend toward sustainable, low-emission mobility, and the associated rise in demand for battery materials for electromobility are key growth drivers for BASF.

BASF strives to improve its position as a leading provider of nutrition and care ingredients for consumer applications in the Nutrition and Care segment. BASF intends to strengthen its capabilities in areas such as biotechnology and diversify its product portfolio with bio-based and biodegradable products. In this regard, BASF has formed alliances to strengthen its position in the bio-based surfactants and actives market. One example is the technology collaboration with Holiferm Ltd in Manchester, UK. In that context, the most important thing is the development of fermentatively accessible glycolipids for home and personal care applications and industrial formulator applications. BASF can pursue a targeted, accelerated marketing strategy and expand its portfolio of natural and biotechnological products thanks to its enzymes business ([Management's Report-BASF, 2021](#)). BASF is also investing in natural and biological substances.

Farming is critical because the world's population is expected to grow by two billion people by 2050. In the Agricultural Solutions segment, BASF believes that finding the right balance and creating value for the environment, society, and business is the way forward for agriculture. While there is an increase in demand for food, feed, fiber, and energy, natural resources are limited. Agriculture is a critical enabler in providing healthy enough, affordable food and responding to changing consumer behavior while minimizing environmental impact. BASF is committed to making a positive impact on sustainable agriculture and food systems as one of the world's leading agricultural solutions companies ([Energy and Climate Protection-BASF, 2021](#)). BASF's agriculture innovation strategy focuses on specific crops and their appropriate cultivation systems in particular regions.

Quantitative Analysis

Analysis and results of the research

The research is carried out within the structure, statistical, comparative, dynamics, documentation analysis. The time scope of the study is 2016-2021. The territorial area of the study is the Americas, Asia Pacific, Europe, Middle East-Africa (The size of the operation of BASF Group). The structure and dynamic analysis are carried out within: the number of employees in BASF Group in 2016-2021 (in people at year-end); the personnel costs in BASF Group in 2016-2021 (in a million €); sales in BASF Group in 2016-2021 (in a million €). The results of the carried out studies show notable differences between the research variables in the specific research areas. Below is depicted a number of employees in BASF Group in 2016-2021 (in people at year-end) (Fig. 1).

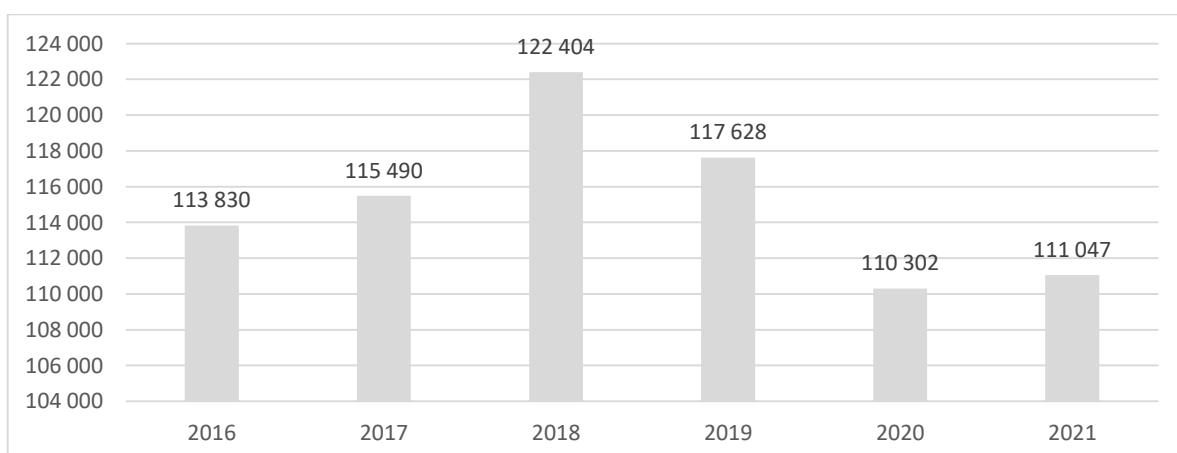


Figure 1: A number of employees in BASF Group in 2016-2021 (in people at year-end)

Source: BASF Online Report 2021, Employees, <https://report.basf.com/2021/en/>, (access: 15.03.2022).

