# Opportunity and risk report

## Opportunities

thyssenkrupp defines opportunities as events or developments that enable us to exceed the group's forecasts and targets. Opportunity management encompasses all measures required for the systematic and transparent management of opportunities. As it is integrated with the strategy, planning and reporting processes, opportunity management is an important element of the strate-gic and value-based management of the group.

### Overall assessment by the Executive Board: thyssenkrupp with opportunities from strategic realignment

For thyssenkrupp opportunities arise as a result of the strategic realignment of the group. The goal is to significantly improve thyssenkrupp's performance and create the necessary framework for the businesses to develop optimally and assume leading market positions.

### Opportunity management process

In the annual planning process the segments also describe bands for their earnings and liquidity targets (adjusted EBIT, free cash flow before M & A) related to the following fiscal year. These fig-ures take account of the opportunities and risks of their businesses. This means opportunities and risks are discussed in the planning meetings with the Executive Board. The assessment of oppor-tunities and risks addresses among other things strategic factors such as relevant market and technology trends which in some cases remain relevant far beyond the forecast period. In the subsequent monthly reports the segments update the earnings and liquidity projections as well as the opportunities and risks in the current fiscal year. The graphic "Opportunity and risk reporting at thyssenkrupp" in the "Risks" section of this report shows how these elements are integrated into the standard reporting system.

Management of our opportunities is a task shared by the group's decision makers – from the Exec-utive Board of thyssenkrupp AG to the segment management boards and managements of the companies through to officers and project leaders with local market responsibility. Roles and responsibilities are clearly defined and separated. This structured involvement of numerous experts in decision-making processes in the group ensures that opportunities are reliably identified and systematically exploited.

## Opportunities for the group

Opportunities arise through the transformation into a powerful group of companies.

Opportunities will arise for the group if we can systematically implement our transformation into a powerful group of companies and achieve the desired improvements in the performance of our businesses.

As an international group of companies with largely independent industrial and technology businesses, we aim to use our extensive technology know-how to develop high-quality products and intelligent industrial processes and services. With our products and services under a strong umbrella brand, we see opportunities to help create a better and sustainable future. Our brand promise is summed up in our slogan "engineering.tomorrow.together.". More information is provided in the section "Profile and organizational structure".

Our goal is to give our businesses the freedom they need to focus fully on their customers and their markets so that they can compete successfully. We want to foster a strong entrepreneurial climate that speeds up decision-making, increases efficiency, and puts the customer first. This means more entrepreneurial freedom in the business operations but also more accountability, opening up opportunities to better leverage the value potential of our businesses.

The systematic implementation of a performance culture and corresponding focus on value-adding investment will create opportunities to continuously improve our competitiveness. This is supported by our restructurings in various businesses and portfolio measures, which will allow us at thyssenkrupp to concentrate on businesses in attractive markets with good prospects for the future.

Opportunities can arise from strategic portfolio decisions. Due to the specific market and sector situation at Steel Europe and Marine Systems, thyssenkrupp will therefore pursue possible partnerships and consolidation options in parallel with measures to improve performance for a stand-alone future within the company. The new Multi Tracks segment is a separate area combining businesses for which, for various reasons, the company does not see itself alone as the best owner in the future. More details of our corporate strategy and the associated opportunities are presented in depth in the "Strategy" section.

We are convinced that thyssenkrupp stands for efficient processes and production methods with high product quality and that many of our plants set global standards in terms of resource efficiency and environmental protection. In this connection we see opportunities particularly from the implementation of our hydrogen strategy. Advancing digitization means that previously separate value chains are increasingly converging and new products, services and business models are emerging. Detailed information on current initiatives and key development areas is presented in the "Technology and innovations" section.

In our development projects we are also always guided by the group's financial scope. Unfavorable economic conditions may result in delays or compromises in implementing existing opportunities. More on this and on other risks can be found in the "Risks" section.

## Operational opportunities of the businesses

All businesses have operating opportunities in their specific markets.

**Materials Services –** As the name suggests, Materials Services' business model centers on services; our "Materials as a Service" strategy further underlines the nature of our central product in this segment. As producers and processors focus more closely on their core competencies in an increasingly uncertain environment and at the same time market digitization is steadily rising, the solutions Materials Services can offer both in processing and in supply chain management are growing ever more complex. Materials Services will benefit from this in two ways, because both the profitability and market growth of these services are higher on average than in classic distribution.

Opportunities arise for the segment from its specific market and sector knowledge. Also, thanks to its global network within the group, the segment can further standardize processes and systems in materials distribution so as to systematically expand its business. Far-reaching opportunities are also created by Materials' Services consistent customer focus.

Growing customer requirements in the area of supply chain management in particular offer major opportunities for Materials Services – for example when Materials Services takes over the management of several suppliers to ensure that the right quantities are delivered to the right place at the right time and in the right quality.

The continuous development and implementation of tailored digital solutions offers many opportunities for Materials Services to be an even better and more efficient partner to its customers. One example of this is the systematic further development of the omnichannel architecture: through individual customer portals, interfaces for electronic data exchange, online shops and ordering apps, customers worldwide have 24/7 access to the segment's products and services. Materials Services is continuously driving its digital transformation along the entire value chain: Artificial intelligence is to be used to make processes at every stage of the supply chain more flexible, for example to better meet specific customer requirements with regard to speed of delivery, pricing or material quality. Through the implementation of state-of-the-art digital solutions, Materials Services also aims to shorten order lead times, optimize warehouse logistics and pave the way for new types of supply chain services.

In response to the challenges of the coronavirus pandemic, interconnected collaboration and interactive processes have been further intensified in all areas – from logistics to warehousing, equipment utilization and purchasing to administration. This also opens up opportunities for project execution, among other things through increased use of agile methods. In addition Materials Services works on digital solutions from which new business models are created. One example is steel recycling, in which we have established a joint venture with an external partner.

Under its efficiency programs, Materials Services has identified opportunities and defined extensive measures to further improve the segment's cost and earning situation. Key elements of this are the further structural optimization of materials warehousing and service operations in Germany, the pooling of purchasing activities and the establishment of a segment-wide project management organization for the structured, sustainable implementation of improvement opportunities. If we

can implement these optimizations sooner than expected, the forecasts for our key performance indicators could be moderately exceeded.

