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Allianz Research

Sector Atlas: Assessing non-payment risk across global sectors

Executive summary



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- **More challenging macro environment.** Global GDP growth is projected to decelerate to +2.5% in 2023, as low as in 2019. Advanced economies will likely dodge a full recession but will experience low growth in 2023 and 2024. Post-pandemic, consumers have shifted from buying goods to spending on services, which is dragging global trade and all related sectors. The US economy remains robust despite a challenging monetary environment, while the Eurozone grapples with minimal growth and stubborn inflation issues. As central banks remain determined to shake off inflation, interest rates should remain higher for longer, which will harm highly leveraged sectors and also eventually dampen capex. China's growth outlook has dimmed due to various challenges ranging from issues in the real estate sector to low consumer confidence, and emerging markets should also see lower growth.
- **Brace for Q3 as the outlook for corporates looks challenging.** The Q2 earnings season revealed a decline in global revenues by -1.9% y/y, marking the first contraction across all regions since 2020. [cf: [A slow landing for China](#)]. US revenues dropped by -0.3%, but S&P 500 companies saw a +0.5% y/y growth, bolstered by the financial sector. Meanwhile, after a strong Q1, European companies, are headed towards a -6.0% sales drop, mostly because of the energy sector (excluding energy, a +0.6% increase is projected). Global earnings decreased by -1.2% y/y, with significant contractions in marine transportation, paper, chemicals and metals & mining. The impending impact of rising interest rates could lead to ratings downgrades, escalating funding costs. Although companies maintain a higher interest-coverage capacity than pre-pandemic, the ratio is declining. The Q3 outlook appears bleak, especially for Europe, with the US showing slight improvement. European companies exhibit reduced optimism, with materials, technology and consumer discretionary sectors facing the most uncertainty.
- **Against this backdrop, we see a balanced risk landscape from a sector perspective.** The bulk of our sector ratings are either 'Medium' risk or 'Sensitive' risk (a combined 85% of all ratings) across all regions. However, there is quite some risk dispersion between regions as Asia seems to be on the safer side while Latin America is on the riskier side. In terms of sectors, pharmaceuticals or software & IT services are the ones with overall better ratings, while construction, textiles and metals are often deemed riskier.



Agrifood

Easing prices to continue but climate change could put crop yields at risk

Sector rating

M Medium risk for enterprises

Strengths & weaknesses



- High pricing power for farmers and companies in the upstream segment
- Growth potential: Strategic sector considering the vital role of feeding an exponentially growing global population
- Steady consumption and immune to inflation as food will always be in demand



- Vulnerable to climate change: More frequent and severe floods and droughts affect crops and livestock
- Food-processing and packaged-food companies continue to struggle with high energy, transportation and input costs.
- Labor shortages, especially in the upstream segment and in Western Europe
- Global inflation has exacerbated price competition

Sector overview

What to watch?

- **Food security:** The invasion of Ukraine has affected the global food supply and prices. Before the war, Ukraine supplied 4.5mn tons of agricultural produce through its ports (12% of the world's wheat, 15% of globally traded corn and 50% of sunflower oil).
- **Overpopulation:** As the world's population hits 8.05bn people in 2023, ensuring access to food is key to avoid a global food crisis in the coming years, especially as shortages of grains and fertilizers, alongside climate change and lingering post-pandemic-driven supply-chain issues, have pushed up global food prices by +56% compared to end-2019.
- **Climate change:** Changes in temperature, humidity and rainfall patterns, as well as the frequency of extreme weather events (storms, droughts, wildfires) and the "El Nino" phenomenon in 2023 are affecting farming practices and output capacity.
- **Energy crisis:** The end of the conflict in Ukraine (when and how) is uncertain. While Europe is aiming to be self-sufficient in energy, this will take time. Therefore, we expect the price of fertilizers to remain relatively high in the short term, keeping general prices of agrifood high as well (vs. 2019-2020 levels). Nevertheless, we think prices peaked in 2022 and that 2023 could be a pivot year.
- **Veganism:** Much of the world is trending toward plant-based eating and this global shift could be here to stay, representing a considerable decrease in consumption of animal meats and other kinds of animal-derived products (eggs and dairy).
- **Online distribution:** Through apps and websites, virtual grocery shopping has become more attractive, especially for young consumers. This trend will continue to gain momentum, becoming a challenge for physical retailers.

Russia is the world's largest supplier of natural gas and is responsible for 33% of the world's fertilizer production, being a key producer of ammonia and NPK. As a result, the trade sanctions imposed on Russia have tightened the supply of fertilizers globally, while in parallel other key fertilizer-producing countries, such as Germany, have been forced to limit production due to high energy costs. The result was an unprecedented increase in the price of fertilizers, which represent around 12% of input costs of field crop farms. Fortunately, so far in 2023, fertilizers have become more affordable following the drop in natural gas prices. We believe the peak is behind us, which could diminish agrifood prices slightly.

Profit growth has been differing by sub-sector as the level of pricing power is uneven within each link of the chain, depending on market positioning, product-mix and the geographical footprint of each company. Companies in the upstream sub-sector do have strong pricing power so they have been allowed to sell crops at higher prices and even to strengthen their margins throughout 2022 and the first half of 2023. Yet, part of these price increases are also due agrifood scarcity since farmers in some regions have faced tough and unexpected weather conditions that led to reduced yield projections and quality for several agricultural commodities. On the other hand, companies in the downstream segment are facing another challenge as stubborn inflation and low consumer confidence reduce their ability to continue raising prices to boost profit growth. Only big packaged-food players with a strong market positioning in the food & beverage industry have been able to use their brand power and large distribution scale to pass on price increases to consumers, while seeing little pushback in demand. On the other hand, food distribution stores are seeing changes in consumption patterns as customers favor cheaper products (regardless of quality), which is further increasing the already high price competition between retailers at a time when online distribution channels are gaining popularity among final consumers.

Subsectors

- 1. Upstream:** Companies who are engaged in the first phase of the production line, notably in the fields sowing and harvesting all kinds of grains and raising animals (cattle, pigs, sheep, goats, poultry and fish). The upstream stage doesn't involve any processing of food. The major producers of agri-commodities are China, the US, India, Brazil, Argentina, Canada and Russia.
- 2. Downstream:** In this sub-sector, companies are involved in processing and transforming the extracted agri-raw-materials into consumable products. The full chain includes processing, packaging, transporting and cooking the food. China and the US are the biggest contributors to the global food & beverages industry, making 31.5% and 17.9% of the world's total output, respectively.
- 3. Beverages (also part of the downstream segment):** Companies that produce and supply any type of beverage. The beverage industry contains two main categories: non-alcoholic beverages (such as juice, sodas, soft drinks, coffee, tea and bottled water) and alcoholic beverages (beers, wines, and distilled beverages - also known as spirits).
- 4. Food retail:** retail stores are the retailers or wholesaling retail chains that generally stock groceries, fruits & vegetables, uncooked meat products, frozen products and daily needs such as spices, snacks, sweets and others on the minimum operating margin. Based on the distribution channel, this sub-sector can be further segmented into physical stores (such as supermarkets, hypermarkets, warehouse stores) and online food stores.



Automotive

Global registrations to continue their recovery from historical lows

Sector rating

S Sensitive risk for enterprises

Strengths & weaknesses



- Consumer interest for electric vehicles and new mobility services
- Government support for electric-vehicle transition
- Global fleet ageing, indicative of future replacement purchases
- Still low car penetration in emerging markets
- Overcapacities eliminated in past years



- Vulnerable supply chains (car electronics in particular)
- Heavy investment in EVs will take time to pay off
- Rise of Chinese carmakers a competitive game changer
- Progressive end of internal combustion engine technologies a major challenge for suppliers
- Competition from tech giants and start-ups in the field of connected and autonomous driving technologies
- Rising financing costs

Sector overview

What to watch?

- The duration (and magnitude) of chip shortages
- The potential sporadic/global resurgence of the virus
- Any extension of the (already noticeable) rise in input costs, including energy prices and transportation costs
- All factors at play in consumer confidence and their willingness/capacity to purchase expensive durable goods such as cars (wages, savings, unemployment social tensions)
- Rollout momentum of EVs and changes in regulatory environment, notably public subsidies, CO2 emissions rules and bans on internal combustion engines (ICE)
- Innovation in autonomous driving and new mobility services, boosting R&D spending, capex, M&A and partnerships
- Price competition from second-hand market
- Resurgence of tariff and non-tariff barriers
- Any event leading to another major supply chain issues (for instance related to batteries)

The global car industry is witnessing a positive shift in sentiment as new vehicle registrations have been gaining momentum across all major markets since the second half of 2022. With order books staying at healthy levels but new orders going down, carmakers are carefully calibrating production rates to prevent oversupply. The key factor contributing to this resurgence has been the easing of supply-chain constraints, particularly in the semiconductor sector. As the availability of these now ubiquitous components improves, car manufacturers are finding themselves in a better position to increase production and meet the market demand that has been building up since early 2021. This combination of strong demand and improving supply has been positive for the industry's profitability, which was also boosted by higher average selling prices and a greater focus on higher margin models. Raw material and transport costs have also significantly eased from their 2022 highs.

For 2023, we expect the global market to reach around 84Mn units (+7%). While the gap from 2019 levels remains wide, we do not expect it to be bridged anytime soon:

- On the demand side, because the cost-of-living crisis, higher interest rates and the general increase in new car prices are excluding a fraction of potential customers out of the market
- On the supply side, because carmakers are not yet engaging in a race for volumes

The situation among suppliers in the automotive sector presents a more varied picture, particularly for those whose business models are heavily dependent on volumes and who have limited ability to exert pricing power. Suppliers that are heavily invested in internal combustion engine (ICE) technologies are also finding themselves particularly vulnerable as the automotive industry continues to shift towards electric vehicles (EVs).

The main risk factor, in our view, lies in growing competition from Chinese carmakers both in China and international markets. Because Europe is more open to international competition and European firms are the most present in China, we believe European firms are the most at risk of losing market shares in the years to come.

Subsectors

Automotive manufacturers: On top of current short-term issues related to global chip shortages and supply-chain bottlenecks, including in shipping, manufacturers face high pressure from global competition: Geographical diversification, innovative model launches and operating-cost adjustments remain a key strategy to protect profitability and fund the R&D spending, capex, M&A and partnerships that are needed to address the transformation of the industry, from the electrification and new mobility services to autonomous driving.

Automotive suppliers: Suppliers used to (most often) post higher revenue growth and profitability compared to manufacturers prior to the Covid-19 outbreak, but they proved to be more impacted by the pandemic in terms of losses in turnover and profitability, and to benefit less since then. On average, tier-1 suppliers have a stronger financial situation and larger size to master the transformation from combustion engine to electric drive, but we expect a prolonged pressure from car manufacturers. The market's transition is to increase (tech) content per car and opportunities but to reduce drastically the need for some components (i.e., diesel), keeping non-EV players as well as the smaller suppliers most at risk.



Chemicals

Challenging market environment, with a recovery unlikely in the short term

Sector rating

S Sensitive risk for enterprises

Strengths & weaknesses



- Very diversified end-markets, which limits dependence on purchases from a certain sector
- The ecological transition represents an opportunity for expansion in the biofuels business. Other chemicals, such as those used in the production of paper and cardboard, will also continue to be highly demanded in the packaging industry
- Companies in the 'Specialty Chemicals' subsector enjoy high pricing power
- Given the key role of chemical products in global manufacturing, demand will always be granted (in times of industrial activity)
- The increased production of electric vehicles represents an opportunity for lithium producers (highly used for the manufacture of electric batteries)



- Large amounts of investments on capex and research & development needed
- As an energy-intensive sector, highly vulnerable to energy prices
- Revenues for the petrochemical segment are threatened by the lower use of plastics and its derivatives in the years to come amid new environmental regulations
- Agrochemical products hardly meeting people's higher concerns about environmental safety
- High reputational risk and many ESG-linked challenges to cope with: decarbonization, water and soil protection, ensuring there are no health problems for both employees and customers, notably with chemicals used in the food industry, among others

Sector overview

What to watch?

