

Market Commentary on the Q3'2021 Results Season:

Structural Demand Explosion Meets Supply Constraints

Being half-way through the Q3'2021 results period, we observe **two major discussion points of specific investor interest**: a) to what extent are the long-term megatrends (climate change & resource scarcity, demographic & social change, urbanisation, digital transformation)ⁱ currently getting overlaid with short-term supply constraints, leading not only to additional investment demand but also to higher inflationary pressure as we approach 2022;ⁱⁱ and b) to what extent are recent inflationary developments already reflected in higher wage pressure, which could potentially start a self-fulfilling inflationary spiral.ⁱⁱⁱ Within the **current inflation debate**, it has been argued, however, that the “missing piece” are **productivity gains**, which have not only accelerated during the pandemic but should also ease the upward pressure from prices, enabling the companies to “afford higher wages without compressing margins”.^{iv}

Two notes for clarification are important at this stage. We are certainly looking into **supply chain constraints for much longer than originally expected**, with semiconductor producers indicating that capacity will “remain tight in 2021 and throughout 2022”,^v while container shipping executives expect the supply chain crisis to extend even into 2023.^{vi} This largely explains the “**demand explosion**” some executives described in recent weeks; however, “**structural**” has, in this context, an element of ambivalence as the semiconductor industry tends to lean more towards **secular long-term trends**^{vii} while other industries rather complain about **short-term physical constraints** in terms of logistics, container shipping, manufacturing capacity and labour shortages.^{viii} The latter had to focus much more on getting a hand on “complexity reduction, procurement, onshoring and network optimisation” (Akzo Nobel, Q3'2021 results call).^{ix}

While inflationary expectations largely defined the current market discussion, we have witnessed other **exogenous political and environmental factors, which have not only impacted asset pricing and valuations** (China, natural catastrophes), but also link back to the broader investor debate on the **scope of infrastructure investment** required for the green energy transition. The structure of this market commentary follows the sequence of these three major themes before finishing with some further observations on companies in transition.

CHINA JITTERY

Recent attacks by the Chinese political authorities on technology firms as well as on education and tutoring businesses combined with crackdowns against the property sector have been a defining moment in investors' assessment not only of the country's growth prospects but also to what extent Chinese companies remain “investable” when applying new regulatory risks.^x The adoption of a strict data privacy law in August 2021 has not only made a massive valuation impact on China's largest internet and e-commerce stocks but has also renewed investor concerns over the intensity of the regulatory impact, including gaming and fintech,^{xi} and to what extent the new five-year plan will strengthen regulatory control over key strategic sectors such as technology and healthcare.^{xii}

From an investor's perspective, the important distinction compared with the 2008-09 financial crisis is that China will this time not necessarily be instrumental in a post-pandemic revival of Western economies, as it did back then through its economic modernisation effort spurring not only the "commodity supercycle" but also consumer spending. Continuing coronavirus outbreaks, power outages and heavy rainfall reportedly curbed travel and consumption in recent months, leading to a slowdown in both industrial production and retail sales.^{xiii} Moreover, contagion from the indebted property developer Evergrande potentially spreading beyond the sector remains a serious threat, triggering not only a wider sell-off in China's real estate sector but also raising renewed questions about the broader health of local financial institutions.^{xiv}

NATURAL CATASTROPHES

The impact of climate change has been spectacularly evidenced in different parts of the globe over the summer, whether wildfires in California, the Mediterranean and Russia, floods in Germany and the Benelux or even tornados in the Czech Republic, which were natural disasters of unprecedented scale and the damage it caused.^{xv} Importantly for our analysis, it has further sensitised the investment community towards the risk of climate change and the implications for future investments, notably by becoming more articulate about tackling "greenwashing" to protect investors from misleading environmental claims,^{xvi} or even taking an activist approach against the banking industry financing of fossil-fuel projects.^{xvii} In the context of the current inflation debate, another interesting discussion is about the costs involved in green transition, or "greenflation", with a specific focus on carbon pricing as well as about the role of states in fighting climate change.^{xviii}