**Industrial Components –** The bearings business offers positive growth prospects in particular in view of the growth of the wind energy market (onshore and offshore). The trend towards larger systems is driving demand for high-performance components, which we serve via our global production network. In the short term the phase-out of national incentive programs in China, which created a boom from pull-forward effects in fiscal 2019 / 2020, could result in declining demand for wind energy components on the Chinese market. In the medium and long term, however, the growth trend will continue, not least due to the steadily growing competitiveness of renewable energies. For other markets for our bearings, we expect very moderate growth. Opportunities will arise if these markets recover more quickly than forecast.

A key factor for the future performance of our global forged technologies business is the development of the global truck market (particularly Class 8 trucks) and the construction machinery sector. If these sectors make a stronger recovery than expected, our forecasts could be moderately exceeded.

**Automotive Technology –** As part of the strategic realignment, the Springs & Stabilizers, Battery Solutions, and Powertrain Solutions units are to be transferred from the System Engineering business unit to the newly created Multi Tracks area at the start of the new fiscal year 2020 / 2021.

A key factor for the future business performance of Automotive Technology is the development of the global economy and personal mobility. Medium-term forecasts indicate growing demand irrespective of the current impact of the coronavirus pandemic. In the wake of the automotive sector's ongoing transformation, size and technology leadership are increasingly becoming key success factors.

Alongside further measures to enhance performance and competitiveness, Automotive Technology will therefore align with the industry trend in exploring, evaluating and independently pursuing strategic options to develop the automotive components business in alliances and development partnerships.

We are convinced that Automotive Technology is capable of meeting future customer requirements on the basis of further investment, increased standardization in research and development, new products, and increasingly interconnected production sites.

We operate worldwide as an engineering partner for components, modules and systems. With our products we want to support the global trend towards an efficient and environmentally friendly kind of mobility that also meets challenging political targets to reduce vehicle emissions. In the relevant areas of weight reduction and optimization of powertrain technologies, we want to offer our customers state-of-the-art solutions and are working to steadily extend our position. With the further development of our chassis systems we are creating the conditions for new approaches and solutions. We want to actively shape the path towards increasingly automated and self-driving vehicles. We see growth opportunities here across all vehicle classes.

If the relevant markets and sectors – particularly the automotive markets – perform better than expected, the forecasts for our key performance indicators could be moderately exceeded. This is the case in particular if the markets pick up more quickly than expected after the plunge resulting from the coronavirus pandemic.

Further opportunities will arise if we achieve higher savings than expected from the efficiency programs we are systematically pursuing.

**Steel Europe –** The Steel Europe segment is focused on the market for premium flat carbon steel, which depends to a large extent on the performance of the European economy.

Against the background of increasing customer demands, new market trends, and structural problems in the market, we started on the development of Strategy 20-30 back in the previous year. In the project period up to 2030 we aim to improve average annual EBIT by over €600 million. Launched in mid-July 2020, the strategy is focused on systematically aligning the business to attractive future markets and profitable steel grades, improving production performance and product quality, and achieving climate-neutral steel production. The accelerated digital transformation of the company will open up opportunities to further improve internal processes and realize new digital business models along the value chain. Also under Strategy 20-30 we will systematically press ahead with further short to medium-term performance measures to strengthen the company's earning power. If we can implement these measures faster than expected, the forecasts for our key performance indicators could be moderately exceeded.

In preparation for the implementation of Strategy 20-30, a new organizational structure was introduced effective May 1, 2020. Over the course of the project, extensive new and maintenance investments, some already underway, will focus on the development of market potential and at the same time enable the implementation of cost-reducing structural measures. The process kicked off with the construction of an additional walking beam furnace at hot strip mill 2 in Duisburg with the aim of further improving the surface quality of our premium sheet products, used for example for automotive skin panels. The furnace is scheduled for completion in 2022. Further opportunities are opening up in the area of e-mobility, where growth in demand is expected for high-quality electrical steel which has an attractive revenue structure. Overall investments in this business unit will significantly strengthen our market and competitive position in terms of technology and quality.

Even though the coronavirus pandemic is currently massively impacting our day-to-day business, Strategy 20-30 remains the right response to current conditions. In particular our transformation on the path to climate neutrality offers major opportunities. We aim to be able to market the first substantial volumes of climate-neutral steel in 2022. This is to be achieved by injecting hydrogen into a blast furnace. Through further technical measures and investments, these volumes will be significantly expanded in the future. The increasing future demand for hydrogen can be covered by various projects and initiatives which are being discussed on a cross-company basis with various players.

**Marine Systems –** Despite the uncertain global economic environment, the national and international markets for our marine business – in particular conventional submarines and frigates/corvettes – continue to offer good prospects. Above all in surface vessel construction, Marine Systems strengthened its market position by winning major orders in the 2018 / 2019 and 2019 / 2020 fiscal years. Particularly the frigate order for the Brazilian navy offers good opportunities for Marine Systems to obtain follow-up orders from customers in South America and further strengthen our market position there in both newbuild and service business.

We expect additional opportunities to arise from the ongoing implementation of our site strategy for Kiel with flexible manufacturing infrastructure, as well as from the advanced harmonization of the business processes of our shipyard sites using the capabilities of maritime electronics. If we can implement these optimizations faster than planned, the forecasts for our key performance indicators could be moderately exceeded.

**Multi Tracks –** To further strengthen the competitiveness of the plant technology business and exploit growth opportunities on our markets, we aim to continuously standardize and optimize our products and order execution methods. We want to cement our position as a leading partner for the engineering, construction and service of industrial plants and systems by further expanding our innovative and eco-friendly technologies.

In chemical plant engineering, opportunities could arise in the medium term through entry into new markets (for example water electrolysis). Further opportunities may result from the ongoing expansion of our high-margin service business. We want to utilize the increasing demand for solutions for digitization and the operation of industrial plants and develop further areas of business with corresponding service offerings.