- War in Ukraine: The conflict has lasted much longer than initially expected. Europe in particular continues to be affected by high energy prices. Though they have fallen, they remain above pre-war levels.
- The reopening of China will stimulate local production and demand for chemicals. Nevertheless, the speed and magnitude of the Chinese boost for the industry is uncertain.
- Industrialization: The support measures and management decisions to be taken by governments and companies' executives will be key in determining the resilience and evolution of the sector.
- Continuation of the turnaround in chemical output (reduction) due to the global economic slowdown and expectations of lower consumer demand and weakened consumer sentiment.
- Tighter financing conditions in developed economies (Europe & US) to continue affecting companies rolling over debt

The first half of 2022 was a period of consolidation for the sector after the sharp recovery observed over 2021, when chemicals sales grew by +40% y/y. However, market sentiment deteriorated by the end of the year as stubborn inflation (notably high energy prices), hawkish monetary policy in some regions and recession concerns slowed down business activity.

Overall, chemicals sales grew by +11% in 2022, driven by higher prices rather than by volume. Still, margins contracted, especially in Q4 due to the abrupt increase in production costs (notably energy and labor). By business segment, sales trends were different last year: while intermediates & derivatives grew by +15%, sales of base chemicals and petrochemicals grew by +9% and +4%, respectively.

With the degradation of the global economy, chemicals sales have been declining in 2023 (-16% y/y in Q1 and -26% y/y in Q2). Natural gas prices have declined compared to the peak reached in 2022, bringing relief to producers in Europe. Yet, we believe energy prices will remain higher than in the US and above their historical averages. As a result, we expect US chemical producers to continue enjoying a competitive advantage over European peers, while China will continue its efforts to enlarge its production capacity (notably for basic chemicals) in order to absorb all the market share Russia has lost.

Companies in the “commodity/basic chemicals” sub-sector are the most affected by the current weak market environment, with margins squeezed by the high energy requirements for production. These companies do not have much pricing power given the nature of the product (they are not transformed and have no extra value-added). In contrast, producers of “specialty chemicals” have higher pricing power. As their production is more complex (under certain specifications and quantities for certain specific end-markets), players in this segment can transfer higher production costs to their customers. Fertilizers, for instance, saw a huge price increase in 2022 (and they continue to be expensive so far in 2023). Yet, demand remained high due to the product’s key role in the global agricultural sector.

The global economic outlook for 2024 appears gloomy, setting the stage for continued unfavorable demand for certain chemical products. As a result, we expect the decline in volumes to continue in the next two quarters, together with low prices.

Subsectors

Basic or commodity chemicals: Chemical substances used as a starting material for the production of a wide variety of other chemicals. Examples include chlorine (used as a disinfectant and for water treatment), sulfuric acid (used in metallurgy, for refining petroleum products or the production of explosive materials), vinyl chloride (used to produce PVC for wall coverings, houseware and automotive parts), aluminum sulfate (used for water treatment, in agriculture and in paper production), sodium carbonate (used in the manufacture of detergents, soaps and paper), acetone (commonly used in pharmaceuticals) and titanium dioxide (used in the cosmetic and food industries), among others. Under this sub-sector, we find another distinction – petrochemicals - when looking to the origin of the raw material. Petrochemicals are also organic chemicals, but they are made from crude oil and natural gas. Examples include olefins, methanol, butadiene, benzene, ethylene glycol, polyethylene, etc. They are used as raw materials in the manufacture of polymer products such as plastic, detergent, adhesive, rubber, tires, food packaging and elastic bands.

Specialty chemicals: Specialty chemicals are a range of compounds that are produced in smaller quantities when compared to basic chemicals as they are high-value products that are sold based on functionality, and following certain formulations that make them “special”. Under this sub-sector we can find a variety of classifications according to the end-market, such as antibiotics, adhesives, pesticides, fertilizers, cleaners, inks, paints and coatings, fragrances, chemicals for the food & beverage industry (food additives and flavors) etc. In terms of commercial applications, producers within the specialty chemicals sub-sector cater to the needs of their customers on an individual level (production is tailor-made under certain specifications), and because of this these chemicals can be sold at very high prices.



Construction

Cyclical hurdles and long-term opportunities

Sector rating

H High risk for enterprises

Strengths & weaknesses



- High demand due to urbanization and population growth
- Increased investment in infrastructure development
- Growing focus on sustainable and green construction
- Enhancement of smart cities pushing advancements in construction



- Highly cyclical
- Cost control and schedule management challenges
- Skill shortages in the industry
- Regulatory and environmental challenges

Sector overview

What to watch?

- Rising interest rates
- Housing-market price correction
- Green regulation, both an opportunity and a risk for the sector
- Public policies on infrastructure



The global construction sector is going through significant growth and transformation. Demand for construction is on the rise, driven by factors such as urbanization, demographics and increased public and private investment in infrastructure. Global construction output is expected to grow to US\$15.5Tn by 2030, with three countries (China, the US and India) leading the way, accounting for about 60% of all global growth.

On average, the EBIT margin for the industry was around 5% in 2022 but there are large discrepancies from one region to another. Liquidity in the construction sector is a critical factor as firms get paid in instalments and need to finance inputs and labor out of pocket upfront. Although many construction firms faced liquidity issues during the Covid-19 pandemic, the situation has improved, despite working capital requirements remaining high.

In terms of segments, infrastructure is expected to witness significant growth due to increased public spending on infrastructure projects worldwide amid the green transition and development of emerging economies. However, the residential construction segment may face challenges, mostly due to rising interest rates and high valuations in the property market.

Subsectors

Residential construction: This segment includes the construction of new homes and apartments, as well as the renovation and repair of existing ones.

Non-residential construction: The construction of commercial buildings (offices, retail), industrial buildings (factories, warehouses, data centers) and public buildings (schools, hospitals etc.).

Infrastructure construction: Construction of large-scale public projects such as highways, bridges, railways, airports and utilities.

Construction services: Services related to construction, such as architectural and engineering services, project management etc.



Electronics

Strong headwinds

Sector rating

M Medium risk for enterprises

Strengths & weaknesses



- Broad customer base (consumer electronics, automotive, telecommunications, industry, etc.)
- Powerful long term growth drivers (digitization of the economy)
- Technology intensive, innovative industry
- Semiconductors: concentrated, high value added, high margin product markets

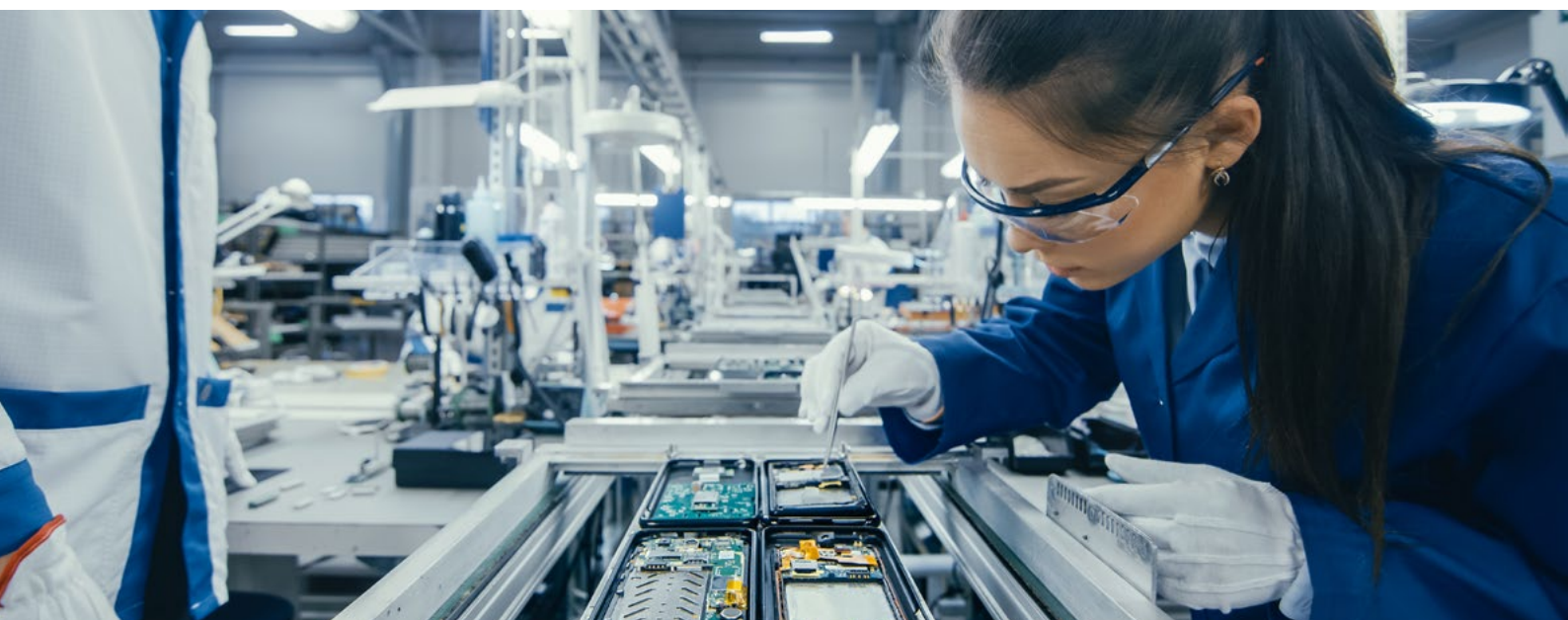


- Commodity electronic components: fragmented, low barrier to entry, low margin product markets
- Saturation reached in major client industries (smartphones, computers, etc.)
- Volatility, with one major recession every four to five years on average

Sector overview

What to watch?

- Inventory adjustment in key final markets (computers, smartphones)
- New developments in the US-China tech cold war



After recovering from its worst recession in 2019 (-13%), the semiconductor industry entered a turbocharged growth cycle in 2020. Volumes were driven by unusually strong demand for consumer electronics (PCs, smartphones, audio and video equipment, accounting for 80% of final semiconductor sales); prices were pushed higher by a tight supply/demand equilibrium and the product mix improved with the introduction of higher priced, new-generation chips using the 5nm manufacturing node. The same three drivers have now reversed, with consumer electronics deep in the red, rising inventories sending prices down and next-generation chips only in their ramp-up phase. After growing by a record +24% in 2021 and slowing to +8% in 2022, we anticipate global semiconductor sales to fall by as much as -15% to USD495bn in 2023. In our scenario, monthly sales would bottom out in Q3 2023 but a strong recovery would be hampered by weak final demand for consumer electronics.