As to the latter, the recent experience of surging gas prices in Europe and elsewhere has been instructive, not only for the extent to which it pushed up carbon prices as energy producers switched to coal production,^{xix} but also to what extent it has shown supply constraints for cargo shipping, low gas storage, the lack of a robust renewables energy sector and pricing power as LNG ships have been redirected to those markets offering highest returns.^{xx} This in combination with Russia using natural gas as a "political weapon" to speed up regulatory approval for Nord Stream 2 and getting former allies back under control (Moldova),^{xxi} has added a not less relevant geopolitical factor to investor sentiment when considering the energy transition. As we are approaching the COP26 meeting in Glasgow, a number of new themes will need to be discussed to try and make a tangible and long-lasting impact including, among others, methane emission reduction, reforestation, decarbonisation of the power sector and heating of buildings, as well as electrification of road transport.^{xxii}

INFRASTRUCTURE INVESTMENT

Another interesting investor debate in recent weeks has been to what extent have shortages in the "old economy" (from energy to basic materials and even agriculture) less to do with the impact of the Corona pandemic and more with chronic under-investment in those sectors post the 2008-09 financial crisis coupled with aging infrastructure.^{xxiii} It has been argued that the predominant focus on central bank quantitative easing has led to lower returns and less capital expenditure in commodity-related traditional sectors, with some market observers even talking about the "old economy's revenge" as we witness rising gas prices and shortfalls in raw materials while China, India and other markets are struggling with power generation.^{xxiv}

While more capital has been invested in short-cycle “new economy” areas such as technology, the old economy was arguably “overbuilt, debt-laden and over-polluted”, with ESG-focused investors now compounding the growing under-investment in commodity-related sectors through the increasing divestiture from hydrocarbons. In the wake of the structural demand explosion meeting supply constraints through inadequate infrastructure, transitory shocks with various ripple effects in container shipping, port capacity, etc. have led to persistent physical price inflation we have faced in recent weeks.^{xxv} However, there may be a blessing in commodity prices overshooting to the upside, as some market observers maintain, providing incentives for more investment in highly-risky, long-cycle capex projects required for the green energy transition.^{xxvi}

COMPANIES IN TRANSITION

While one could read extensive reports about supply-chain disruption, shipping bottlenecks, shortages in semiconductors, raw materials and labour, as indeed about inflationary pressure and the future of work after the Corona pandemic, it has been fascinating to follow companies reporting their Q3’2021 results in recent weeks as they gave a clear indication to what extent their businesses are currently in transition. While senior management in most sectors has naturally been preoccupied with short-term supply constraints, investors and analysts pressed them consistently hard about the long-term implications of current disruptions and to what extent this situation provides new opportunities for the future.

In this final observation we select two examples from the “old economy” (Volkswagen, Shell),^{xxvii} with both companies having been under tremendous shareholder pressure in recent years and being very explicit in the Q3’2021 results call about how to tackle the challenges of electrification, digitalisation and green energy transition. Volkswagen perceives the “semiconductor crisis” as a new chance for the industry, focusing more on the share of wallet from mobility by “structurally spending more on software” and “rightsizing” incentive tools through reducing discounts to agents and providing “minimal incentives” on new battery electric vehicles.^{xxviii} In the wake of the recent activist campaign, Shell maintained the “value of integration” (without breaking up the company as demanded by Third Point) in terms of network effects and, most importantly, the funding extracted from the traditional fossil-fuels business provided for the energy transition.^{xxix} The latter argument strongly resonates with long-term investors in the company (see endnote XVII below).

With the investor focus now setting strongly on 2022 and beyond, we would expect increasing enquiries about productivity gains to withstand inflationary pressure, and also the broader investor debate to move on towards companies in transition.

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ENDNOTES

ⁱ There is a huge library of literature with various definitions of megatrends, although the investment community seems to focus predominantly on these four themes which we have adopted from Infineon's Capital Markets Day on 5 October 2021, slide 7. There is also a broad consensus about the secular themes of electrification and digitalisation, for which Infineon provided an interesting chart on relevant applications (see Appendix).