Figure 1 shows that the number of employees increased to 111,047 as of December 31, 2021, up from 110,302 as of December 31, 2020. Staff increases in the Asia Pacific, particularly in connection with the formation of BASF Shanshan

Battery Materials Co., Ltd., and BASF's new Verbund site in Zhanjiang, China, are the primary drivers of the increase. The divestiture of the pigments business, which affected approximately 2,500 employees, had a compensatory effect. BASF hired 3,028 apprentices (2020: 3,120). Temporary contracts are held by 2,329 employees (47.6% are women). The number of employees decreased to 110,302 on December 31, 2020, from 117,628 on December 31, 2019. The drop is primarily caused by the sale of the construction chemicals business, which affected approximately 7,500 employees. An offsetting factor is the acquisition of Solvay's polyamide business, which resulted in the addition of approximately 1,200 employees to the BASF Group, including employees of the Butachimie SNC and Alsachimie S.A.S. joint operations in Chalampé, France, which are counted on a pro-rata basis ([Employees-BASF, 2021](#)). BASF hired 3,120 apprentices (2019: 3,161). There are 2,128 employees on temporary contracts (44.0% are women). The number of employees decreased to 117,628 on December 31, 2019, from 122,404 on December 31, 2018. As of December 31, 2019, there are 6,964 employees in the disposal group for the construction chemicals business (December 31, 2018: 2,017 employees in the disposal group for the oil and gas business). BASF hired 3,161 apprentices (2018: 3,174). There are 2,606 employees on temporary contracts (of which 44.0% are women). BASF had 122,404 employees at the end of 2018 (2017: 115,490); 3,174 of these are apprentices (2017: 3,103). Temporary contracts are held by 3,226 employees (of which 40.9% are women). The increased headcount is primarily due to the acquisition of Bayer's businesses. In addition, the number of employees as of December 31, 2018, included 2,017 from the disposal group for the oil and gas business. The dynamic change of the number of employees in BASF Group in 2016-2021 (in %), shows that the highest decline in the number of employees in BASF Group in 2016-2021 is recorded in 2020 at the level of -6,23%, in comparison with 2019. A similar situation is also observed in 2019, when the decrease is at -3,90%, compared to 2018. The COVID-19 pandemic affected the situation within employment in BASF in 2019 and 2020. It is a worth accent that BASF can rely on its employees' commitment. It demonstrates a strong commitment to BASF and a strong passion for the job. Global employee surveys and pulse checks are well-established feedback tools used by the BASF Group to engage employees in creating their working environment. Employees, the Board of Executive Directors, the Supervisory Board, and stakeholders are all informed of the findings. Since 2008, BASF has conducted regular global employee surveys. BASF intends to maintain the high level of employee engagement determined by these surveys while increasing it as much as possible. Below is presented the personnel costs in BASF Group in 2016-2021 (in a million €) (Fig. 2).

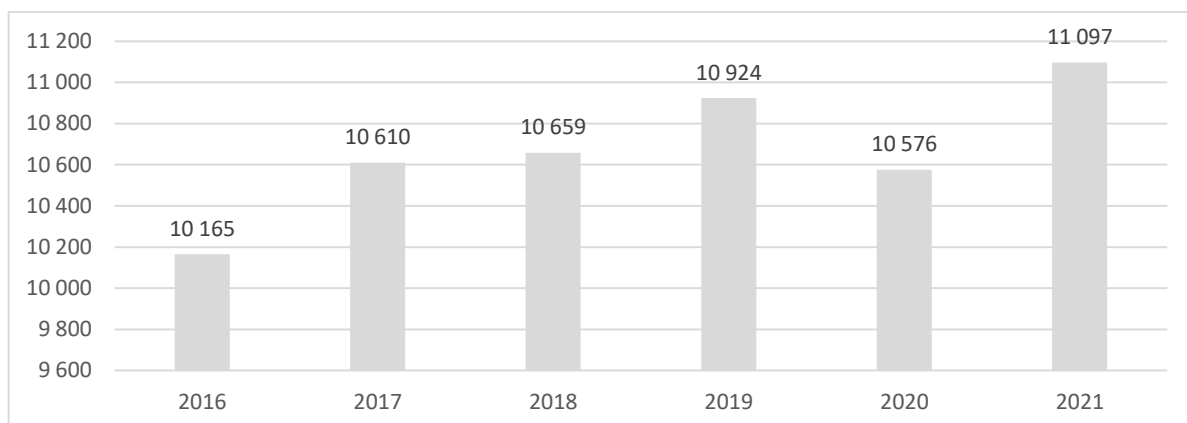


Figure 2: Personnel costs in BASF Group in 2016-2021 (in a million €)

Source: BASF Online Report 2021, Personnel costs, <https://report.basf.com/2021/en/>, (access: 15.03.2022).

Figure 2 shows that in 2021, the BASF Group spent €11,097 million on wages, salaries, social security contributions and assistance, and pensions. In 2020, these costs totalled €10,576 million, which included €291 million in personnel costs from the disposal group for the construction chemicals business until the date of the divestiture. The increase in personnel costs in 2021 is primarily due to increased bonus provisions. The lower average number of employees, in particular, had an offsetting. In 2019, the BASF Group spent €10,924 million on wages, salaries, social security contributions, pensions, and assistance (2018: €10,659 million). Personnel costs from the disposal group for the construction chemicals business and proportionally for the oil and gas business totalled €557 million in 2019.