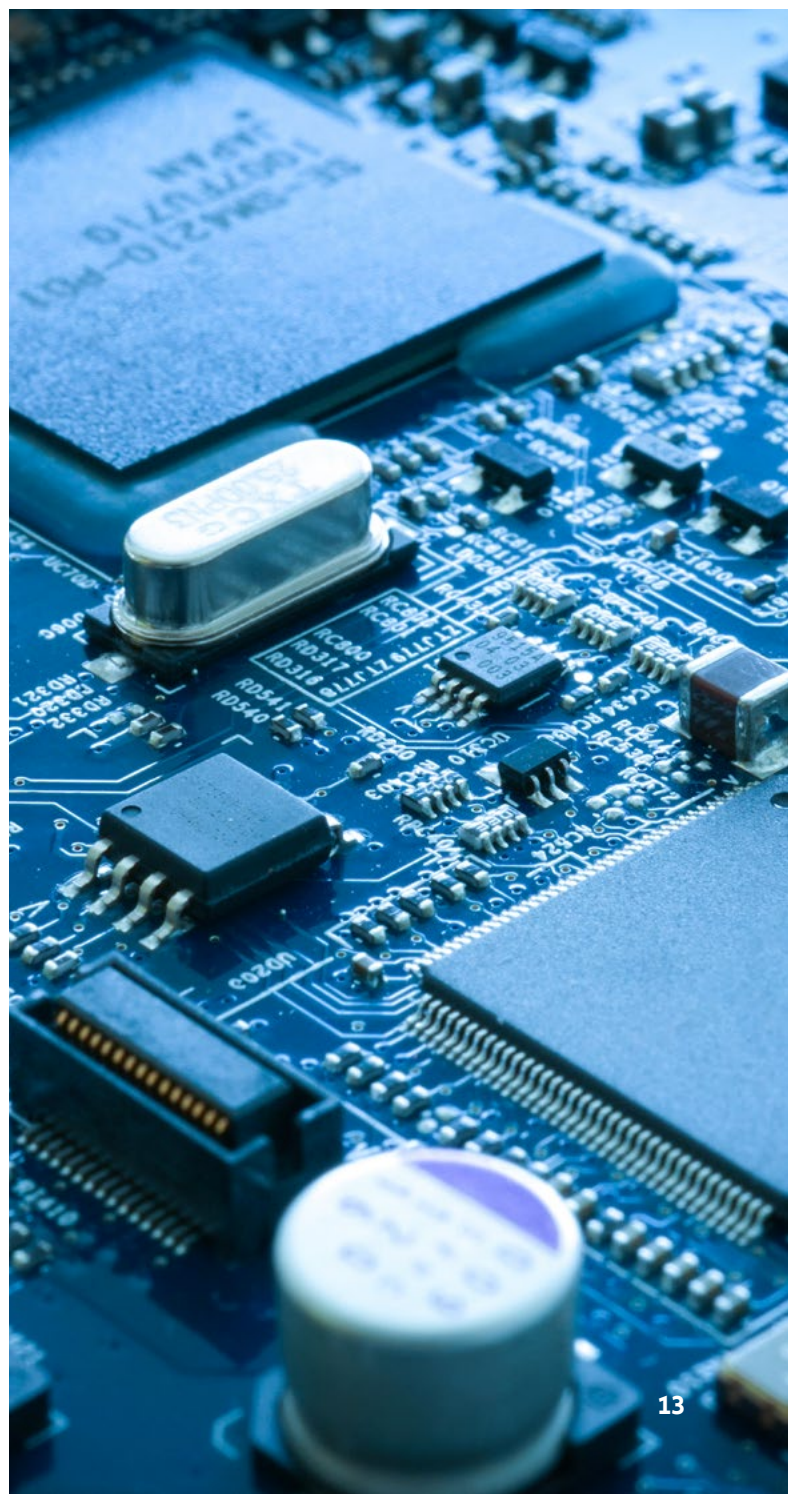
On top of the industry's inherent boom-and-bust nature, we believe renewed tensions in the so-called US-China tech cold war are another major risk factor. The previous US administration implemented a series of regulations to prevent Chinese companies from acquiring critical US semiconductor manufacturing technologies and equipment. After an apparent truce between both countries, the US passed new pieces of legislation to further slow down China's progress in semiconductor manufacturing by adding restrictions on exports of key technologies to a growing list of Chinese players.

Reflecting its growing economic and strategic significance, the industry will benefit from substantial financial incentives to expand its R&D and manufacturing activities in Europe and North America in coming years. While we do not expect such moves to challenge Asia's domination in semiconductor manufacturing in the short term, they will most likely contribute to more balanced trade flows in a more distant future.

Subsectors

Electronic components can be loosely divided between semiconductors and other active/passive electronic components and sub-systems.

Semiconductors serve different purposes (computing, storage, power management, communication, etc.) and are found in pretty much each and every electronic device. Product markets are generally concentrated and dominated by a handful of global players. The remainder of the industry is far more fragmented and generally more commoditized, with companies manufacturing everything from printed circuits boards to electronic displays through to resistors, capacitors and switches.



Energy

From brown to green

Sector rating

M Medium risk for enterprises

Strengths & weaknesses



- Increased investment in clean energy
- Improved economics at a time of high and volatile fossil fuel prices
- Enhanced policy support through various instruments
- Strong alignment of climate and energy-security goals
- Focus on industrial strategy as countries seek to strengthen their sovereignty



- Geographic imbalances in investment
- Weak electric grid infrastructure in many economies, including the US
- Uncertainties over longer-term demand for fossil fuels
- High upfront spending required for clean-energy investments
- High financing requirements
- Vulnerability to geopolitical risk

Sector overview

What to watch?

- Rising interest rates
- Green regulation, an opportunity for renewables & power and a risk for oil & gas
- Public policies on infrastructure
- Geopolitical developments (war in Ukraine, China-US, Middle East etc.)



The global energy sector is currently at a crossroads amid the significant shift towards clean-energy investments, even as the global economy remains heavily reliant on fossil fuels. The recovery from the Covid-19 pandemic and the response to the European energy crisis have provided a major boost to global clean-energy investment. In 2023, it is estimated that around US\$2.8Tn will be invested in energy, with more than US\$1.7Tn going to clean energy, including renewable power, nuclear, grids, storage, low-emission fuels, efficiency improvements and end-use renewables and electrification. The remainder, slightly over US\$1Tn, would go to unabated fossil-fuel supply and power, of which around 15% is to coal and the rest to oil and gas.

Clean-energy investments have been boosted by a variety of factors, including improved economics at a time of high and volatile fossil fuel prices; enhanced policy support through instruments like the US Inflation Reduction Act and new initiatives in Europe, Japan, China and elsewhere; a strong alignment of climate and energy-security goals, especially in import-dependent economies and a focus on industrial strategy as countries seek to strengthen their footholds in the emerging clean-energy economy.

Regarding oil & gas, global oil demand is projected to reach over 100mn barrels per day (mb/d) in 2024, up from 91.2 mb/d in 2020, driven by higher consumption in developing economies, especially in Asia.

Because of fluctuating oil prices, geopolitical tensions and the ongoing energy transition, the outlook for global oil and gas remains uncertain. However, the sector remains profitable, with the global oil and gas industry earning around US\$4Tn in 2022. However, the profitability of firms in the sector is heavily reliant on oil prices.

Subsectors

Fossil fuels: This includes oil, gas and coal operations. Firms can be involved in upstream or downstream processes.

Power: Firms in electricity generation whether through fossil fuels, nuclear, solar, wind, hydro or other forms of renewable energy.

Grids and storage: This includes firms managing and building infrastructure needed to distribute and store energy.




Household Equipment

Households cut down equipment spending after the Covid-19 boom


Sector rating

M Medium risk for enterprises

Strengths & weaknesses



- Structural growth drivers (population growth, urbanization)
- Capacity to innovate and create profitable niche markets



- Strong sensitivity to swings in consumer sentiment and real estate/construction activity
- Concentrated customer base (specialty retailers)
- Consumer electronics: Saturated products markets (computers, mobile phones, TV sets, audio equipment, etc.)
- Furniture: Fragmented industry, domination of small and medium-sized enterprises

Sector overview

What to watch?

- Trends in the real estate market (new housing starts and resale transactions)
- Trends in employment, salaries, savings and consumer credit
- Trends in commodity prices (steel, copper, plastics)



The household equipment industry emerged stronger from the pandemic, with booming consumer demand sending sales of appliances, consumer electronics and furniture to all-time highs in Europe and North America. Sales and profits peaked in the second half of 2021 before slowly eroding because of rising procurement costs (steel, copper, resins) and component shortages (semiconductors). The increase in the cost of living, together with the high comparison basis of 2021, already caused global sales of household equipment to recede in 2022.

Looking forward to 2023, we expect the risk environment to deteriorate significantly:

- The general increase in cost of living (food, personal and home care goods, fuel, etc.) is eroding the purchasing power of households for discretionary goods
- A major driver for replacement purchases, the real estate market will suffer from the increase in interest rates in Europe and North America
- In this context, we anticipate global sales to recede further in 2023, while remaining above pre-pandemic levels
- While softening, commodity and energy prices will remain high and pressure profit margins. Meanwhile, weak demand will make it more difficult for manufacturers to maintain high price tags

Subsectors

Household Equipment comprises different industries involved in the design and manufacturing of domestic equipment for households. While companies exhibit very different profiles between segments, they have in common a strong sensitivity to consumer spending and a reliance on Asia Pacific, mostly China, for their manufacturing activities. Mature economies still make up for the vast majority of demand.

- **Consumer electronics:** Audio and video equipment, computers, mobile phones etc. with an estimated US\$2,450Bn in turnover. Product markets are now largely mature and driven by replacement sales. A handful of companies generally dominates their markets and focus on design, R&D, marketing etc. while outsourcing manufacturing to contract manufacturers. Asia Pacific concentrates more than 85% of global turnover. Mexico is the only significant manufacturer outside of the region.
- **Domestic appliances:** Small appliances (home care, personal care, cooking aids ...) and large appliances (refrigerators, ovens, dishwashers, washing machines ...) with an estimated US\$530Bn in turnover. Much like consumer electronics, product markets are largely mature and dominated by a few large global players and smaller niche, regional competitors. Asia Pacific's share of global turnover stands at about 80%. Other manufacturing countries include Germany, Italy, Turkey and the U.S.
- **Furniture and furnishings** (US\$520Bn in turnover) is, on the contrary, a highly fragmented industry dominated by small- and medium-sized companies working closely with designers and retailers. A few mature economies, including Germany, Italy and the U.S., still have a significant presence in the industry.



IT Services

Digital transformation continues to fuel the global IT services industry

Sector rating

L Low risk for enterprises

Strengths & weaknesses



- High value added, high margins in IT consulting, software, cloud computing
- Significant share of recurring revenues
- Broad customer base (industries, retail, banking, insurance, transport, etc.)
- Powerful long term growth drivers (digitization of the economy)
- Positive legacy of the Covid-19 outbreak on future IT investment

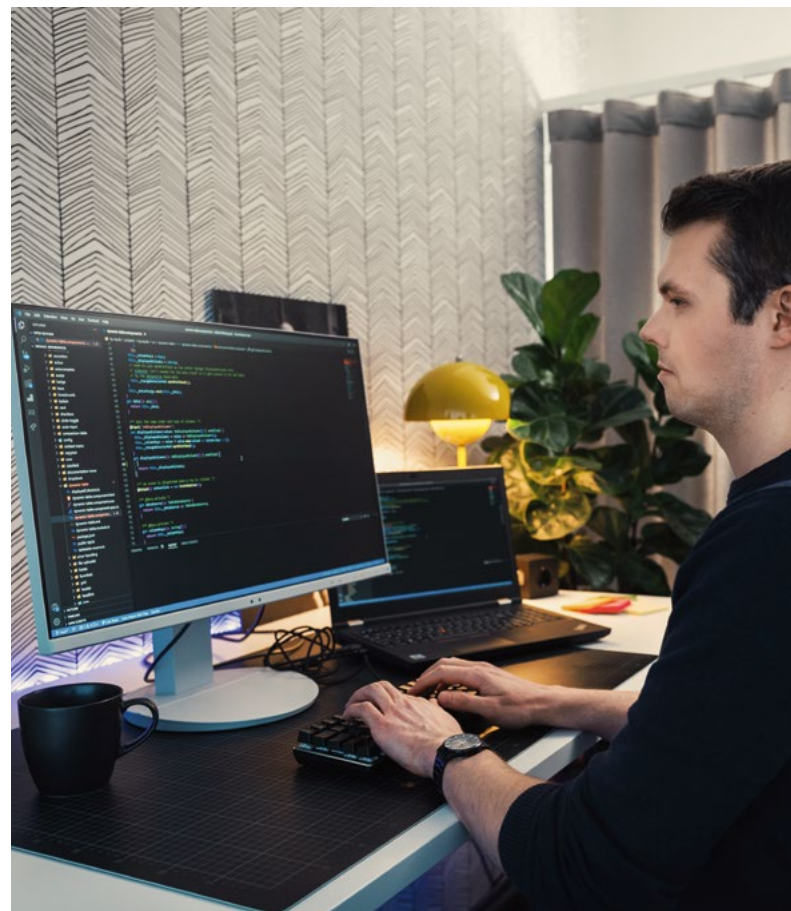


- Low barriers to entry
- Sensitivity to cuts in corporate IT investment

Sector overview

What to watch?