ⁱⁱ While the CEO of Taiwan-based chip maker TSMC, C.C.Weï, highlighted the "structural increase in demand" due to 5G, high-performance computing and the increase in silicon contents (TSMC Q3'2021 results call, 14 October 2021), the CEO of semiconductor equipment manufacturer ASML, Peter Wennink, appeared much more humbled by the current "demand explosion", saying that "everybody is screaming for capacity" and that he is still "trying to connect the dots", implying huge uncertainty and limited visibility going forward (ASML Q3'2021 results call, 20 October 2021). In turn, the CEO of Intel, Pat Gelsinger, spoke about the "insatiable demand" in graphics (notably gaming in the wake of the Corona lockdowns) and accelerated computing (Intel Q3'2021 results call, 21 October 2021). His counterpart at AMD, Dr. Lisa T. Su, observed gaming becoming a "secular trend" (AMD Q3'2021 results call, 26 October 2021).

ⁱⁱⁱ While there is certainly evidence of more labour disputes and strike action for higher wages, aggravated through wide-spread labour shortages, we are getting mixed signals to what extent this has helped to push up inflation, see for example: Martin Arnold, "*German workers strike for higher pay as inflation surges*", *Financial Times*, 1 October 2021. A number of companies we had followed during the first three weeks of the Q3'2021 results period reported "wage pressure" (A1 Telekom Austria), "inflationary labour costs" (Daimler), labour cost inflation in "some regions" (ABB) and "higher social costs" (Nestle) but without any immediate impact on profitability.

^{iv} Megan Greene, "*Productivity growth is almost everything in the post-Covid recovery*", *Financial Times*, 30 September 2021. It is interesting to note that particularly banks have started to elaborate more extensively on productivity gains through new technology, digital applications and an "improving engineering culture" (UBS, Q3'2021 results call, 26 October 2021). In preparation of its strategy update on 9 December 2021, UniCredit has also talked extensively about its digital footprint, data and technology (UniCredit Q3'2021 results call, 28 October 2021).

^v C.C.Weï, CEO of TSMC, at the company's Q3'2021 results call, 14 October 2021; also, the CEO of ABB, Björn Rosengren, saying that supply chain issues will not be a "quick fix" (ABB Q3'2021 call, 21 October 2021).

^{vi} Jeremy Nixon, CEO of Ocean Network Express, as quoted in Harry Dempsey, "*Governments need to fix supply chain crisis, top shipping boss warns*", *Financial Times*, 25 October 2021. In the economics literature, the "just in time" issues of global supply chains with their cascading effect and ownership implications were extensively discussed many years ago in: Peter Nolan, *Crossroads: The End of Wild Capitalism*, Marshall Cavendish, London, 2009, with detailed case studies on the aerospace and beverages industries, pp. 54-58. For monopolistic developments in other US industries (e.g., hospitals, concrete, airlines, cable), see Jonathan Tepper with Denise Hearn, *The Myth of Capitalism. Monopolies and the Death of Competition*, John Wiley & Sons, New Jersey, 2019, pp.43-44.

^{vii} Hence, semiconductor industry executives pay particular attention to issues of energy efficiency, higher density, reliability, capacity and the share of outsourcing (Infineon CMD 2021, 5 October 2021) as well as partnerships and process & packaging technology (*Intel Unleashed: Engineering the Future*, 23 March 2021). In more visionary terms, the CEO of NVIDIA, Jensen Huang, talked about accelerating computing, networking technology and data center architecture, claiming that "everything is going to be a data center", whether 5G, autonomous cars or other, and that "every industry is becoming a technology sector" (NVIDIA CMD, 12 April 2021). In this context, a more down-to-earth view was expressed by the CEO of KPN, Joost Farwerck, saying that 5G investments "should start paying off first", implying that KPN will look very carefully at the "IRR of capex" while, at the same time, keeping scope for further share buy-backs (KPN Q3'2021 results call, 26 October 2021).