We have also launched initiatives to enhance profitability. Measures include reducing administrative and material costs and improving project execution.

The business performance of AST as a European producer of high-quality stainless steel depends to a large extent on the economy and the trade policy of the European Union. In this challenging market environment we are increasingly driving market penetration in the end user business. But overall we see the best opportunities for AST – as for the other businesses combined in Multi Tracks – outside thyssenkrupp. All options in connection with partnerships or a sale of individual businesses are therefore currently being examined.

The forecasts for the Multi Tracks segment's key performance indicators could be moderately exceeded if the relevant markets and sectors of the various businesses, the results of our performance programs, the investment spending of our customers or contract execution turn out better than expected.

## Risks

thyssenkrupp defines risks as events or developments that reduce our ability to achieve our forecasts and targets. Risk management encompasses all measures involved in the systematic and transparent management of risks. With its link to planning and reporting processes in controlling, it is an important element of value-based management and goes far beyond the early identification of risks required by law. Efficient, forward-looking risk management therefore also serves the interests of our capital providers and other stakeholders.

### Overall assessment by the Executive Board: No risks that threaten thyssenkrupp's ability to continue as a going concern

No risks that threaten thyssenkrupp's ability to continue as a going concern

Our transparent and systematic risk management system with structured processes ensured overall risks in the group were efficiently managed. From the current perspective and with the closing of the Elevator transaction on July 31, 2020 and the associated significant liquidity inflow, there are no risks that threaten the company's ability to continue as a going concern.

### Risk strategy and risk policy

Our risk strategy is focused on securing the existence of the company long-term and increasing the value of the company sustainably. Success as a company requires us not only to realize opportunities but also to identify and evaluate associated risks and ensure that all employees manage these risks in the best way possible. Risks threatening the company's ability to continue as a going concern must be avoided.

Basic principles of corporate governance and risk management defined in GRC Policy

Our "Governance, Risk and Compliance (GRC) Policy" defines basic principles for corporate governance and risk management. The GRC Policy also describes the universally applicable risk policy principles of the group as a framework for meeting the requirements of proper, consistent and proactive risk management. The principles are based on the thyssenkrupp mission statement and the strategic goals for the various business models; they serve as guidelines for professional and responsible risk management. Further aims of risk management at thyssenkrupp are to increase risk awareness and establish a value-based risk culture at all corporate levels. Risks and opportunities in the group are therefore analyzed transparently and are systematically incorporated into business decisions.

### Risk management process

We continuously enhance thyssenkrupp's risk management system, align it with the internationally recognized COSO model and integrate it with our internal control system. In our GRC Policy, our risk management system methodology is embedded in the three lines of defense model and the responsibilities of the individual lines of defense are clearly defined. Details of the model can be found in the corporate governance statement. All other requirements for the risk management process are bindingly defined in the group regulation on risk management

Risk management throughout the group is based on standardized sub-processes and procedures.

The efficient design of our various risk management instruments ensures that the sub-processes are integrated in a continuous risk management loop and all risk managers are involved appropriately in the risk management process. Our methods and tools to identify, assess, control and report risks are implemented throughout the group and we continually develop them as new requirements arise.

The organizational anchoring of corporate risk management in controlling facilitates holistic risk management integrated with planning and reporting processes. Our main focus in using the risk management instruments is to assess possible deviations in the key performance indicators adjusted EBIT and free cash flow before M & A. The following graphic outlines our approaches:

## OPPORTUNITY AND RISK REPORTING AT THYSSENKRUPP

| Interval / Time horizon / Goal/content | Opportunities and risks: in estimation | Opportunities and risks: in budget | Risks: Risk scenarios | Risks: Risk inventory | Risks: Provisions for risks |
|---|---|---|---|---|---|
| Goal/content | Identification and assessment of opportunities and risks not included in current estimation | Identification and assessment of opportunities and risks not included in budget | Analysis of concentration risks based on defined common scenarios | Identification, assessment and management of risks in all operating units not included in estimation and budget planning | Analysis of main provisions for risks / measures monitoring |
| Time horizon | Current fiscal year | Following fiscal year | Scenario-dependent | Planning period | Current fiscal year |
| Interval | Monthly | Yearly | At least yearly | Twice yearly | Four times yearly |
| | Standard reporting | | Risk and Internal Control Committee and Audit Committee | | |
| | Monthly reporting | Budget reporting | Interval<br>Four meetings yearly | | |

The opportunities and risks not included in the monthly updated projections or in the budget are part of standard segment reporting. Regular discussion of opportunities and risks makes an important contribution to integrated business management during the year and to corporate planning by highlighting bands for the key performance indicators adjusted EBIT and free cash flow before M & A related to the current and the subsequent fiscal year.

As part of the planning process and on an ad hoc basis we also analyze macro-economic concentration risks taking into account centrally defined interdependencies and risk premises. These groupwide risk scenarios mainly address slumps of major economies and other exogenous shocks and their impacts on thyssenkrupp.

To record relevant event risks in a structured way in specific areas of responsibility, all consolidated companies worldwide use a standardized IT risk management application to prepare risk maps. The assessment period used for the risk map goes beyond the period covered by the forecast and covers the entire three-year operational planning period; this provides multiple-year transparency into the local risk assessments. The regular reporting and updating of risks at local level also ensures that risk awareness remains high throughout the group.

Risks already recognized in the form of balance sheet provisions are also the subject of standardized analyses and risk reporting, ensuring systematic control of these risks too.

Ad hoc risks are communicated immediately to the risk management officers and are also documented via the established reporting channels.

These standardized risk management processes ensure that the Executive Board and Supervisory Board are informed promptly and in a structured way about the group's current risk situation. However, despite comprehensive risk analysis, the occurrence of risks cannot be systematically ruled out.

### Roles and responsibilities

The risk management system is a combined top-down and bottom-up process.

We have organized risk management at thyssenkrupp as a combined top-down/bottom-up process. Binding process and system standards are formulated centrally by the group and apply to all operating entities. Responsibility for measuring and controlling risks along the value chain lies at local level with the functional managers in the operating entities.