- Positive fallout of the pandemic on demand for remote, cloud-based professional solutions
- Labor shortages for highly skilled IT professionals



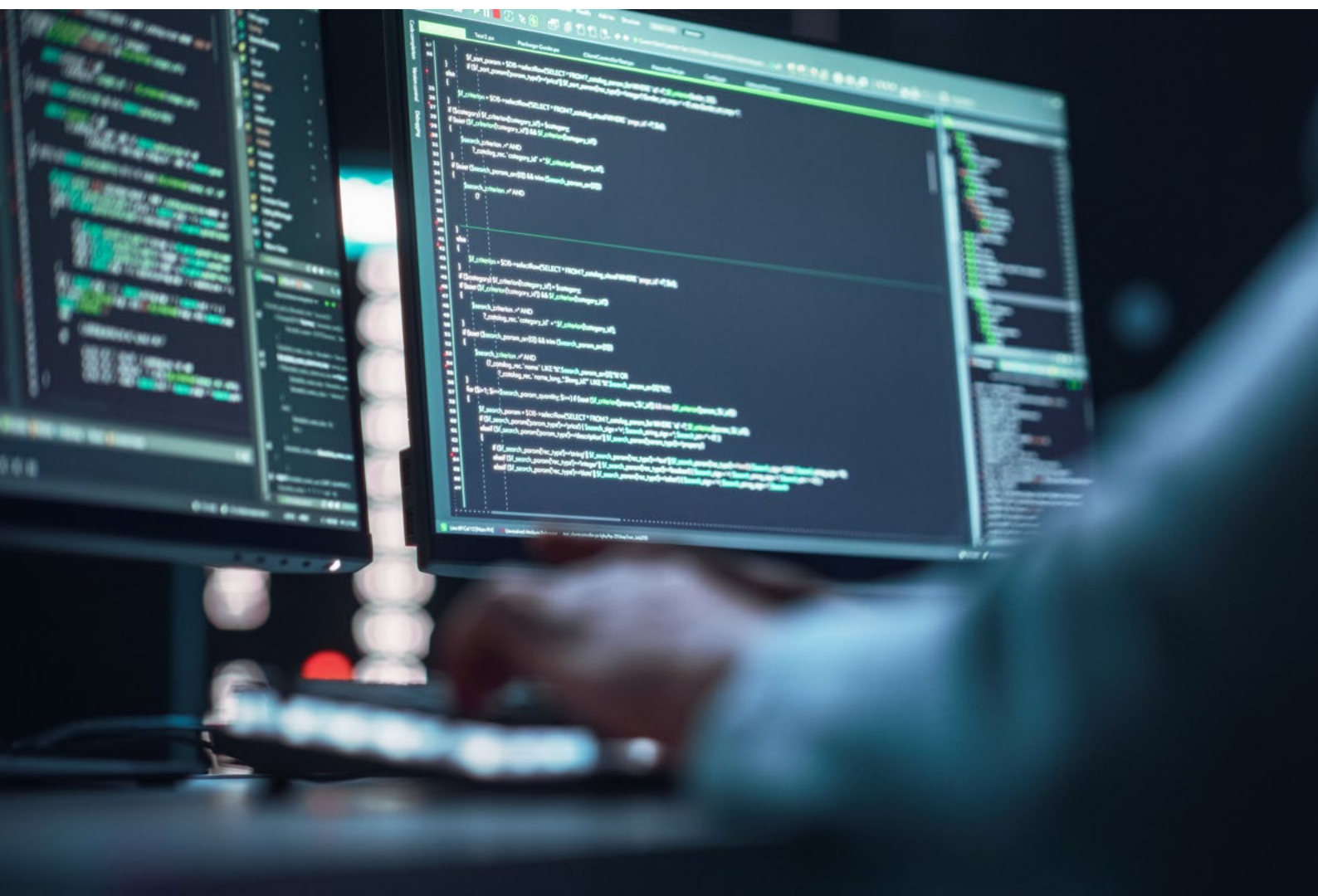
The global IT services sector is expected to grow by +9.5% in 2023, defying a more challenging economic environment and showing that digital transformation remains a priority among companies. The IT services segment, estimated at around US\$1,250Bn, should grow by about +8%, with companies placing a greater emphasis on cloud computing. Artificial intelligence in particular is seeing booming investment from all client industries, with financial services and industries leading the pack. Software, valued at around US\$800Bn, will see +12% growth as companies accelerate the modernization of their legacy software solutions.

Though a generally high-margin industry with recurring cash flows, it could however suffer from the tightening of financing conditions across most markets. This is especially the case for start-ups or companies operating in frontier markets. The sector is also vulnerable to an acceleration in salary growth amid fierce competition for talent and a shortage of skilled labor in emerging applications.

Subsectors

The industry can be divided into five main subsegments – companies generally operate across many segments. While IT consulting and programming is a fragmented activity, the managed services, software and data processing segments are far more concentrated with regional and global players.

- **Consulting** is about helping organisations make the best possible use of digital technologies to operate more efficiently.
- **Programming** is about developing custom digital tools to help organisations reach their business objectives.
- **Managed services** is about outsourcing the management of the IT infrastructure to a third-party company.
- **Software** are complex, generic programmes that can be made available to a variety of corporate customers.
- **Data processing**, including cloud computing, is about collecting and treating large quantities of data for corporate customers.




Machinery and Equipment

Metals volatility and recession concerns threaten the short-term outlook


Sector rating

 Sensitive risk for enterprises

Strengths & weaknesses



- High barriers to entry since a lot of investments in technology and capex need to be made in order to keep up with innovation and expansion
- Strong growth potential in robotics and process automation. Benefits from ongoing industrial innovation and automation. All sectors today are looking for efficiencies, and being able to bring products to the market that meet these expectations represents a great opportunity for gaining market share
- Heterogeneity of clients and markets, serving companies and people in all regions and in all kind of business/end-markets



- Highly cyclical sector, meaning that companies in the sector are hit hard during recession periods due to falling demand
- Complex and fragmented supply chain, which makes the sector vulnerable to periods of supply constraints, as was the case of the 2020 pandemic-linked lockdowns worldwide
- Capital-intensive sector, as large investments and R&D expenditures are necessary to grow the business and be able to offer new products that adapt to the new demands of the different sectors that require machinery
- Susceptible to commodity access and prices, since metals such as aluminum, copper, steel and nickel are highly used for machinery-building and their prices have been quite volatile lately

Sector overview

What to watch?

- Evolution of the global economy: A recession could threaten demand, especially if it endures longer than expected.
- Expansion of industrial activity: New orders and consequently capex plans will depend on industrial production and business confidence.
- Supply chains: Easing bottlenecks over the past few quarters have prompted machinery manufacturers to increase production and increase deliveries, and we expect this trend to continue.
- Evolution of metal prices: In a context of high volatility, the price evolution will be key in defining machine production costs and hedging strategies.
- Adaptation: Machinery companies with a more complete portfolio that combines hardware, software, cutting-edge technology and services will largely control the market.

The global machinery & equipment sector has a market value of around USD280bn and relies heavily on the APAC and North America regions, where revenues represent 34% and 30%, respectively, of the total market. The rest is split between EMEA (18%), South America (11%) and the rest of the world (11%).

As one of the most cyclical sectors, machinery and equipment is often hit hard and fast during slowdowns and recessions. This was the case during the 2020 pandemic-linked downturn, when revenues fell on average by -10% y/y. However, the post-pandemic recovery was noticeable as various end-market customers resumed operations and increased new orders, making revenues jump by around +16% in 2021 and +13% in 2022.

Through 2022, revenue and profit margins were positively boosted by still-high new orders that pushed backlogs to never-before-seen levels, ensuring production and revenues throughout 2023 as well. Despite waning demand in Europe and China (the main M&E exporter in the world), India and the US have witnessed business activity with huge government investments in infrastructure bolstering demand for heavy equipment.

Overall, two sub-sectors have seen the best performance in 2023: farming machinery and mining machinery, helped by elevated food demand and prices that have boosted income for agri-food companies and mining companies' increased capex to meet high demand for lithium and rare earth minerals, respectively. Nevertheless, as fears of a global recession remain, demand is expected to decline in the short term, which together with still-high production costs will threaten companies' margins in 2024. In fact, equipment makers may face excess inventory in early 2024 as new orders from farmers and construction companies may cool in the next quarters. However, in the long term, we see a lot of growth potential, especially in the most tech-oriented subsectors such as robotics machinery, given that the automation of processes is gradually becoming a priority for sectors such as automotive and electronics, which are dependent on innovation to keep growing their businesses. The farming machinery sub-sector will also see rising demand to ensure food security for an increasing global population..

Subsectors

The machinery & equipment sector includes the following sub-sectors: construction machinery, heavy trucks, agricultural & farm machinery, industrial machinery, mining equipment and robotics.




Metals

Green growth dilemma

Sector rating

S Sensitive risk for enterprises

Strengths & weaknesses

- 
- Increasing demand for metals, especially those critical to renewable-energy technologies and electric vehicles
 - Despite volatility, many metals have high prices, boosting profitability for the sector
 - Governments' focus on critical materials could increase support for the sector
 - Firms' strong liquidity position

- 
- High exposure to geopolitical tensions and conflicts
 - Fragmented supply chain at risk of disruptions
 - Mining companies are facing increasing pressure related to ESG (water use, biodiversity, social impacts etc.)
 - High capital intensity

Sector overview

What to watch?

- Rising interest rates
- Green regulation, both an opportunity (through higher demand) and a risk (because of higher regulatory requirements)
- Public policies on critical materials
- Exploration announcements by mining companies
- Geopolitical developments (war in Ukraine, China-US, Middle East etc.)



The global base-metal mining market is expected to reach US\$744.14Bn by 2030. The global metals sector, including mining companies, has been through a recent period of growth and expansion. The sector's profitability has been driven up by increasing demand for metals in developing economies as well as the boost from the energy transition and by higher metal prices. In 2022, metal prices increased by almost +90%, thanks to strong demand and supply constraints. The average EBITDA margin for the global metals sector was 28.7% in 2022, indicating a healthy level of profitability. Firms also have strong liquidity, with the average current ratio standing at 2.1 in 2022.

However, the sector faces challenges such as geopolitical tensions, environmental regulations and the need for technological innovation. The ongoing Russia-Ukraine war and high input costs will continue to pressure profitability in 2023. Indeed, the rise in cost of production has been squeezing margins. Despite the tremendous needs of the green transition, many firms in the sector have decided to limit plans to develop mines. The sector faces a growth dilemma as miners should spend more on exploration to ensure sufficient supply. However, their capex is set to decrease by about -10% in 2023, with exploration likely to fall by twice as much.

Subsectors

Steel production: This is a significant segment of the metals sector, with steel being a critical material in construction, automotive and many other industries.

Metal processing and manufacturing: Firms involved in the processing of raw metals into finished products or components used in various industries (other than steel).

Iron-ore mining: Mining of iron ore for steelmaking industries

Base-metal mining: Mining of non-ferrous metals such as aluminum, copper, zinc and lead.

Precious-metals mining: Mining of gold, silver, platinum etc., mostly used for jewelry and as a form of investment.