^{viii} The CEO of Zumtobel Group, Alfred Felder, described the current situation as "following semiconductor industry cycles", notably in pricing, which is true for a number of industrial sectors (Zumtobel CMD 2021, 12 October 2021). However, there is also an element of customers building "reserve buffers" through higher inventories in anticipation of ongoing supply chain shortages, which has a direct impact on working capital management (Trelleborg Q3'2021 results call, 27 October 2021). The latter has certainly added to the above-described "demand explosion". From the perspective of the semiconductor industry, AMD outlined that it "prioritises strategic segments" to respond to supply chain constraints but "works also hard to add further capacity" (AMD Q3'2021 results call, 26 October 2021). In similar terms, car manufacturers reported to have prioritised the usage of semiconductors for luxury brands first (Daimler Q3'2021 results call, 29 October 2021 and Volkswagen Q3'2021 results call, 28 October 2021).

^{ix} Lonza phrased it similarly when being asked at the Q&A of their Capital Markets Day about how to achieve efficiency gains in various production processes, pointing to "equipment optimisation, changeover, tech transfer and downstream" (Lonza CMD, 12 October 2021). See also the relevant slide on "accelerating productivity" at Lonza in the

Appendix.

^x Logan Wright, *"The real question about China for investors"*, [Financial Times](#), 14 October 2021

^{xi} Hudson Lockett, *"China tech stocks fall sharply after Beijing passes data privacy law"*, [Financial Times](#), 20 August 2021. Intel specifically discussed the impact of regulatory intervention on their data center and gaming business in China (Intel Q3'2021 results call, 21 October 2021), whereas AMD seemed to dismiss the impact so far (AMD Q3'2021 results call, 26 October 2021).

^{xii} Christian Shephard and Ryan McMorrow, *"China unveils five-year plan to strengthen control of economy"*, [Financial Times](#), 12 August 2021. This development was high on investor and analyst radar screens when following the Q3'2021 results season, with banks being asked about their Asian clients' sentiment and deleveraging effort in China following the property developer Evergrande's liquidity crisis (UBS, Q3'2021 results call, 26 October 2021) as other industrial and consumer goods companies were asked about their China exposure (ASML, ABB, Nestle).

^{xiii} Retail sales rose just 2.5% year-on-year in August compared with economists' forecast of 7% while industrial production was up by 5.3%, see Thomas Hale, *"China slowdown worsens as Covid outbreak exposes consumer weakness"*, [Financial Times](#), 15 September 2021. Some analysts asked specifically about the impact of power outages in China (ABB Q3'2021 results call, 21 October 2021) as well as about renewed procurement uncertainties (ASML Q3'2021 results call, 20 October 2021).

^{xiv} Hudson Lockett and Thomas Hale, *"Evergrande contagion threat hits China and Hong Kong property stocks"*, [Financial Times](#), 20 September 2021. For a different view following the massive sell-off of Chinese semiconductor, software and biotech groups by Western fund managers in the wake of the regulatory crackdown in summer, see Pascal Blanque (Group chief investment officer of Amundi Asset Management), *"Big picture appeal of Chinese assets remains strong"*, [Financial Times](#), 17 September 2021.

^{xv} Insurance losses from wildfires, US winter storms and tornados in Europe were estimated by Swiss Re at US-\$40 billion for the first half of 2021 alone, see Ian Smith, *"Extreme weather blows out catastrophe insurance losses to \$40bn"*, [Financial Times](#), 13 August 2021.