The material risks are discussed and validated in meetings of the interdisciplinary Risk and Internal Control Committee (RICC) held once every quarter and chaired by the CFO. At the same time this forms the preparation for risk reporting to the Executive Board and Audit Committee. The RICC meetings are attended by all the group's officers responsible for governance, risk and compliance. This interdisciplinary approach at committee level makes a key contribution to improving corporate governance processes in the group.

Employees responsible for risk management receive regular training on using the various instruments. We also use our groupwide web-based IT risk management tool to provide targeted information and training material.

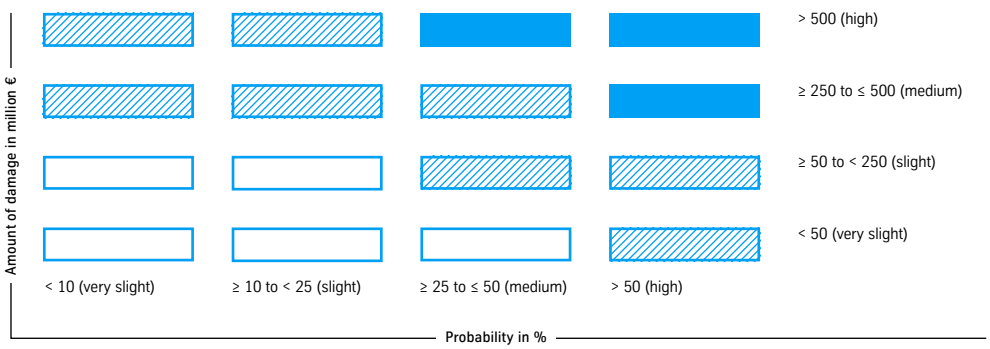
Internal Auditing uses the information from the risk maps for its risk-oriented audit planning. The internal audits structured on this basis contribute to the efficient monitoring of the risk management system and deliver insights to further improve risk management in the group.

## Risk assessment

Identified risks are assessed consistently according to the group's risk management rules as follows: Based on probability of occurrence and impact on the key performance indicators adjusted EBIT and free cash flow before M & A in the planning period we define risk classes according to the following graphic. If there are variances in the earnings and liquidity perspectives for individual risks, the higher assessment is used for the overall risk assessment. The main individual risks in defined risk categories, which we address in the following sections, are grouped in accordance with this system as "high", "medium", "low" or "very low".

Risk assessment follows clearly defined criteria.

### RISK CLASSES AT THYSSENKRUPP



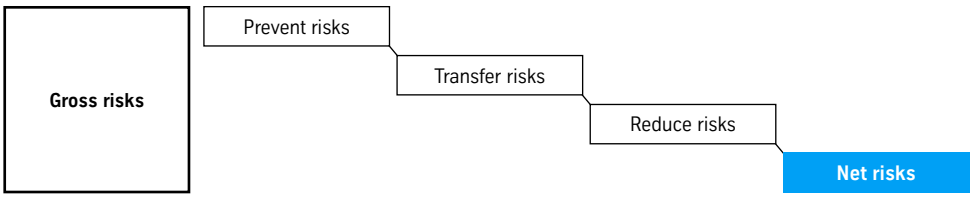

## Risk control

In the risk mapping process all consolidated companies are required to formulate risk control measures for the individual risks identified and assessed in the three-year planning period and systematically monitor their implementation.

Risk control measures are in place for all risks.

Risk presentation at thyssenkrupp is by the net method, i.e. taking into account already realized, effective risk control measures that reduce gross risk.

### RISK MANAGEMENT MEASURES AT THYSSENKRUPP




We prevent risks by following the risk policy principles and not entering into transactions if they infringe thyssenkrupp codes of conduct or policies.

We transfer risks in cases where the financial scale of a risk can be minimized by central measures such as insurance policies. More information is contained in the section below on risk transfer

We reduce risks by taking appropriate targeted measures and for example by continuously improving our internal control system. More information on the individual initiatives can be found in the sections "Internal control system in the accounting process" and "Operational risks of the businesses".

### Risk transfer

The internal insurance provider manages the transfer of risk.

Risk transfer to insurers is handled centrally at thyssenkrupp AG. The scope and design of insurance cover are determined on the basis of structured risk assessments in which insurable risks at the companies of the group are identified, evaluated and reduced or eliminated through specific protection plans. A balanced insurer portfolio ensures risks are spread appropriately across the insurance market.

Binding standards are in place for all companies in the group to ensure risk prevention always stays at an appropriately high level. These standards are developed by experts from all areas of the group under the leadership of thyssenkrupp AG and are updated as required. Internal and external auditors regularly check compliance with these standards.

### Internal control system in the accounting process

The internal control system reduces process-related risks.

The internal control system comprises all the systematically defined controls and monitoring activities aimed at ensuring the security and efficiency of business management, the reliability of financial reporting, and compliance of all activities with laws and policies. An effective and efficient internal control system is key to managing risks in our business processes successfully.

We continuously develop the requirements on the internal control system using a standardized risk control matrix and a structured self-assessment process.

Various monitoring measures and controls in the accounting process help ensure compliant financial reporting. For consolidation we use a group system based on standard software. In this way we ensure consistent procedures and minimize the risk of misstatements in our accounting and external reporting. An appropriate segregation of functions and application of the dual-control principle reduce the risk of fraudulent conduct.

thyssenkrupp has clearly defined the sub-processes involved in financial reporting and assigned clear responsibilities for them. The central function Controlling, Accounting & Risk is responsible for the preparation of the consolidated financial statements and issues binding instructions to the local units with regard to content and timing. Internal thyssenkrupp service providers support the local units in preparing local financial statements. All employees involved in the accounting process undergo regular training.

We perform regular central system backups on the IT systems used in the consolidation process in order to avoid data losses and system failures. The security strategy also includes system controls, manual spot checks by experienced employees, and custom authorizations and access controls.

Internal Auditing regularly checks the effectiveness of the internal control and risk management systems and is therefore integrated in the overall process.

By means of these coordinated processes, systems and controls we ensure that our accounting is reliable and complies with IFRS, German GAAP (HGB) and other relevant standards and laws.