In contrast, the amount in 2018 included €276 million in personnel costs from the disposal group for the oil and gas business. Personnel costs increased primarily due to higher costs for the long-term incentive program, higher wages, and salaries, and a higher average number of employees due to the acquisition of significant businesses from Bayer. Offsetting factors included the merger of Wintershall and DEA's oil and gas businesses in the joint venture Wintershall Dea and a decrease in pension benefit costs due to plan curtailments. In 2017, the BASF Group spent €10,610 million on wages and salaries, social security contributions, and pension and assistance costs (€10,165 million in 2016). It amounted to a 4.4% increase in personnel costs. Aside from wage and salary increases, it is primarily due to an increase in the average number of employees due to the Chemetall acquisition. The partial reversal of provisions for the Long Term Incentive (LTI) program, and currency effects, offset it. Below is depicted the sales in BASF Group in 2016-2021 (in a million €) (Figure 3).

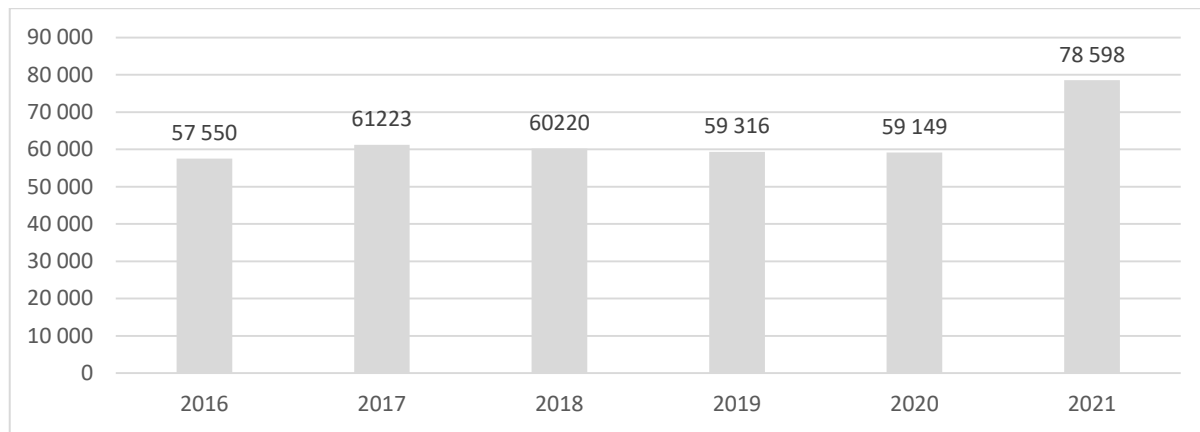


Figure 3: Sales in BASF Group in 2016-2021 (in a million €)

Source: BASF Online Report 2021, Sales, <https://report.basf.com/2021/en/>, (access: 15.03.2022).

Figure 3 shows that sales increased by €6,925 million (+12,00%) year on year to €64,475 million in 2017. It is primarily due to significantly higher sales prices in the chemicals business, particularly in the Chemicals segment, and volume growth across the board. Chemetall, which is acquired from Albemarle in December 2016, also had a positive impact. In all segments, sales are reduced by slightly negative currency effects. In 2018, sales increased by €1,452 million (+2,00% year on year) to €62,675 million. It is primarily due to higher sales prices across the board, particularly in the chemicals business. Sales are also boosted by the August 2018 acquisition of significant businesses and assets from Bayer in the Agricultural Solutions segment and higher volumes, particularly in the Functional Materials & Solutions segment. It is offset in part by negative currency effects. Sales fell by €904 million (-2,00%) to €59,316 million in 2019 compared to 2018. It is due to lower volumes and prices. In particular, lower sales volumes are recorded in the Chemicals and Materials segments (Sales-BASF, 2021). Lower prices, particularly in the Materials and Chemicals segments, slowed sales growth. Surface Technologies, on the other hand, saw significant price increases. Offsetting effects came from the August 2018 acquisition of significant businesses and assets from Bayer in the Agricultural Solutions segment and positive currency effects. In 2020, sales were €59,149 million, the same as in 2019. Higher price levels impacted overall sales performance, primarily due to higher precious metal prices in the Surface Technologies segment and portfolio effects in the Materials segment from Solvay's integrated polyamide business acquisition. Negative currency effects and lower volumes, particularly in the Materials and Industrial Solutions segments, offset it. In 2021, sales increased by €19,449 million (+13.50%) over 2020 to €78,598 million. It is primarily due to higher prices and volumes across all segments. Chemicals, Surface Technologies, and Materials prices increased the most. Surface Technologies and Materials sales volumes increased the most. Currency effects, particularly those related to the US dollar, had an offsetting effect. Negative portfolio effects also weighed on sales performance, particularly in the Industrial Solutions segment following the divestiture of the global pigments business. BASF anticipates a significant drop in sales for the Chemicals segment in 2022, following very high prices in 2021 due to market supply shortages. The drop in 2022 will occur in connection with the presence of significantly lower sales in the Petrochemicals division (Shareholders-BASF, 2021). Following the supply disruption caused by Winter Storm Uri in January 2021, the company anticipates a return to normalcy in the market, particularly in the United States. BASF anticipates higher sales volumes in the Intermediates division, primarily driven by amines and polyalcohols. Prices in the segment expect to fall to a lower level, while higher raw material prices expect to put pressure on margins. As a result, BASF anticipates a significant decrease in EBIT before special items for both divisions. The company anticipates slight sales growth in the Materials segment in 2022. Despite a strong recovery in 2021, it will be primarily due to continued volume growth in both divisions. Efficiency gains will mitigate inflationary pressures. Enterprise anticipates lower prices as the market environment normalizes. Following strong margins in 2021, EBIT before special items in the Monomers division is expected to fall significantly due to lower price levels and higher raw material prices.