^{xvi} For the IMF urging regulators in its semi-annual Global Financial Stability Report to protect investors from greenwashing, see Chris Flood, *"Tackle greenwashing to boost sustainable investment, says IMF"*, [Financial Times](#), 4 October 2021 and for shares of German asset manager DWS plummeting following allegations made by its former head of sustainability that it is misrepresenting ESG metrics, see Joe Miller, et.al., *"DWS shares slide after greenwashing claims prompt BaFin investigation"*, [Financial Times](#), 27 August 2021. The Q3'2021 reporting season has also shown that sell-side analysts have become not only more knowledgeable about ESG themes but also started asking more frequent ESG-related questions, particularly about the costs involved in the energy transition (TotalEnergies' Energy Outlook and CMD 2021, 27-28 September 2021), the climate lobbying effort by car manufacturers (Volkswagen ESG Conference 2021, 8 October 2021), Scope 3 emission targets (A1 Telekom Austria Q3'2021 results call, 20 October 2021) and greenwashing claims (UBS Q3'2021 results call, 26 October 2021).

^{xvii} Camilla Hodgson, *"Hedge fund manager Hohn steps up campaign over banks' fossil-fuel loans"*, [Financial Times](#), 12 October 2021. The other big activist campaign was that of Third Point advocating Shell to split its business into a legacy oil, refining and chemicals company and a separate gas, renewables and marketing business, which was highly controversial among mainstream investors, see Attracta Mooney and Tom Wilson, *"Leading Shell investor rejects call for energy group to split"*, [Financial Times](#), 29 October 2021. Interestingly, during the Shell Q3'2021 results Q&A on 28 October 2021 a number of analysts (Bernstein, Wells Fargo, JPMorgan) appeared much more in favour of Third Point's proposal and repeatedly challenged management on the company's value of integration.

^{xviii} Gillian Tett, *"Politicians need to be more active when it comes to greenflation"*, [Financial Times](#), 1 October 2021.

^{xix} Camilla Hodgson, *"European gas crunch pushes up carbon prices"*, [Financial Times](#), 4 October 2021. At its Energy Outlook 2021 on 27 September 2021, TotalEnergies was asked about the "affordability of transition" given high gas prices and also the availability of minerals for new sources of renewables after senior management had pointed to the enormous amount of land required for energy production from solar, wind and synthetic biofuels.

^{xx} David Sheppard and Jim Pickard, *"Gas crunch threatens industry in UK and Europe"*, [Financial Times](#), 3 September 2021. Two interesting themes of the Q3'2021 results season in the integrated oil & gas industry were the extent of inflationary pressure on capex budgets for 2022 (TotalEnergies Q3'2021 results call, 28 October 2021) and gas hedging strategies, with some companies being exposed to heavy losses (OMV Q3'2021 results call, 29 October 2021).

^{xxi} Henry Foy, *"Moldova presses EU for more help to avert crisis over Russia gas deal"*, [Financial Times](#), 29 October 2021

^{xxii} Martin Wolf, *"What is the least we need from COP26?"*, [Financial Times](#), 27 October 2021. In the run-up to COP26 in Glasgow, Shell's CEO, Ben van Beurden, was asked by the Merrill Lynch analyst whether it would matter if COP26

were not successful and whether this would expose Shell's carbon emission targets (Shell Q3'2021 results Q&A, 28 October 2021). Ben van Beurden pleaded for a more global view on how to manage emissions by specific sectors but also admitted that there is "increasing hostility and demonisation of our sector".

^{xxiii} The change in investor expectations for more public investment and funding for the energy transition has been well illustrated during the German elections in September 2021, see Erik Nielsen, "What investors are looking for from the German elections", Financial Times, 24 September 2021 and also in the wake of the European gas crisis, see Katie Martin, "Climate change is getting real for investors", Financial Times, 27 September 2021.

^{xxiv} Jeff Currie (global head of commodities research at Goldman Sachs), "The revenge of the old economy", Financial Times, 21 October 2021

^{xxv} A very instructive example was that of AkzoNobel reporting that raw materials have increased by more than 20% year-to-date in 2021 given management estimates to be able to increase prices for their own products by only 12-14% by the end of 2021 (AkzoNobel Q3'2021 results call, 20 October 2021), see also relevant slide 17 at the Appendix. Similarly, ABB pointed to consistent price pressure through supply-chain constraints, raw materials and components as well as logistics and how they plan to manage "near-term challenges", see relevant slide 13 in the Appendix (ABB Q3'2021 results call, 21 October 2021).