### Risk categorization

We have pooled the types of risks relevant to thyssenkrupp in the following categories:

- Risks from external parameters
- Financial risks
- Legal risks and compliance risks
- Risks from operating activities

We deal in detail with these categories and provide a risk assessment in the following sections.

### Risks from external parameters

The external risks mainly include macroeconomic risks and regulatory risks.

**Macroeconomic risks –** Economic risks for our business models exist when positive impetus is not forthcoming from the global economy and markets of relevance for thyssenkrupp and growth rates fall below the economic forecasts.

The progression of the coronavirus pandemic will significantly influence business performance.

The global growth outlook remains marked by extreme uncertainty. Particularly the progression of the coronavirus pandemic poses major risks as infection rates in regions important to us remain high and further waves of infection and their impact cannot be reliably predicted. Possible new lockdown measures could weigh on all our business activities and severely impact our key performance indicators.

Other risk factors result from geopolitical imponderables: it is unclear whether the trade conflicts will escalate further or how the numerous global flashpoints will unfold. A sharper slowdown in China in the medium term could also have a dampening effect. The economy in numerous raw materials exporting countries remains fragile and dependent on the price situation for oil and raw materials. Exogenous shocks such as a further escalation of violence in crisis regions could have major effects on the global economy; this would also affect thyssenkrupp.

In Europe, continuing uncertainty over the modalities of Brexit could weigh on investment – above all in the UK itself but also in the other countries of the EU.

Risks also exist as a result of the mushrooming of debt in numerous industrial and emerging nations in recent years. The numerous state support measures to mitigate the impact of the pandemic could exacerbate these risks.

If economic growth is weaker than forecast in the planning as a result of the stated risks, which are even higher than in the prior year, the individual economic risks for thyssenkrupp would remain "high".

We continuously monitor economic development and corresponding country-specific conditions based on wide-ranging early warning indicators. In a worst-case scenario integrated into the planning process, we simulate the impacts of lower growth rates on our business models to enable us to take action and minimize risks at an early stage when necessary.

A worst-case scenario integrated into the planning process takes into account in particular economic risks in the event of the coronavirus pandemic increasing in severity.

Our current economic assessment is presented in detail in the section "Macro and sector environment". Further details on specific market risks in our businesses can be found in the section "Operational risks of the businesses".

**Regulatory risks –** New laws and other changes in the legal framework at national and international level could entail risks as well as opportunities for our business activities if they lead to higher costs or other disadvantages for thyssenkrupp compared with our competitors directly or in respect of our value chain. Overall the regulatory risks for thyssenkrupp are classified as "medium".

Risks for our business models could result from national and international regulations.

In our energy-intensive operations, we face earnings risks on the global markets if additional costs are imposed under energy- and climate-related rules which we are unable to pass onto our customers in full or at all, or if there is no longer demand for products and technologies in the long term. thyssenkrupp supports effective climate protection efforts and a sustainable energy transition in which climate protection, security of supply, and competitiveness are equal priorities. We support the relevant discussion processes on regulatory efforts through close working contacts with the relevant national and international institutions and cooperate with industry associations at all levels to reduce possible risks. Concrete risks in particular for Steel Europe in this connection are described in the section "Operational risks of the businesses".

## Financial risks

The central responsibilities of thyssenkrupp AG include coordinating and managing finance requirements within the group and securing the financial independence of the company as a whole. This involves optimizing financing and limiting the financial risks.

Financial risks are contained by centrally managed measures.

**Default risks –** To minimize default risks from operating activities and the use of financial instruments, such transactions are only concluded with contractual partners who meet our internal minimum requirements. The credit risk management function defines minimum requirements for the selection of contractual partners. The credit standing information is subject to appropriate, continuous monitoring which permits the credit risk management function to intervene at an early stage to minimize risks. Outstanding receivables and default risks in connection with supplies and services are constantly monitored by the subsidiaries; in some cases they are additionally insured under commercial credit policies. The credit standing of key account customers is monitored particularly closely. Further details are reported in Note 22.

**Liquidity risks –** To secure the solvency and financial flexibility of the group at all times, we maintain long-term credit facilities and cash funds on the basis of a multi-year financial planning system and a liquidity planning system on a rolling monthly basis. We use the cash pooling system to allocate resources to the individual companies internally according to requirements.

**Market risks –** To hedge market risks (currency, interest rate and commodity price risks) we enter into derivative hedging instruments. These mainly include foreign currency forward contracts, interest rate swaps, interest rate/foreign currency swaps and commodity forward contracts with banks and commercial partners. The use of derivative financial instruments is extensively monitored.

**Currency risks –** To contain the risks of our numerous payment flows in different currencies – in particular in US dollars – we have developed groupwide policies for foreign currency management. All subsidiaries are required to hedge foreign currency positions at the time of their inception. They mainly use our central hedging platform for this. Translation risks arising from the conversion of foreign currency positions are generally not hedged.

**Interest rate risks –** The task of central interest rate management is to control and optimize the risk of changing interest rates from funds invested and borrowed. For this, regular interest rate risk analyses are prepared, the results of which feed into our risk management system.

Taking into account the control measures selected, the financial risks outlined above are assessed as “low”.

We recognize provisions for impairment.

**Valuation risks –** For the success of our strategic realignment it is important to have an organization in which the businesses can develop optimally. Accordingly, we review what is the right portfolio strategy for our businesses or parts of businesses. In this connection, disposals and acquisitions, partnerships as well as restructurings within our existing business activities are conceivable. Portfolio measures and restructurings are generally associated with execution risks; in addition our strategic business units are regularly tested for impairment. The risks identified in this category, which after the impairment losses recognized at September 30, 2020 we classify as “medium”, are monitored continuously and provisions are recognized where required.

**Risks associated with pension obligations –** The fund assets used to cover pension liabilities are exposed to capital market risks. To minimize these risks, the individual investment forms are selected and weighted with the support of independent experts. In addition, parts of the investments are aligned with the structure of the pension obligations in selected countries for the purposes of risk management (liability-driven investment).