Paper

New consumption patterns, digitalization and environmental awareness are reshaping the market


Sector rating

S Sensitive risk for enterprises

Strengths & weaknesses



- Increasing demand for boxes and packaging made of cardboard and paper with the exponential development of e-commerce
- Further growth potential in the medium and long term, driven expectations of exponential population growth
- Greater environmental awareness will continue to promote the use of paper packaging instead of plastic, especially in the food industry



- Digitalization: With remote working becoming the “new normal”, digital connections and communication will continue to increase, resulting in reducing use of notebooks, paper sheets and printed books in the future
- Deforestation: the excessive use of land for planting and felling trees represents a great reputational risk for the sector
- Vulnerability to energy and chemicals access and prices: higher input costs are damaging the margins of the pulp subsector, particularly in Europe

Sector overview

What to watch?

- **Evolution of e-commerce:** The packaging segment is highly correlated to online sales as e-commerce is the main market for selling cardboard boxes and corrugated cartons.
- **New regulations for packaging:** Governments, notably in Europe, have been encouraging a greater use of paper and cardboard to replace plastic packaging.
- **Energy crisis:** Electricity and natural gas prices in Europe remain above normal levels, eating into the competitive advantage of European players versus their peers in the US.
- **The war in Ukraine:** The conflict continues to affect supply and demand flows of paper and is also hindering the sector’s supply chains.
- **Increased consumption of paper-derived sanitary products:** This is the result of the increasing population in developing countries and government aid seeking to generate more access to essential household products in developed countries.
- **Increasing digitalization:** This will continue to reduce the use of printing paper.
- **Evolution of the housing and construction market** in the main wood-demanding economies (US and China) and building renovations in Europe.



As of today, the market share (by revenue) of each subsector is as follows: wrapping and packaging (53%), printing and writing paper (23%), sanitary (12%), news print (5%) and others (7%). By geography, the top five pulp & paper producers are China, the US, Japan, Germany and Canada.

The pulp & paper sector is energy and raw materials intensive, notably dependent on chemicals for transforming wood into pulp and then into other derived sub-products. Margins in the sector, especially in Europe, have been deteriorating throughout 2023 as natural gas and electricity prices remain above levels seen before the invasion of Ukraine. As it is difficult to predict when and how this conflict will end, there is much uncertainty over the length and effect of Europe's energy crisis.

Many European chemicals companies have reduced or stopped the production of certain products due to the huge amounts of natural gas needed to operate. As a result, some players in the pulp & paper sector have been forced to source from other chemicals suppliers from China, the US and Canada. Only few companies have been able to continue passing on part of these higher production costs, depending on the subsector they are in and the country. Overall, Q1 and Q2 2023 saw sharp drops in both revenues and earnings for the entire sector, and a similar performance can be expected for Q3 and Q4, with a recovery expected in the first half of 2024.

By sub-sector, we believe that companies in the packaging segment have a better outlook than those in the pulp and wood categories. On one hand, the rise in online purchases together with greater demand for paper and cardboard for food packaging and transportation are two key factors that will keep demand high in this category. On the other hand, the rise in pulp prices in Europe is making trade flows shift to other countries, such as the US and China. Regarding wood, we expect prices to remain weak due to decreasing demand, especially from the construction/housing industry, as recession fears persist.

Subsectors

Paper packaging This sub-sector is valued today at around USD930bn and the global demand for containerboards has increased by +28% when compared to ten years ago, thanks to the increasing utilization of paper and cardboard in the food & beverage industry (replacing plastics and cans) and the huge development of e-commerce (revenues of online sales providers are expected to jump by +35% in 2024).

Freesheet, newsprint paper and specialty paper: The printing and writing sub-sector is a fragmented market that has been shrinking in size due to digitalization. Both demand and supply of printing and writing paper have been decreasing by -21% from the levels observed a decade ago, especially in North America, where the decline has been sharper (-51%). In parallel, global newsprint paper demand has decreased by -63% to around 11.9mn MT per year, also compared to ten years ago. The decline has been observed in all continents. However, Asia (especially China) continues to be the world's largest consumer of newsprint paper (3.6x the amount demanded by North America)

Pulp: This market is less fragmented than the other subsectors as it is a capital-intensive industry with high chemicals consumption needs. The majority of companies operating in this segment are located in Brazil, Chile, Canada and Northern Europe. In terms of trade, 50mn MT of pulp were shipped around the world in 2021, of which 54% was bleached hardwood kraft and 46% bleached softwood kraft. The largest consumer is China, which demands around 38% of the global pulp production. Pulp producers are currently suffering because of increasing energy and chemical prices (extremely necessary for transforming the pre-shredded wood into pulp). However, some companies are self-sufficient in energy. The absence of capacity increases will perhaps see pulp prices remaining high.

Forest, wood and timberland: Lumber and wood product prices have been declining after jumping during the beginning of 2022. The wood market is correlated to the construction industry, which is not currently at its best since housing starts have been declining in the US.




Pharmaceuticals

Pandemic-driven revenue growth fades, but robust pipeline of new medicines will assure growth in the mid-term

Sector rating

L Low risk for enterprises

Strengths & weaknesses



- Large-scale sector with a wide, stretched market, offering a wide variety of products and services worldwide
- Low fragmentation: the top 5 players together hold 30% market share, while the top 10 hold 50% of the market.
- High barriers to entry, notably as the sector requires significant investments in R&D as well as highly trained personnel (scientists), which is too costly for new companies.
- Despite the high expenditure in R&D (around 19% of revenues), companies in this sector are able to generate sufficient cash from operations to cope.
- Chronic disease cases have risen globally, making people more dependent on medicines and health supplements, which guarantees demand.
- Access to healthcare has been improving globally, especially in developing regions such as LatAm and Asia.
- Pricing power for treatments that benefit from patent protection since companies that produce generic drugs cannot replicate the formula. In parallel, this allows branded-drug sellers to have larger margins and absorb the inflation effect (higher ingredient prices)



- In order to ensure the safety, efficacy and quality of medicines, the pharmaceuticals sector is highly supervised and controlled, both globally (international standards) and locally (FDA in the US or EMA in Europe).
- Constant competition from generics and biosimilar drug producers as they can offer equally effective products at lower prices. As a result, generic drug-makers are constantly struggling to increase their profit margins.
- Although the approval processes for new medicines have been somewhat simplified in the last few years, they are still complex and lengthy, which delays the launch of new products to the market.
- The biggest players in this sector are American (and some European), which means that access to many medicines is not easy or affordable for people living in developing countries (LatAm, Africa, Asia)

Sector overview

What to watch?

- **Aging population:** The life expectancy at birth has been rising progressively and today it is at 73.2 years on average (75.6y for women and 70.8y for men). At the beginning of the century, the average was 67.1 years.
- **Growing population:** The global population is currently at 8Bn and this figure is projected to reach 8.5Bn in 2030. The more people there are, the greater the number and frequency of new infections and diseases on the planet. This represents a persistent challenge for companies focused on doing research and development on new drugs and vaccines. To ensure sanitary stability, a lot of capital and human resources have to be invested.
- **Faster approval processes:** The number of annual FDA approvals of new products has increased markedly, thanks to its initiatives to speed up the processes and make it more efficient. In the past four years (2018-2021), the average number of annual approvals was 53 products, while between 2014-2017 the average was 39 and between 2010-2013 it was 29.
- **Pandemic boost to sales eroding in 2023:** Although 2022 was a good year for the sector (revenues grew by +7.7% y/y on average for the 15 largest pharmaceutical companies), a sales decline is expected in 2023 (-3.8% y/y), followed by a recovery in 2024 (+5.0% y/y).
- **Rivalry with generic drug-makers will intensify in 2023 as the number of expiring patents will be higher (vs the figures of 2021-2022).** It is estimated that once a generic drug is available in the market, it can cut the revenue of the branded drug by around 70%-80%.
- **Competition will also grow from specialty drugs or biopharmaceuticals, i.e. drugs manufactured from biological sources (living organisms such as microbial cells or plant cell cultures), implying higher production costs and therefore higher prices.** Despite being more expensive, biopharmaceutical products are becoming popular, given their proved capacity to treat previously untreatable illnesses. In parallel, in the same way that branded drugs face competition from generics, biopharmaceutical products also face competition from biosimilars, which are an imitation (almost an identical copy) of original biopharmaceuticals.

Having proved its prowess to the world during the challenging times of the Covid-19 pandemic, the pharmaceutical sector experienced a boom in 2021 that continued in 2022, with revenues growing by +17% and +8% y/y, respectively, explained by the record speed at which laboratories managed to create new vaccines. With the health crisis behind us, 2023 revenues are expected to fall by -4%, with earnings also expected to be weak in the coming quarters. Yet, we believe the outlook for pharmaceutical companies is rather stable.

The main pillar for the industry to remain on its feet is innovation. There are still hundreds of diseases that cannot be fully prevented or cured, which means there is a lot of room for science exploration and growth potential. Despite the revenue erosion expected for 2023, we expect the sector to continue investing in R&D to continue enlarging the product pipeline and assure growth in the medium and long term. Oncology will be the top focus as it is the number one source of income for pharmaceutical companies today. Immunology and diseases related to the metabolism such as diabetes are the two other segments that will see a lot of growth.

Because patents are constantly expiring (they last 20 years on average), it is crucial to continue innovating to obtain new ones that will allow manufacturers of branded drugs to remain relatively protected against makers of generic drugs. Generic drugs are increasing their share of some markets, especially in low-income economies.

Market growth expectations are not homogeneous by geography: In developed regions such as North America and Europe, market growth of +4% is expected between now and 2025, while Latin America and India are likely to see growth of around +11% and Africa +5.5%. This is explained by the increasing population in developing regions and by a growing middle class with greater access to healthcare.

In terms of consumption, the world's biggest importers of pharmaceutical drugs are the US, Germany, Switzerland, Belgium and China. In terms of production, the US and Europe are by far the industry leaders. For instance, large American pharma companies generate around USD360,000mn of revenues per year, which is 1.1x higher than that of European peers and 4.3x higher than that of Asian peers.

Even though patents are constantly expiring (they last on average 20 years), continuing to innovate and obtain new patents is allowing manufacturers of branded drugs to remain relatively protected. Nevertheless, it is a reality that generic drugs are penetrating more and more in some markets, particularly those where governments encourage the use of generic drugs and thus the competition is stiffer.

Subsectors

Drugs manufacturers:

- a. **Active Pharmaceutical Ingredients (API):** API is the part of any medication that produces the intended health effects. They are produced from raw materials with a specified strength and chemical concentration. Examples of APIs include: ibuprofen, loratadine, omeprazole and acetaminophen. All drugs are made up of two core components (APIs and excipients). The excipients are chemically inactive substances, such as lactose or mineral oil in the pill, which are used to help the medication remain stable and to control its absorption.
- b. **Patented drugs (also known as branded or original drugs):** Original drugs refers to drugs that have been approved for marketing after many tests and rigorous clinical trials (there are four phases before the post-market monitoring). This takes about 15 years of R&D and millions of dollars of investments. Only large multinational pharmaceutical firms are able to develop original drugs, which benefit from a patent period of 20 years. But once the patent expires, other manufacturers can start to produce generic versions of the drug.
- c. **Generic drugs:** Drugs that are not branded but that are very similar to a branded drug in terms of dosage, administration, safety and performance. Generic drugs tend to be cheaper and therefore more accessible, since their manufacturers did not have to invest in discovering/creating a new formula but only replicate an existing one.
- d. **Biotechnology:** This is the merging of biology and technology, referring to the branch of applied science that uses living organisms and molecular biology to produce healthcare-related products. Today, approximately 17% of total drug revenue is derived from biopharmaceuticals, which are mostly used in oncology, metabolic disorders and infectious diseases. The term biopharma describes companies that use both biotechnology and chemicals in their R&D.

Contract Research and Manufacturing Services (CRAMS):

The field encompasses those services in the pharmaceutical and biotechnology industries that require extensive R&D and large-scale manufacturing facilities. It is a clinical term used for referring to outsourcing and it is one of the fastest-growing segments in the sector today.