^{xxvi} It is worth noting that analysts have started asking more frequently about short-cycle capex plans being aligned with growing cost pressure and inflationary trends, see, for example, TotalEnergies Q3'2021 results call, 28 October 2021 (analysts from Barclay, JPMorgan and Cowen) while, at the same time, distinguishing the long-term investments required for electrification and digitalisation, see Volkswagen Q3'2021 results call, 28 October 2021 (analysts from UBS, Deutsche Bank and Bernstein) and Daimler Q3'2021 results call, 29 October 2021 (JPMorgan and UBS).

^{xxvii} Both CEOs, Herbert Diess (Volkswagen) and Ben van Beurden (Shell), phrased it in terms of being a "company in transition", with Herbert Diess even speaking openly about the need for a "new vision for Wolfsburg" (the company's headquarters in Germany known for its unions being resistant to change), given the head-on-head competition from Tesla being only 200 kilometers away in Grünheide, with the need for a much larger R&D centre in Wolfsburg while having to further streamline overheads (Volkswagen Q3'2021 results call, 28 October 2021).

^{xxviii} Christian Dahlheim, global head of sales at the Q&A of Volkswagen's Q3'2021 results call, 28 October 2021. Similarly, the CFO of Daimler, Harald Wilhelm, stressed that they want to maintain the proprietary control of both the operating system in the car and the customer interface (Daimler Q3'2021 results call, 29 October 2021).

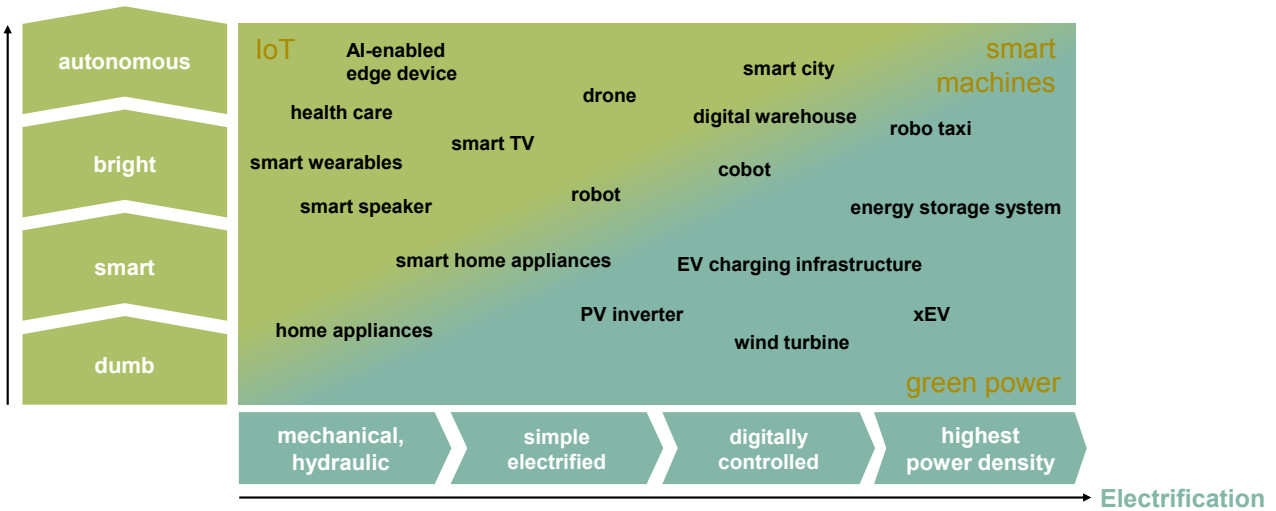
^{xxix} Ben van Beurden, CEO of Shell, at the Q&A of Shell's Q3'2021 results call, 28 October 2021.