In connection with the valuation of pensions, thyssenkrupp is exposed to the risk of falling interest rates. Further decreasing discount rates for pension obligations would result in pension provisions increasing further and weighing more on equity.

Further decreasing interest rates represent an accounting risk in connection with the valuation of pension obligations.

Additional risks exist in connection with the payment of life-long pensions due to the rising life expectancies of beneficiaries and the need to adjust pension amounts on a regular basis. In addition, payments to pension funds could increase substantially in some countries in the future due to stricter statutory requirements, or additional allocations to pension plans could become necessary in individual cases if pension plans are terminated prematurely.

### Legal risks and compliance risks

Legal and compliance risks include litigation risks, compliance risks focused on antitrust violations and corruption, and risks from trade restrictions.

**Litigation risks –** We define litigation risks as risks in connection with pending or imminent lawsuits or regulatory or administrative court proceedings brought against thyssenkrupp. The thyssenkrupp group uses a software tool with which litigation risks are systematically identified, categorized, evaluated and reported under the established risk management processes to the Executive Board and the Audit Committee on a quarterly basis. We carefully examine claims asserted by third parties for merit. Legal disputes in and out of court are supported by in-house counsel and where necessary external counsel.

We currently classify litigation risks individually and cumulatively as medium. Cumulative litigation risks are combined risks from lawsuits brought by numerous claimants and from regulatory proceedings against thyssenkrupp which relate to the same matter and can be classified as a single litigation risk. Information on further litigation risks for which we have recognized provisions or which are classified as contingent liabilities is provided in Notes 16 and 21.

Intensive support for legal disputes in and out of court.

**Compliance risks –** We operate a strict compliance program focused on reducing the risks of antitrust violations and corruption because these offenses have enormous potential for damage, both financial and in terms of reputation.

A strict compliance program guards against the high potential for damage from antitrust violations and corruption.

Compliance risks also include possible infringements of the EU General Data Protection Regulation which came into force in 2018. We classify general compliance risks overall as “high”.

**Risks from trade restrictions –** Due to the global nature of its business thyssenkrupp is exposed to possible risks stemming from trade restrictions such as anti-dumping/anti-subsidy tariffs, export restrictions, special monitoring measures, embargoes, far-reaching economic sanctions against certain countries, persons, businesses and organizations, as well as other protectionist or politically motivated restraints.

These restrictions can not only impede our business activities in individual national markets; violations could lead to severe penalties, sanctions, reputational damage and damage claims. We therefore take strict care to comply with customs and export control regulations and other trade restrictions.

### Risks from operating activities

Risks from operating activities include procurement risks, production risks, sales risks, order risks, risks associated with information security and personnel risks.

Risks in the supply chain are monitored continuously.

**Procurement risks –** To manufacture our high-quality products, we procure raw materials and other starting materials. Depending on the market situation, procurement prices can vary considerably and impact on our cost structures. Also, suppliers may be lost or transport routes for raw material restricted, which might in turn jeopardize our production and the fulfilment of our contractual obligations towards our customers. The individual risks identified in this category are low. We counteract these risks through margin-securing measures and alternative procurement sources.

Risks related to rising energy prices are countered by structured energy procurement. We operate sustainably and are working across the Group to save energy and recycle waste.

Further information on specific procurement risks in our businesses can be found in the section "Operational risks of the businesses".

We counter the risk of business interruptions through regular maintenance and investment in our equipment to ensure we fulfill our contractual obligations towards our customers.

**Production risks –** In the event of a worsening of the coronavirus pandemic or other unfavorable constellations and developments, our plants can be exposed to the risk of business interruptions and property damage. In addition to the cost of repairing damage, there is above all the risk that a business interruption might result in production losses and thus jeopardize the fulfilment of our contractual obligations towards our customers. We counter these risks through regular preventive maintenance measures and through modernization and investment in our machinery and production facilities. In addition we take out appropriate insurance and so transfer risks to external service providers. The remaining financial risks in this category are classified as "medium".

Accident risks during the production, installation, maintenance and use of our products cannot be completely ruled out. A safety-oriented corporate culture and a comprehensive bundle of measures related to occupational safety and health help minimize the accident risks faced by our employees and subcontractors.

In our production plants there are process-related risks that can lead to air and water pollution. Furthermore, some of the group's real estate no longer used for operations is subject to risks from past pollution and mining subsidence. To minimize risks thyssenkrupp invests continuously and sustainably in environmental protection and scheduled remediation and maintains a close dialogue with authorities, local communities and political representatives. We recognize adequate provisions for dealing with past pollution.

Further details on production risks in our businesses can be found in the section "Operational risks of the businesses".

**Sales risks –** The risks described in the section "Macroeconomic risks" may diminish our business prospects on individual markets and therefore lead to sales risks. In the event of sustained developments, we carry out market-oriented adjustments or relocate capacities.

We counter sales risks resulting from dependence on individual markets and industries by focusing our businesses systematically on the markets of the future. As a group of companies with leading engineering expertise, thyssenkrupp operates globally, maintains good, long-term customer relationships, and pursues active strategic market and customer development. Our diversified product and customer structures help ensure that we remain largely independent of regional crises on our sales markets.

In quality management, the requirements of our customers are a top priority.

Product and process quality and meeting the corresponding quality requirements of our customers are a top priority for us. However, the possibility cannot be ruled out that we will not always be able to meet these quality standards. We classify the risks arising from this as "low"; we counter them with extensive measures in connection with production and quality assurance systems and where necessary by setting aside provisions in our financial statements.

Further details on specific sales risks in our businesses and on our professional receivables management system to counter the risk of bad debt are provided in the section "Operational risks of the businesses".

**Order risks –** Particularly in the plant engineering and marine businesses, one of the core challenges is the execution of major contracts involving a high degree of complexity and long project run times. Cost overruns and/or delays in individual project phases cannot be ruled out. Individual identified order risks are currently classified collectively as "medium" taking account of risk reduction measures in the reporting year. To minimize these risks we continuously improve our management instruments so that we are aware of the current order status at all times and able to take project-related measures more quickly if required.