Drug marketing: This refers to the marketing of drugs and medical devices by private and public organizations to doctors, clinicians and consumers as drugs/treatments need to adopt particular marketing strategies to be sold effectively;W

Retail

Cost-of-living crisis weighs on consumer spending

Sector rating

M Medium risk for enterprises

Strengths & weaknesses



- Resilient labor markets in advanced economies
- Still elevated savings buffers in advanced economies
- Policies supporting the purchasing power of households for staple goods
- “Modern retail” still has a lot of room for expansion in emerging markets
- E-commerce can be a growth catalyzer in emerging markets
- Changing consumer habits are an opportunity
- Expertise of established players on supply-chain issues



- Record-high inflation denting households’ purchasing power
- Strong price competition and overall limited room for differentiation for food retailers
- Cut-throat competition between online and incumbent discretionary retailers
- In the face of growing e-commerce penetration, adaptation to new business models proves very challenging for incumbent retailers

Sector overview

What to watch?

- Cooling down of inflation
- Trends in employment, salaries, savings and consumer credit

Food retailers had to navigate challenging times during the Covid-19 pandemic, with supply-chain disruptions, labor shortages, changes in customer needs and behaviors and costly safety protocols to ensure the health and safety of employees and customers. With people spending more time at home and restrictions on eating-out opportunities, food retail sales surged in 2020 and well into 2021, before progressively returning to pre-pandemic levels in early 2022.

Russia’s invasion of Ukraine considerably changed the retail trading environment not just in Europe through lower consumer confidence but also in other international markets through record high food inflation and product shortages. While international agricultural benchmark prices have fallen well below their 2022 highs, food producer prices have only begun to decelerate and will remain elevated for the foreseeable future. Pressure will remain strong on retailers to strike the right balance between increasing their prices in turn to preserve their profitability and maintaining their market shares by being as price competitive as their competitors. Notably, food-retail sales in volume terms are decreasing because of high inflation in advanced economies – a phenomenon so far more typical of emerging economies.



Retailers also have to adapt their e-commerce logistics in response to the post-Covid reality, with online sales figures lower than during the pandemic but still exceeding pre-pandemic levels. Rising inflation may discourage consumers from making online purchases due to the additional cost of delivery fees, which could result in lower-than-expected sales for online retailers. As a result, retailers may see a reduction in profitability if their capacity utilization falls below expected levels due to the decreased sales volume.

Adding to this highly challenging environment, the tightening of financing conditions seen across most markets could significantly add to the expenses of retailers that relied on debt for expansion in past years.

Non-food retail

At the onset of the Covid-19 pandemic, discretionary retailers experienced significant challenges due to the closure of physical stores and reduced consumer spending amid economic uncertainty. However, following the easing of lockdowns, spending on discretionary items such as consumer electronics, furniture and appliances surged, with households tapping into their accumulated savings from reduced spending on non-essential items and services during the pandemic. In most advanced economies, extra spending from the second half of 2020, 2021 and the first half of 2022 more than offset the initial losses of the first pandemic wave.

Rising inflation began to hurt discretionary retailers in Q3 2022. Because of growing pressure on the purchasing power of households, leading retailers experienced lower sales volumes, even though higher prices helped to maintain satisfactory sales performance for a few months. The situation worsened in the fourth quarter of 2022, with sales volumes falling further and inventories building up, leading retailers to cut prices, hurting profitability.

The outlook for 2023 appears bleak, with depressed real estate markets, unfavorable comparables, persistently high inflation and lower economic growth on the cards. As the economic environment continues to deteriorate, flaws in the business models of companies that were previously masked by the 2021-2022 boom in consumer spending are likely to become more apparent. Discretionary retailers will continue to face fierce competition from e-commerce specialists, and achieving profitable growth in their e-commerce operations will continue to be a significant challenge.

Subsectors

Fast-moving consumer goods (food, personal care, house care, etc.): Traditionally the most resilient segment of the industry with little volatility in consumer spending and high industry concentration. The main challenge for retailers is to adapt their store mix to address changing consumer preferences.

Furniture, electronics, appliances, hobby and leisure: Segments with generally higher profit margins but greater volatility as they sell discretionary consumer goods. Fierce competition from e-commerce specialists. Uncertain transition from a brick-and-mortar to click-and-mortar business model.

Apparel and accessories: Much like other discretionary spending, apparel and accessories see reduced consumer spending when the economy decelerates.

Beauty and cosmetics: Very dynamic sales globally pushed by the retail expansion of luxury companies.

Department stores: Department stores face very strong competition from online stores. The segment is cutting capacities in North America and is starting to adapt in Europe, but still growing in other regions of the world.

E-commerce specialists: Buoyant top line growth but still elusive profitability for the vast majority of players



Telecom

5G take-off fails to revive growth in a mature industry

Sector rating

L Low risk for enterprises

Strengths & weaknesses



- Highly regulated, concentrated markets with generally predictable cash-flows and limited churn
- Generally high EBITDA margins (30-40%)
- Long-term trend of booming data use
- Resilience to periods of downturns in advanced economies



- Market maturity in advanced economies leads to strong price competition
- Highly capital intensive business (capex in the range of 10-20% of revenue)
- High leverage (net debt/EBITDA > 3) among a few large U.S. and European players
- Uncertainties related to the U.S.-China tensions, Huawei of China being the leader in 5G technologies
- Sensitivity to periods of downturns in emerging economies
- Exposure to deteriorating financing conditions

Sector overview

What to watch?

- 5G uptake in mature economies
- Deteriorating credit conditions hurting vulnerable players



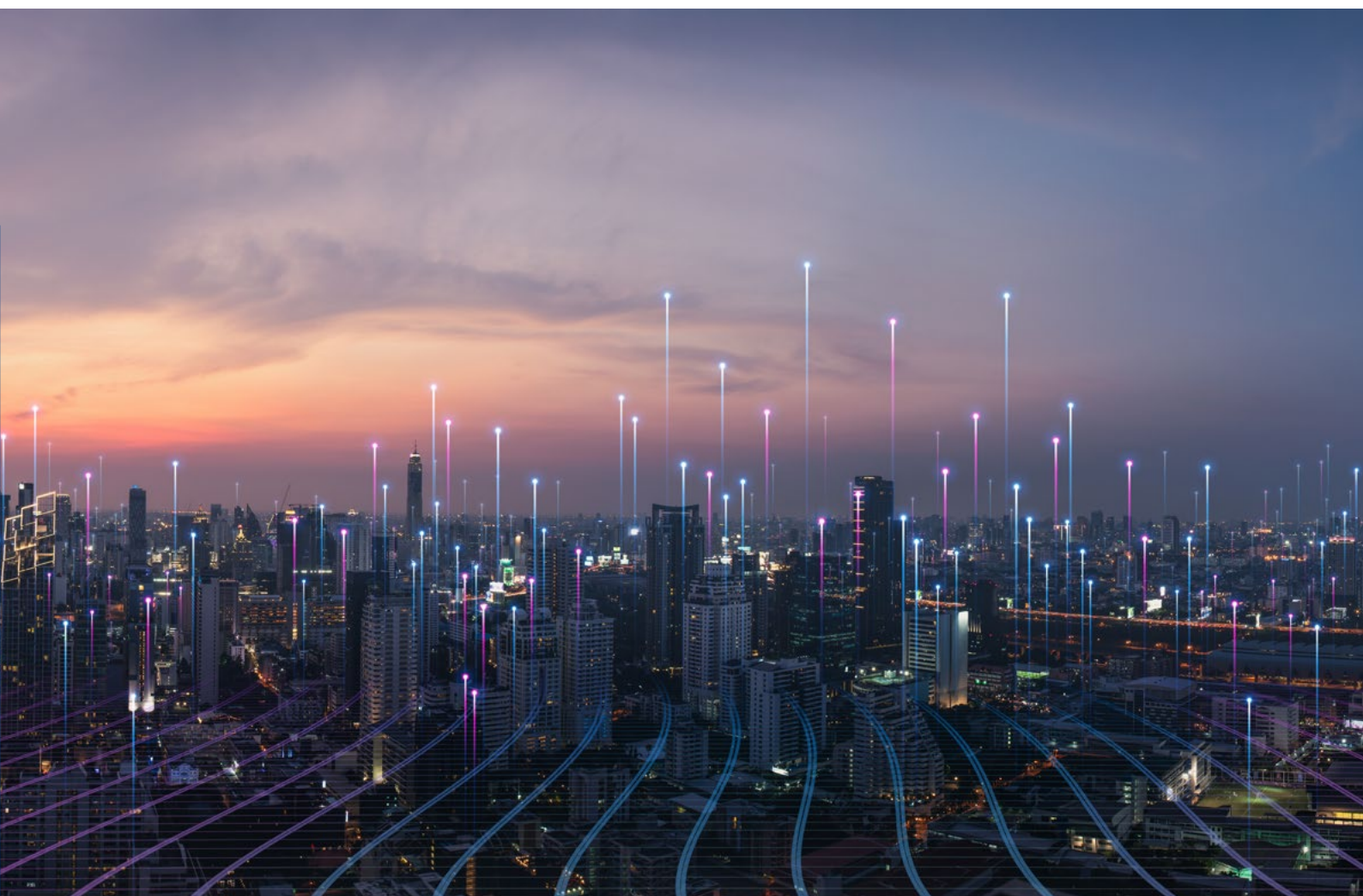
While generally resilient in periods of economic downturns, the sector is not immune altogether. In particular, because of its capital-intensive nature, it is often relying on substantial debt financing to invest in network infrastructure. As interest rates rise, the cost of servicing this debt escalates, which can significantly impact profitability. Additionally, as consumers grapple with the broader economic implications of rising interest rates, discretionary spending may decline, which can adversely affect the demand for telecom services or lead to greater price-based competition.

Higher financing costs and more cash-conscious consumers are likely to translate into cuts in capital expenditure for network expansion. The 5G roll-out is likely to slow down as the technology has been a major disappointment, both for consumers — because of a lack of innovative services — and telecommunications companies, which have not been able to raise subscription prices as much as they expected. As of 2023, about 1bn mobile-phone users had a 5G plan in the world, the vast majority in China (650Mn) and to a lesser extent North America (140Mn) and Europe (67Mn).

Subsectors

The industry can be further segmented into smaller subsegments

- **Landline and mobile telecommunications.** The biggest players operate in both segments, but it is not the case in emerging economies
- **Consumer and business telecommunications.** Some niche players focus on the specific needs of corporates
- In the US and in some European countries, **cable companies** are major players. They often derive revenue not only from telecommunications services, but also pay-TV services
- Satellite telecommunications is a minor but still significant segment, catering the specific needs of companies and customers in remote location
- **Mobile Virtual Network Operators (MVNO)** are companies focusing on marketing mobile services while renting network capacity to traditional operators



Textiles

Cost-of-living crisis in major economies dashes hopes for a strong recovery


Sector rating

S Sensitive risk for enterprises

Strengths & weaknesses



- Reactive, flexible and integrated supply chains
- Product segments with strong consumer appeal (luxury, sportswear)
- Capacity to reinvent business models (fast fashion, ultra fast fashion)



- Boom for personal protection equipment now over
- Sensitivity to changes in consumer sentiment and income
- Very strong pressure from a handful of large fashion retailers
- A growing fraction of consumers relying on the second-hand market
- Shift away from China for manufacturing proves challenging
- Bad ESG publicity

Sector overview

What to watch?

- Reshuffling of consumer spending in advanced economies
- Changes in raw-material prices (cotton, synthetic fibers derived from oil and gas)
- Changes in consumer preferences and business-model innovation addressing those changes



In 2022, the global textile industry experienced a revival in demand, although it remained shy of reaching the heights seen prior to the pandemic in both production hubs and end markets. The industry now faces a challenging mix of persistently high costs for raw materials, a sweeping cost-of-living crisis and evolving consumer preferences, which collectively set the stage for a demanding landscape for the quarters to come.