APPENDIX

Numerous applications are getting electrified and/or digitalized – creating a much bigger playing field for Infineon



Digitalization



2021-10-05

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...and Accelerating Productivity
Disciplined execution



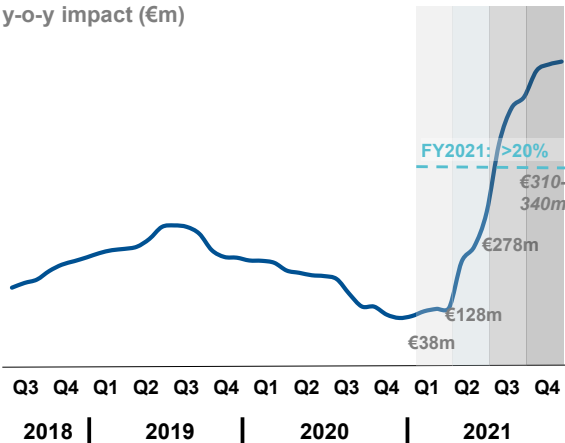
Cost Item		Margin Impact	Value Levers
Production Costs	Base business	++	<ul style="list-style-type: none"> Increased yield Right first time Reduced cycle times
	Growth projects	Short-term - Mid-term +	<ul style="list-style-type: none"> Optimised investments Efficient scale up
Overheads	Sales & Marketing	+	<ul style="list-style-type: none"> Increased contract pipeline Improved targeting
	R&D	-	<ul style="list-style-type: none"> Value impact Clear prioritization
	Admin	++	<ul style="list-style-type: none"> Process excellence

Margin Accretion

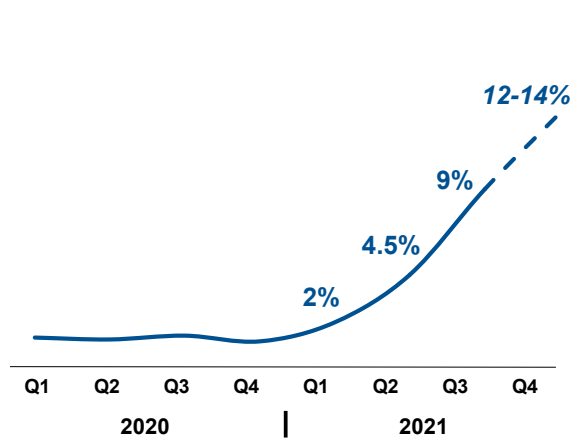
26

Q3 pricing September run rate at 10%, AkzoNobel on track to offset inflation on run rate basis by end 2021

Raw material price index development
y-o-y impact (€m)



AkzoNobel pricing (%)*



Percentage change to FY2020 annual average



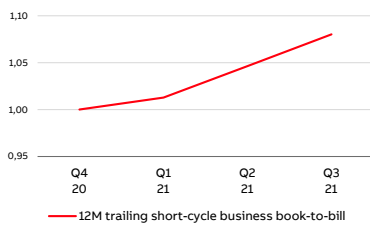
*Price only (excluding mix), percentage change vs. prior year

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We will continue to manage near-term challenges

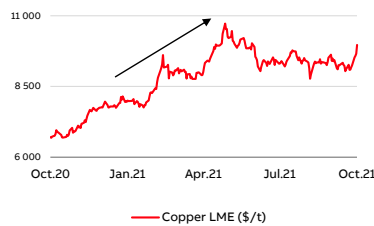
Ability to deliver and cost inflation

Ability to deliver impacted by supply chain constraints



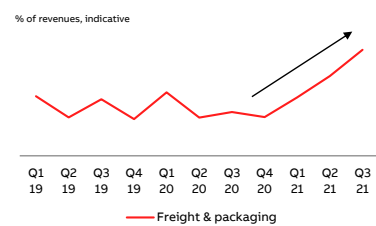
Working on redesigns using components that are in higher supply where possible
New supplier validations
Build inventory for critical components where possible

Higher costs for raw materials and components



Further price increases to offset raw material costs
Continued headwind expected for Q4
Ambition for price vs. commodity to be at least neutral from 2022

Other cost inflation such as costs for logistics



Relying on long-term contracts
Offsetting cost pressures through continuous improvement driven by divisions

Slide 13