Experienced project managers help minimize risks in the execution of major orders.

For all major orders we check the credit standing of our customers carefully before entering into contracts and deploy experienced project managers for order execution. Through transparent monitoring of order status we ensure that payments are made promptly according to order progress and payment defaults are minimized.

Cyber security remains a permanent challenge.

**Risks associated with information security –** Our IT-based business processes are exposed to various risks associated with information security, which we classify as "medium". Human error, organizational or technical processes and/or security vulnerabilities in information processing can create risks that threaten the confidentiality, availability and integrity of information. For this reason we continually review our processes and technologies. Systems are updated and processes modified immediately as necessary. The IT-based integration of our business processes is subject to the condition that the risks involved for our companies and business partners are continuously minimized. This is all the more important when entire value chains are transformed as a result of advancing digitization.

The number of attacks on the IT infrastructure of major German companies continues to increase. In this connection we have carried out measures to further improve our information security management and security technologies. One focus is to protect our production operations from unauthorized access for the purpose of espionage or sabotage. A group of IT security experts provides cross-segment support with the early identification of risks; this is being continuously expanded. In addition, vulnerability analyses are carried out regularly with the support of our IT security team and external experts to verify the security of the infrastructure and if necessary take corrective action.

Sensitizing our employees to the risks involved in handling business-related information is a very important issue to us. In this connection we carry out internal communication campaigns and ensure that the confidentiality of information is guaranteed through appropriate technical support.

Together with the group's data protection officer, our experts ensure that personal data are processed in accordance with the rules of the EU General Data Protection Regulation and the new German Data Protection Act.

All these measures will allow us to continue to protect the Group's business data as well as the privacy of our business partners and employees, and to respond appropriately to potential new risks.

The pandemic may result in temporary personnel shortages.

**Personnel risks –** To implement our fundamental strategic realignment successfully, we need dedicated and highly qualified employees and managers in all business units. There is a risk of not being able to find enough key personnel to fill vacancies or losing competent employees in the challenging situation in which the group currently finds itself. In addition, pandemic-related factors could result in temporary personnel shortages, with the protection of our employees' health a top priority for us. We classify the individual personnel risks overall as "low", with economic risks from the coronavirus pandemic taken into account under "Macroeconomic risks".

thyssenkrupp continues to position itself as an attractive employer and promotes the long-term retention of employees in the group. This involves offering management development programs, career prospects and attractive incentive systems. We provide targeted support for our employees, inform interested young people about career opportunities at thyssenkrupp from an early stage, and support apprentices as they start their working life. We cooperate with key universities and establish contact with students from an early stage to secure the young talent we need.

### Operational risks of the businesses

**Materials Services –** The global materials and service business of Materials Services is exposed to cyclical swings in demand and prices on the procurement and sales sides – in some cases to a greater extent than other businesses. This influences our earnings situation and our net working capital. The coronavirus pandemic has made it especially clear that strategic partnerships with our suppliers are essential for the stabilization of our procurement processes – because fast delivery with minimum capital employed is and will remain a key success factor for our business model. We therefore work continually to optimize and digitize our logistics processes and the entire supply chain.

Materials Services contains cyclical risks through its presence on all continents.

In addition we contain cyclical risks by our worldwide presence, high degree of diversification, and broad customer base – in terms of not just the total number of customers but also their business sectors. Especially in the current crisis situation, this allows us to cushion falls in demand and possible production stoppages at individual customers, resulting in a significant spread of risks.

With our cost reduction measures we are raising the efficiency and profitability of the segment. At the same time we are intensifying our digitization activities for materials and services.

Systematic improvements to net working capital management and efficient receivables management help us minimize the risks of bad debt. The importance of these instruments is increasing in the current economic crisis triggered by the coronavirus pandemic.

**Industrial Components –** Our bearings business is subject to demand risks in the wind energy sector as a result of dependence on national incentive programs for the expansion of renewable energies. Any disruption of the global investment climate, in particular in the areas of infrastructure and general machinery manufacture, may also jeopardize our current growth targets in these markets. Intense competition and the auctioning of projects may impact prices in the relevant sales markets. Higher than expected factor cost increases, particularly for raw materials, could negatively impact earnings margins. We are countering this price pressure with continuous optimizations and efficiency enhancements. To minimize the above price risks we are also investing in extending our technology leadership and optimizing our global production network.

If demand on the global truck and construction machinery markets does not recover in the wake of the coronavirus pandemic, there is a risk that Industrial Components will not hit its targets in its forged technologies unit. Further general risks relate to the impact of changing exchange rates on sales and earnings, with regard to both translation and transaction effects, in particular where the US dollar and Brazilian real are involved. Finally, the move towards an energy system dominated by renewables in Germany is creating major challenges for energy-intensive industries and thus for example also our forging facility in Germany.

**Automotive Technology –** The performance of Automotive Technology is directly linked to the performance of the automotive markets around the world. The global economy is currently in recession, an end to which is not yet foreseeable.

We are a leading global player in the powertrain sector among others. This position is jeopardized by the increasing trend towards electrification. To counter this we are developing alternative products in new fields of business.

For core markets, following a steep market decline in the current fiscal year we expect a slight recovery for 2020 / 2021.

With regard to the coronavirus pandemic, new waves of infection and further lockdown measures continue to pose significant risks, particularly in our core markets Europe, the USA, and China. If these risks materialize, we will use among other things the instrument of short-time work to retain our skilled workforce.

Risks may arise for Automotive Technology from future restrictions on multinational trade.

Additional risks could come from further future trade restrictions such as possible tariffs on automobile exports or auto parts. To lessen dependency on individual markets Automotive Technology is expanding its customer base, developing technical innovations, and strengthening its local presence internationally.

In addition to the economic risks, both auto component and production equipment suppliers are exposed to risks from consolidation processes, intense competition, further increasing price pressure, and the transformation towards e-mobility. We are countering this price pressure with continuous optimizations and sustainable efficiency enhancements.