With historically high inflation denting households' purchasing power, consumer spending on fashion is under pressure and secular trends such as the rise of ultra-fast fashion brands and the purchase of second-hand goods are only gathering steam. While positive for volume growth, ultra-fast fashion is contributing to pushing prices down and forcing manufacturers, agents and wholesalers to adapt to an even faster pace, putting supply chains under additional pressure. Because it is conversely detrimental to volume growth, the second-hand market is increasingly being embraced by retailers that are introducing trade-in programmes for old clothes.

Among the most resilient end-markets, the sportswear and luxury goods categories are expected to continue to post above-average performance, but signs now abound that their growth has peaked. Similarly, the reopening of the Chinese market in the first half of 2023 has fallen short of expectations and its positive impact on demand appears to be short-lived.

Subsectors

- **Textiles:** about 50% of industry turnover. Textile manufacturers serve mostly the needs of the clothing and home improvement industries, to a lesser extent other industries (automotive, etc.)
- **Apparel:** about 30% of industry turnover. Apparel manufacturers are mostly contractors to which large fashion retailers outsource the actual manufacturing of their clothes and accessories.
- **Leather and shoes:** about 20% of industry turnover. Leather goods and shoes generally have distribution channels that are distinct from apparel.

Asia Pacific concentrates 80% of the industry's turnover, with China's share standing at 50-60% across most segments, the remainder being split between India, Bangladesh, Vietnam and Indonesia. Excluding Asia, Turkey and Mexico also have sizeable textile industries exporting to the European and U.S. markets, respectively. Some countries producing high end or technologically advanced fabric have kept a significant manufacturing base (Italy, France, Germany, Japan in particular).



Transport Equipment

New orders at risk, but high backlogs should ensure production and income in the short term

Sector rating

S Sensitive risk for enterprises

Strengths & weaknesses



- High pricing power since there are few manufacturers capable of engineering and building tailor-made transportation equipment, particularly in aviation (an oligopoly with very few well-recognized players).
- Lot of growth potential for the transportation sector in general, especially for the rail transportation market, with governments looking to encourage green mobility.
- In some cases, construction contracts are signed with governments (state-owned transportation companies), which gives greater reliability of repayment.
- Construction periods for transport equipment tend to be long (several years), allowing companies to anticipate production capacity and forecast income in advance.



- Very capital-intensive sector as it is necessary to invest both in R&D (design and engineering of state-of-the-art models) and in capex and infrastructure for the construction and assembling of the equipment to be sold.
- Highly leveraged market. Given the large size of contracts, companies require a high level of disposable working capital over the construction period as in most cases they will be fully paid only on delivery.
- As steel and aluminum are the main metals used for the manufacturing of trains, airplanes and vessels, profitability is vulnerable to commodity price volatility, though sales are agreed on a fixed-price contract basis.
- A market that demands high precision, high-quality finished products and safety. Any failure of a structural component, manufacturing defect or accident can have huge negative consequences for both the operator and the manufacturing company.
- A cyclical sector: sales accelerate in economic boom periods because transportation companies enlarge their capex, but investments decrease significantly during economic slowdowns.

Sector overview

What to watch?

- **Stricter environmental regulations:** In a society that is increasingly aware of the need to reduce CO₂ emissions, the transportation sector is facing stricter international regulations (as it is responsible for around 26% of global CO₂ emissions). For transport operators to achieve a green transition, transport-equipment manufacturers must invest even more in innovation so that they can create green ships and aircraft. As a result, we expect new models to be launched in the aviation sector in the coming years, intensifying competition in the oligopolistic market where no player wants to lose market share.
- **Easing of supply-chains:** We expect to see some further easing of supply-chain bottlenecks in the coming quarters, which will allow a faster delivery of planes, ships and trains, and therefore faster revenue collection. This will improve companies' financials, given that the backlog that is transformed into finished products represents working-capital improvements and larger operating cash flow.
- **Decrease in new orders for the end of 2023 and beginning of 2024:** A weaker economic outlook, notably for the US and Europe, and waning consumer confidence may reduce demand in the coming quarters. In times of uncertainty, transportation companies prefer to be cautious in terms of how much cash to use for capex.
- **Labor market:** The "great resignation" movement or staffing issues observed in 2022 (difficulty to find and recruit engineers and skilled staff) has persisted in 2023, especially affecting the aviation industry and raising labor costs for some companies that seek to retain employees through salary increases.
- **Inflation:** We expect transport-equipment manufacturers to suffer wage-inflation pressures in the coming quarters. Yet, this sector has the capacity to transfer higher production costs to customers. For instance, the current price of a brand-new large vessel ranges between USD180mn-210mn, while last year a new panamax and a post-panamax were at around USD130mn and USD160mn, respectively.
- **Commodity prices** After reaching a peak in spring 2022, the prices of most metals have been gradually declining over 2023 due to recession fears. We expect to see a lot of volatility in the short-term, particularly for steel, palladium, copper and aluminum.
- **Space race:** We expect the competition to develop spacecraft to intensify in the coming years. Countries with high investment capacity in innovation and R&D such as the US, China, Russia and Europe will continue running the race to find solutions that will allow transportation to the space/moon.
- **Growing defense market:** Companies in the aviation and maritime sub-sectors have been increasing their market shares in the defense segment (military helicopters, jet fighters, aircraft carriers, submarines). The US, Russia and China spend the most on military equipment.

Trucks OEMs: The supply-chain situation has been improving so far this year, accelerating production rates and boosting delivery volumes. A healthy backlog and pent-up demand from years of poor production due to a lack of supply should support manufacturing rates in the remainder of 2023. Nevertheless, additional new orders for heavy trucks risk being threatened by the weak economic outlook that is destabilizing global trade.

Aerospace: The financial results of companies have been topping market expectations, thanks to a pick-up in commercial aircraft deliveries as their production accelerated. Plane deliveries should rise further by the end of 2023 and beginning of 2024, driving better profits, margins and cash flow. Yet, engine makers and other suppliers could see lower margins as rising OEM deliveries dilute gains from strong aftermarket demand. Suppliers have been also struggling with sourcing and employee training.

New orders: After having grown drastically in 2021 and 2022, new orders are currently threatened by the deterioration of the global economic outlook. However, the urgent decarbonization of the transportation sector could keep orders rising, especially in the shipping industry. Because of the still ongoing energy crisis, demand for LNG tankers will continue to be high so shipbuilders with expertise in this field will see some market expansion.

Backlog: The large increasing capex of transportation companies during 2021 and 2022 led to this sector accumulating a level of backlog not seen before, which has ensured continued production and revenue collection in 2023. Many shipyards and aircraft builders have tried to expand their manufacturing centers in order to cope with increased demand as some production hubs are at full capacity. This has been affecting the aviation industry, where deliveries are below the desired level even though they have increased significantly compared to 2022 volumes.

Purchasing contracts: The manufacture of transport equipment is a costly and time-consuming business as it can take about two to four years to design and build a vessel, airplane or train. Because of the long duration of these projects, there are many risks along the process and a lot can go wrong. As a result, contracts often go hand-in-hand with insurance bonds (from bid bonds for the tender offer to performance bonds and advance payment bonds for assuring the completion, delivery of and payment for the asset). In many cases, the transportation company places an order for several units, which considerably increases the size of the contract. This is why it is common to see purchasing contracts guaranteed by an export credit agency (ECA).w

Subsectors

- **Aircraft manufacturers (aeronautics):** Companies involved in the design, engineering and assembly of any kind of vehicle that is manufactured to fly in the air, including planes (commercial and cargo planes, private jets, military jets and propeller planes) and helicopters (civil and military). The US and France are the world's largest producers of aircraft.
- **Shipyards:** Companies that build and repair any type of water-transport vehicle, such as yachts, cruise ships, container and dry bulk vessels, military vessels, oil and chemical tankers, ferries, ice-breakers etc. By revenue, this market is vastly dominated by South Korean, Chinese and Japanese companies, followed by European companies.
- **Rolling-stock manufacturers:** Companies involved in the entire process of designing, manufacturing, assembling and testing rolling stock. Wagons/trains can be used for both passenger and cargo transport and can be high-speed or not. This market is lead by China and Europe.
- **Trucks OEMs:** Manufacturers of trucks or camions, which are normally used for cargo transportation, for carrying other vehicles or dry-bulk commodities. Trucks vary in size, power and configuration. While most are still powered with diesel fuel today, electric trucks are gradually being introduced to the market.



Transportation

A speedy recovery will not be enough to achieve a speedy decarbonization

Sector rating

S Sensitive risk for enterprises

Strengths & weaknesses



- Government support in the form of public infrastructure (ports, airports, roads, railways etc.), given its crucial role in enabling trade, tourism and daily mobility.
- Monopoly or oligopoly in some countries, which gives companies pricing power.
- Shipping companies benefit from 1) bunker fuel being cheaper than car diesel or jet kerosene and 2) the largest transport capacity: today's largest vessels can transport up to 24,000 containers, which explains why 85% of global trade is transported by sea.
- While airlines have a lower credit profile, rail companies are mostly state-owned, resulting in relatively easy access to financing



- Fuel-price volatility constantly affects margins as it is the main cost output. In 2022 and 2023, bunker oil, diesel, kerosene and bio fuel prices have been weighing more than usual on companies' earnings.
- Increasingly criticized for its negative environmental impact, especially airlines (anti-flying social movements).
- Capital-intensive sector as companies need an expensive fleet of airplanes, buses, trucks, ships etc, which must be frequently renewed and have high maintenance costs.
- Highly leveraged as companies rely on a huge amount of debt to acquire and expand their fleets.
- Since it mostly transports freight, maritime transportation is very cyclical as transport prices and volumes depend on economic activity (trade).
- Airlines have faced tough competition since the arrival of low-cost carriers.
- Compared to maritime transport, road transport faces higher labor costs despite its lower transportation capacity (a truck can carry only 1 container).
- Road transportation companies depend on government budgets for road infrastructure, which remains less developed in developing countries, limiting expansion. In developed countries, the toll system is too expensive.

Sector overview

What to watch?

Stricter environmental regulations: Transport accounts for around 24% of global CO2 emissions, and road travel accounts for 3/4 of transport emissions. We believe that international regulations aiming to reduce greenhouse-gas emissions are going to become increasingly tougher, affecting all means of transportation. The aviation and maritime sectors in particular are hard to decarbonise since a lot of investments have to be made (to upgrade aircraft and ships) and the pace of technological improvements is slow. Alternative fuels will need to be more widely available and cost-competitive versus conventional fuels (SAF for instance is 2.5x more expensive than kerosene).

Carbon pricing power: We can expect an increase in the pricing power of those players (notably in shipping) that manage to decarbonize their fleets much faster, to the extent that they will help other industries to reduce their scope-3 emissions.

Airlines

- Demand has been strong throughout the year in all geographies, proving that traveling is no longer discretionary but has become a staple in people's budgets. Despite inflation issues in many countries, summer 2023 was a boost for the industry, which was able to handle personnel and capacity difficulties.

- There are three factors threatening airlines margins in the short term: 1. higher wages (personnel have bargaining power through strikes), 2. higher jet-fuel prices, which represent 30% of sales (although throughout 2023 prices have moderated vs. 2022) and 3. higher ground charges (airports fees).
- Limited capacity is also a challenge for airlines. In 2018-2019, the sector saw around 1,600 annual aircraft deliveries globally. With a shortage of parts disrupting production, deliveries fell by half in 2020 and began to improve progressively afterwards. In 2022, aircraft deliveries grew by +19.1% y/y and worldwide available seat kilometers increased by +39.6% y/y. For 2023, deliveries are expected to grow by +19.8%, but blockages in the supply of parts have delayed these deliveries. This supply constraint in a context of high demand could justify keeping airfares high for longer.
- In parallel, we can also expect demand for leasing aircrafts to increase as it allows airlines to operate without leveraging and without incurring high maintenance costs. Today, around 40% of the global fleet is leased and 60% is owned. We estimate that in the next five years the ratio will be 46%/54% and we expect they will manage to report a positive net profit after three years of losses. However, there are three factors threatening airline margins in the short term: higher wages (high personnel bargaining power, constantly threatening the business with strikes), higher jet-fuel prices and higher ground charges (airport fees). Another risk for airlines in 2023 is the fact that some economies may fall into recession, which may reduce the volume of leisure travel.