In contrast, BASF anticipates a significant increase in EBIT before special items in the Performance Materials division due to the positive development of sales volumes. It will only partially compensate for the decline in the Monomers division. The company anticipates that sales in the Industrial Solutions segment will be slightly lower than in the previous year. In comparison to 2021, the company anticipates a slight decrease in the segment's EBIT before special items. It will be primarily due to a decrease in the Dispersions & Resins division, which will be primarily due to the divestiture of the pigments business. EBIT before special items will most likely increase significantly in the Performance Chemicals division, owing to higher sales volumes and stronger margins. BASF anticipates significantly lower sales in the Surface Technologies segment in 2022, owing primarily to lower precious metal prices in the Catalysts division. Higher volumes in both divisions will partially offset it (Financial Statements-BASF, 2021). EBIT before special items is expected to fall slightly in the segment. The company anticipates significantly higher EBIT before special items in the Coatings division but a significant year-on-year decrease in the Catalysts division due to lower contributions from precious metal trading. BASF anticipates significant sales growth in the Nutrition & Care segment compared to 2021. The company anticipates higher volumes in both divisions and higher overall price levels, owing primarily to the passing on of higher raw material prices and logistics and energy costs. It will partially offset portfolio effects from the sale of

the Kankakee, Illinois, manufacturing facility. Before special items, the segment's EBIT should be significantly higher than the previous year. The company anticipates significantly higher earnings contributions from both divisions, owing primarily to higher margins due to strong volume growth ([Trends in the Chemical Industry-BASF, 2021](#)). BASF anticipates significant sales growth in the Agricultural Solutions segment. In an ongoing challenging market environment marked by supply bottlenecks and high energy and raw material prices, it will raise its sales prices and volumes. Based on the positive sales growth, it anticipates a significant increase in EBIT before special items. The company will continue to invest heavily in research and development and digitalization in 2022. Other sales expect to be slightly higher in 2022 than in 2021 ([Sustainability Along the Value Chain-BASF, 2021](#)). It will be primarily due to increased commodity trading sales. Despite lower corporate research costs, the company expects EBIT before special items to be significantly lower in 2022 compared to the previous year.

CONCLUSIONS

BASF anticipates that the overall financial recovery will continue in 2022 and that the coronavirus pandemic will weaken as the population becomes more immunized. Nonetheless, general financial uncertainty will remain high. The pandemic's trajectory is difficult to predict; in particular, coronavirus mutations may result in new waves of infection. It can lead to production halts and supply chain disruptions in BASF's customer industries, suppliers, and BASF's manufacturing plants. Again, restricted financial activity due to additional lockdowns can significantly negatively impact aggregate demand.

Furthermore, the ongoing scarcity of energy and raw materials, and the resulting high prices, may cause inflation rates to rise even further. It could dampen the production of energy-intensive products and consumer demand beyond the level of slowed growth. An escalation of geopolitical conflicts, ongoing trade disputes between the United States and China, and the resulting financial slowdown, pose significant risks. Opportunities will arise from more substantial demand growth, notably if pandemic-related risks are reduced more than BASF's forecasts assume. Rapidly rising global vaccination rates and the approval of effective antiviral drugs against COVID-19 could both play a role. In addition to the uncertainties surrounding market growth and the development of key customer industries, margin volatility creates material opportunities and risks for BASF's earnings. No significant individual risks threaten the BASF Group's continued existence. Even in the case of a global financial crisis such as the coronavirus crisis, the sum of individual risks is the same. However, residual risks (net risks) persist in all entrepreneurial activities and cannot be eliminated, even with comprehensive risk management.

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