On the procurement side there are risks that rising raw material prices cannot be passed on in full to customers or only with delays. We counter these risks by framing contracts with customers accordingly. In addition to the price risk there are also risks of disruptions in the supply chain. In particular in the area of procurement, supplier insolvencies, poor quality and yield problems may have a significant impact. We counter this risk with systematic supplier management, taking into account sustainability requirements.

With regard to ongoing technological innovations and improvements and the ramp-up of new plants, risks from unplanned earnings impacts cannot be ruled out. Newly implemented or modified processes also carry the risk of organizational weak points, for example inadequately resourced internal control systems. On top of this there are potential risks from unexpected yield and quality problems and the associated warranty obligations. Automotive Technology uses extensive production and quality assurance systems to avoid or limit such risks as far as possible. It goes without saying that all our production plants operate in accordance with sustainability requirements.

Further general business risks relate to the effects of changing exchange rates on sales and earnings, both translation and transaction effects, particularly with regard to the US dollar, the Chinese yuan, and the Swiss franc.

**Steel Europe –** Our steel business is particularly exposed to the risk of fluctuating demand due to a weakening economy as a result of the coronavirus pandemic and market distortions/shifts as a result of trade conflicts or protective tariffs. To contain this risk the Steel Europe business area implements customer acquisition measures, ensures appropriate shipments to a range of segments, optimizes costs in all areas and focuses on less cyclical high-end market segments. The segment counters sales risks with appropriate staggering of contract terms and periods.

Steel Europe counters increased competition on the market for flat steel products with its technological expertise and an even stronger focus on markets and customers, enabling the segment to differentiate itself from its competitors. This includes constant optimization of value chains and targeted investment in relevant research and development areas aimed at developing innovative products and customer solutions and bringing them to market quickly. In addition, a quality management system geared to the ever increasing requirements of the market ensures steady improvements in product quality and helps secure a competitive market position.

The segment reduces the risks from customer insolvencies through intensive monitoring and appropriate hedging instruments.

Steel Europe counters the risk of rising raw materials prices by using alternative procurement sources, risk-reducing procurement strategies, active risk management and margin-securing measures. As a result of increasingly frequent extreme weather conditions, there is a risk that our starting materials delivered by water will not be available as planned. To avoid any resultant business interruptions, we take a variety of compensation measures where necessary such as moving some goods flows to rail or using additional handling equipment when loading and unloading.

The hedging strategy already implemented at Steel Europe counters the price increase for emissions allowances.

The already implemented hedging strategy counters the price increase for emissions allowances in the third trading period of the EU emissions trading system (2013 to 2020) and the associated risk of further costs in connection with the need to purchase allowances. An increased cost risk will also arise as a result of the expected price increases for $CO_2$ emissions in the fourth trading period (2021 to 2030). The main price drivers will be the newly introduced mechanisms to reduce allowances but also the expected raising of the EU's 2030 climate targets, which will be reflected in the EU emissions trading system rules. For this reason we will continue the already implemented hedging strategy for the 4th trading period.

To reduce business interruption risks and improve preventive fire safety, funds are made available for ongoing preventive maintenance and for modernization and investment In the event of possible business interruptions, also as a result of the pandemic, business continuity plans as well as emergency and crisis plans are in place specifying measures for remedying damage. The segment has integrated a business and technical risk controlling system for property insurance into its risk management process.

The move towards an energy system dominated by renewables in Germany is creating major additional challenges for energy-intensive industries in general and the steel sector in particular. Although general planning certainty has been achieved by the continuation of exemptions for producers of in-house electricity in the Renewable Energies Act (EEG 2017), the steel industry still sees itself faced with cost-driving developments associated with the integration of renewable energies, such as the necessary expansion of the electricity grids and the storage of reserve capacities to provide security of supply.

Regulatory requirements placed on the electricity and gas networks of our large production sites and our power plants could result in further cost impacts. In addition, relief measures aimed at ensuring the international competitiveness of energy-intensive industries are increasingly being restricted, which also jeopardizes planning certainty. The risk of rising wholesale electricity prices is being countered by the extensive supply of in-house produced electricity. In response to the risk of increasing natural gas prices, the Group is pursuing a centrally managed price hedging strategy.

Steel Europe is countering the threat to IT infrastructures presented by internet criminality with risk-reducing organizational, procedural and technical measures to ensure early identification and defense.

**Marine Systems –** On account of the long-term nature of the business, the impact of the pandemic on Marine Systems has been comparatively low, though there is a risk of delays on some contracts due to notifications of force majeure by customers or suppliers. Risks relating to a number of existing export contracts suffering significant delays were successfully stabilized or reduced through various measures.

In addition, political developments in customer countries or surrounding regions could pose the risk of export approvals not being granted for our products.

**Multi Tracks –**Market conditions for our plant technology business and also for the other businesses combined in the new Multi Tracks segment are volatile due to the pandemic, as reflected in postponements of new projects and delayed progress on ongoing projects. However, service business is stable. As new owners are primarily being sought for the businesses combined in Multi Tracks, there is a risk for the segment that the market for mergers and acquisitions could develop negatively due to the pandemic.

General economic risks could arise from the escalating international trade conflicts, which could pose a threat to the investment climate. The special risks described in the section “Order risks” in the execution of major long-term contracts and technically complex orders are countered by professional and result-oriented project management and the increased use of project management measures. Technological risks are associated in particular with “first of their kind” contracts.

If in addition unexpected delays occur in the implementation of measures under our cost-saving program, these could have negative effects on our key performance indicators.

The production sites of our Italian stainless producer AST are exposed to a risk of unplanned production interruptions and losses. We are countering these risks mainly through preventive maintenance, modernization and investment, and with our detailed business continuity plan. Production stoppages may also be necessary under government orders in connection with the coronavirus pandemic. To guard against this, we have a carefully developed pandemic plan.

If the safeguard measures imposed by the European Union against stainless steel imports from Asia are not effective, price-related risks will arise in particular for AST.

In the Springs & Stabilizers business unit and the powertrain and battery assembly area, extensive restructuring measures have been initiated to adjust capacities and reduce costs. The aim here is to successfully implement the restructuring measures introduced and fulfill existing customer obligations. Corresponding project teams have been created to support implementation of the measures.