Maritime

- Aging fleet: In 2022, the total fleet of seagoing merchant vessels amounted to 102,899 ships (all sizes), equivalent to 2,199,107 thousand dwt of capacity (+2.95% y/y growth). The average age of the global fleet was 22 years (the technical lifetime is 25-30 years). The least developed countries own the oldest fleets and have the fewest resources to accelerate the transition of this sector. International support is essential so that these countries can comply with the new IMO green-house gas reduction targets.
- Capacity is expected to grow over 2024-2026 as all the extra cash generated over 2021-2022 allowed the

sector to enlarge capex for the purchase of new vessels. However, it should be noted that a large portion of new vessels will be intended to replace old ones.

- Containers: Weak macroeconomic conditions in 2023 and early 2024 will continue to push down spot prices for shipping. Still, the profits made in 2021-2022 will allow shipping companies to be financially robust to face the global trade turmoil.
- LNG: As strong demand for LNG has slowed down so far in 2023, its transportation price did so as well. However, winter 2023-24 could represent a period of increased demand.
- Dry bulk: The dry bulk shipping market has been suffering a major slump in the past quarters, in line with the decline of iron ore and coal prices, which are the top commodities leading this market. With slowing demand for dry commodities, we think the downward trend for freight rates could continue.

Rail:

- One of the biggest constraints for rail companies is the constant need for investments, both for the development of railway networks and their signaling systems, as well as for the acquisition of rolling stock. Nevertheless, in some cases (notably Europe), companies receive government support in the form of grants for capex needs.
- We believe that increasing environmental awareness will boost revenues for rail transportation in the coming years as people will prefer to take a train over a flight for short-distance trips

Road:

- The 2021-22 shortage of drivers has eased. However, the road subsector has the most organized and strongest unions within the entire sector, which gives them bargaining power.
- In developed countries, especially in Europe, the electric buses and trucks are increasingly being introduced. Adapting roads to offer a wider electricity supply remains a priority and a challenge.

Airlines: The outlook for airlines has improved dramatically. After three loss-making years, the airline industry may break even in 2023 – earlier than expected. According to the International Air Transport Association (IATA), total revenue is expected to rise +9.7% y/y in 2023 to USD803bn (vs USD838bn in 2019), and net profits could jump up to USD9.8bn (vs USD26.4bn in 2019), with North American carriers recording the strongest results, despite the fact that an increase in pilot salaries has been agreed after months of negotiation.

In terms of volume, all regions have seen improved passenger load factors throughout 2023, approaching pre-pandemic levels. With the reopening of China, Asia-Pacific carriers doubled their international passenger traffic over 2023, but the level remains below that of 2019. The US market still boasts strong results, with RPKs above the pre-covid level. RPKs of European carriers also improved a lot. However, airlines in this region have been facing strikes and exceptional weather conditions that caused traffic disruptions at some airports.

With regard to decarbonization, the SAF market remains in its early stages of development, which means low supply and a very high price. To achieve a significant increase in SAF production, cooperation between the government and key players in the industry is essential.

Maritime: As recession fears persist, the expectations for trade growth in the coming quarters have declined. For 2023, we expect an almost flat performance for global trade (-0.7% y/y in volume terms compared to growth of +10.6% in 2021 and +3.9% in 2022). The observed decline in demand for goods has eased port congestion worldwide, which has also dissolved bottlenecks in supply chains. As a result, prices in the ocean freight market have been falling progressively towards pre-pandemic levels (USD1,450/forty-foot box on average between 2017-2019), after reaching a never-before-seen peak in September 2021 (USD10,377/forty-foot box). For reference, revenues in this industry soared by around +58% and +29% y/y, respectively, in 2021 and 2022. Conversely, for 2023 and 2024, revenues are forecasted to decline by -31% and -4% y/y. Despite this decline, we think companies still have strong balance sheets and liquidity that will enable them to pursue M&A activity and increase investments. Capex in this industry grew by +80% in 2021 and by +15% in 2022. In 2023 and 2024, it is expected to grow by +18% and +5%, respectively. In relative terms, the capex ratio

(capex to revenue) is expected to double in the coming two years, moving from an industry average of 6-7% before the pandemic to around 11-12% in 2023-24.

Rail: Europe is one of the regions where rail transportation is most developed, given the small size of the continent (reduced distances between cities/countries), the flexibility for crossing borders within the Schengen Area and the capital investments made by governments to install an extensive railway network. In Europe, this sector has historically been state-owned, with each country having its own rail-transportation company that ensures mobility through the entire territory. For this, each country is in charge of investing the necessary amount for the expansion and renovation of railway networks, as well as for the purchase of rolling stock. In the same way, governments can fix prices, which creates a certain monopoly within each country. Nevertheless, since 2021, an EU “rail-market liberalization” project has been implemented, which aims to liberalize the commercial long-distance rail market to encourage competition between operators and therefore improve services. Other countries such as the US, China, India and Japan also rely on rail transportation. However, in these countries, trains are more used for the transport of merchandise (cargo) than for passenger transportation.

Road: The 2020-2021 health crisis halted government investment in roads and infrastructure in many geographies, especially in developing regions such as Asia, Latam, and Africa, where it is precisely the lack of transport infrastructure investment that has been inhibiting growth. In contrast, in developed regions such as Europe and the US, governments have implemented new infrastructure projects during the crisis, aiming to drive economic and employment growth. For instance, the European Commission has been working on a Trans-European Transport Network (for railways and roads), aiming to connect 424 cities and imposing a minimum speed of 160km/h. The network is planned to be fully completed by 2040. For companies running inter-city buses and coaches, one of the main challenges is to be able to transform their fleets towards electric vehicles, which is relatively easier to finance in Europe than in any other region of the world. But before fully switching away from diesel, the region requires more electric charging stations, both on highways and in cities.

Subsectors

The transportation sector encompasses all kind of companies providing the means for transporting people and goods from one geographical place to another.

1. **Air transport:** Companies that use aircraft (owned or leased fleet) as a means of transportation, regardless of the distance (short or long-haul).
 - a. Traditional airlines.
 - b. Low-cost airlines: They offer the same transport facility of traditional airlines but with a reduced offer of services that enables lower costs, and therefore lower air-ticket prices.
2. **Maritime transport:** All kind of transportation services through boats, including:
 - a. Cruise ships: large passenger ships used mainly for vacationing purposes.
 - b. Vessels: container ships, oil tankers, chemical tankers, gas and LNG tankers, dry bulk carriers, car carriers (ro-ro ships).
 - c. Ferries: mainly for short trips across rivers, harbors and channels or between islands.
3. **Rail/train transport:** Another way for moving people and goods over short and long distances (both underground and over the surface). Train systems run on metal rails, which allows the rolling stock to benefit from lesser frictional resistance and therefore to attach more load in terms of wagons or carriages. Besides being the means of transport that emits the least CO₂, it is also the one that is less affected by weather turbulence.
4. **Road transport:** This segment includes companies that offer the movement of people and goods through trucks, buses, coaches and taxi-cabs, both in urban perimeters and on highways.



Country and Sector Matrix

		Automotive manufacturers	Automotive suppliers	Construction	Transportation	Chemicals	Pharmaceuticals	Agrifood	Textiles	Paper	Electronics	Metals	Retail	Machinery & Equipment	Transport equipment	Software & IT Services	Household equipment	Computers & Telecom	Energy
North America	US	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Canada	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Latin America	Brazil	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Mexico	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Colombia	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Peru	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Ecuador	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Uruguay	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Panama	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Chile	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Costa Rica	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Dominican Republic	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Guatemala	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Western Europe	France	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Germany	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Spain	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Italy	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	UK	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Netherlands	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Switzerland	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Sweden	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Norway	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Belgium	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Austria	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Denmark	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Greece	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Finland	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Portugal	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Ireland	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Luxembourg	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Central & Eastern Europe	Turkey	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Poland	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Czech Republic	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Romania	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Hungary	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Croatia	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Bulgaria	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Slovenia	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Lithuania	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Latvia	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Estonia	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Slovakia	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Africa & Middle East	Algeria	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Morocco		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Tunisia		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Saudi Arabia		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
UAE		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Israel		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Qatar		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Kuwait		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Oman		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Bahrain		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
South Africa	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Asia Pacific	Japan	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Australia	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	China	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	India	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Indonesia	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Malaysia	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Singapore	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Philippines	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Korea (South)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	New Zealand	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Thailand	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Taiwan	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Vietnam	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Hong Kong	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	

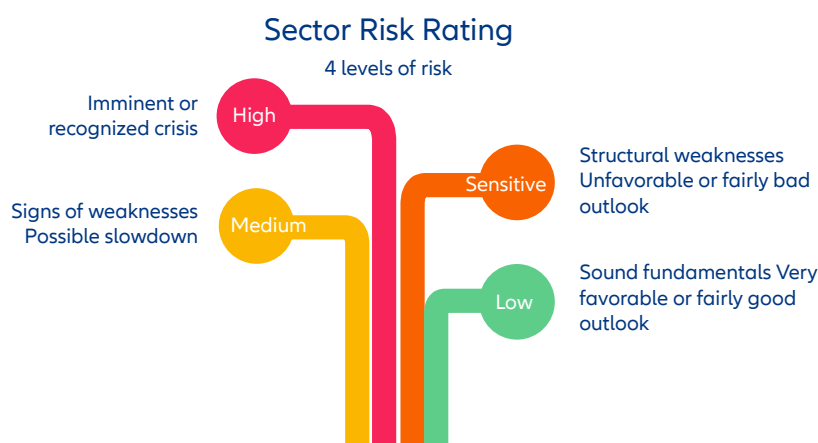
● Low risk ● Medium risk ● Sensitive risk ● High risk

Sector risk methodology

The Sector Risk Rating by Allianz Trade Economic Research assesses the risk of non-payment by companies in 18 sectors across 70 countries around the world. It is measured on a four-level scale from Low to High.

Sector risk assessments are based upon the forward-looking evaluation of four key determinants – demand, profitability, liquidity and business environment – using Allianz Trade internal data and expert judgments, as well as hard data from secondary sources.

Our grading system uses a unique methodology which combines data and expert judgments to assess the risk of nonpayment at a sector level across the top 70 countries of the world.



4 levels of risk based on 4 key components

The Sector Risk Rating is based on the evaluation of four components that are analyzed globally for each sector

Demand: Outlook for companies' turnovers based on the organic growth, fundamentals and price competition of the sector

Profitability: Outlook for companies' margins and profits depending on the evolution of prices in raw materials/ commodities, on labor costs and fluctuations in supply and capacity

Liquidity: Outlook for companies' cash positions and financing risks, based on access to financing and payment performance, and

Business environment: Any technological innovations, new government subsidies and changes in legal framework that can alter business models and companies' strategies.

A quantitative and qualitative grading system

Our grading system is a unique combination of indicators and expert judgements dedicated to assessing the short-term outlook of the four sub-components of our sector risk ratings.

The indicators are based on Allianz Trade internal data and hard data from secondary sources.

The expert judgments capitalize on the microeconomic expertise of Allianz Trade credit analysts, who closely monitor risk in companies all over the world, and the sector advisors of the Economic Research team, who analyze industry trends globally.

These judgments are collected using a standardized and consistent quarterly questionnaire.

Sector risk ratings are designed to complement Allianz Trade' Country Risk ratings and individual buyer risk assessments.





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