

Daily Chemical Reaction

Schuhplattler! – BASF Preliminary 4Q Results Beat Street View, Global Chemical Sector Optimism High

Key Points:

- BASF preliminary 4Q results beat Street expectations and add credibility to several recent constructive peer updates. As sector confidence grows with 4Q20 postings, durability concerns with profit levels will lag and likely rise.
- We highlight multiple corporate items (e.g., Oriental Aromatics, Yansab, FMC & BASF business updates; Air Liquide, Arburg, Ashland, Trammo, Braskem & OMV strategic updates; Olin & Kemira facility updates)
- Other relevant items within this report include a view of ex-US naphtha values relative to USGC ethane, estimates of global spending on the green energy transition, & charts of semiconductor supply serving the auto market.

Exhibit #1: Asia spot methanol values have increased relative to US levels since the start of 2021 due to increased North American supply. We flag recent trends in China and US spot levels and highlight current spot profit trends in each region in our research today.



Source: Bloomberg, C-MACC Analysis, January 2021

Three primary items to take note of today: First, 4Q20 commodity and intermediate profits appear likely to exceed lagging Street estimates notably. We have highlighted this theme in many of our reports recently. We use the BASF preliminary results this morning as evidence that a lagging Street consensus increase will likely result in many chemical sector 4Q20 results exceeding expectations. To set the stage per our view, BASF preliminary 4Q20 adj. EBIT beat the Street consensus estimate by roughly 30%. In comparison, sales exceeded the average estimate by ~9%, and the report came after several 4Q20 guidance updates (Huntsman, etc.) that suggested a better-than-expected reporting season for peers. BASF 4Q20 preliminary results display strength in its Materials, Chemicals, and Industrial Solution segments but weakness in Surface Treatment (likely the result of auto weakness). On the whole, we see the release as a positive for polyurethane peers, such as Dow, Covestro, Huntsman, and in broader intermediates, such as Eastman, Ashland, and Arkema. **Second, we highlight a recent demand-pull on both Ex-US naphtha and USGC ethane**, which has worked to hold the relative price levels seen since late 2020. The spread remains much lower YoY, as can be seen in Exhibit #2. **Third, we flag a few notable global methanol market trends.** We highlighted [Mitsubishi Corp start-up of a Trinidad and Tobago methanol plant](#) yesterday. Today, we show the decline in US spot methanol values since the start of the year in Exhibit #3, relative to Asia values in Exhibit #1, and compare US per-unit profit levels to China in Exhibit #4. We continue to view the profit

January 20, 2021

Today's Commodities:

- Natural Gas/NGLs
- Crude/Naphtha
- Methanol
- Plastics (PVC, PP, PE, PS, PET, etc.)
- Ethylene
- Polyethylene
- Polyurethanes
- Lithium
- Hydrogen
- Trichloroethylene
- Hydrochloric Acid

Today's Companies:

- Air Liquide
- Orsted
- Arburg
- Ashland
- BASF
- Braskem
- DOMO
- Equipolymers
- FMC
- Ganfeng
- Johnson Matthey
- Kemira
- Lanxess
- Highly Innovative Fuels (HIF)
- Mabanft
- Olin
- OMV
- Orbia
- Oriental Aromatics
- Trammo
- Yansab
- Dow
- Methanex
- Paccar
- ASML
- Fastenal Company

setting as notably positive for North American producers, such as Methanex, SCC, Natgasoline, Celanese, and Mitsui Chemicals. And, we flag recent support in acetyl chain metrics as also a broad-based plus. **Altogether, our research today highlights higher YoY chemical sector prices and profit and evidence of rising production.**

o **Relevant Global Chemical Sector Corporate Items:**

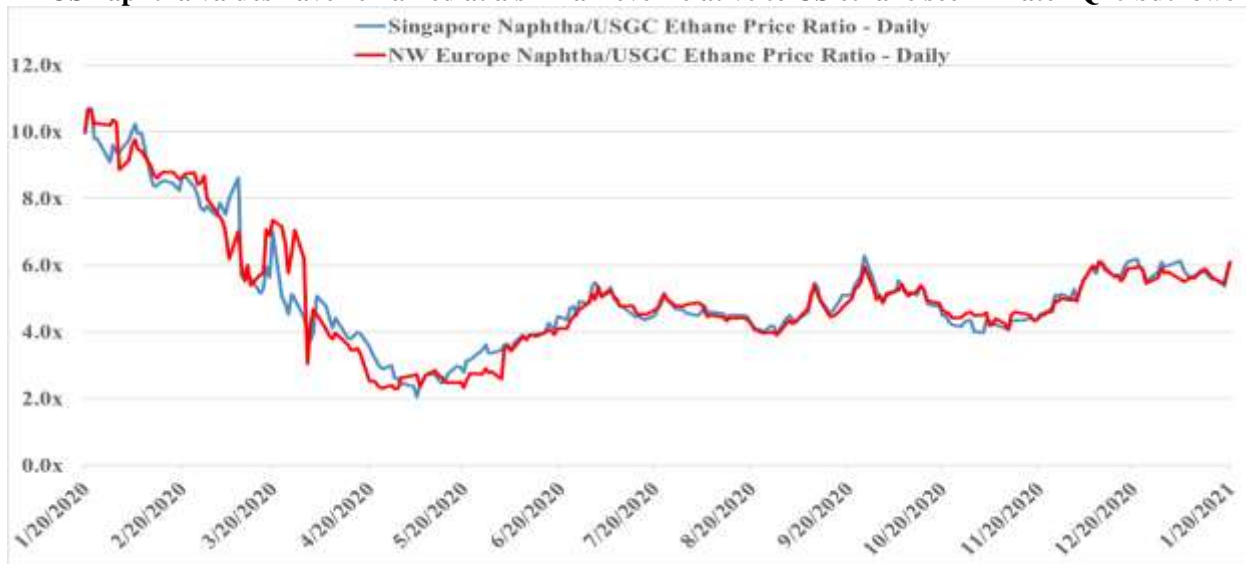
- [Air Liquide makes strategic investment to support large scale renewable hydrogen production in France](#)
- [Orsted, Air Liquide add to European hydrogen momentum](#)
- [Arburg Acquires Longtime Electric Drive Partner AMK](#)
- [Ashland to acquire Schülke & Mayr personal care business](#)
- **[BASF signals a significant jump in earnings, sales in fourth quarter, beats consensus.](#)** See full release in [LINK](#). We estimate BASF 4Q preliminary sales and adj. EBIT estimates exceeded the Street consensus view by 9% and 31%, respectively. Per our view, the primary takeaway extracted directly from the release is that sales increased 8% YoY in 4Q20, and both volume and average prices were broadly higher during the quarter. And, narrowing this down to product chains, we find release commentary noting that “The Materials, Chemicals and Industrial Solutions segments considerably exceeded average analyst estimates for EBIT before special items in the fourth quarter of 2020. EBIT before special items fell slightly short of average analyst estimates in the Surface Technologies and Nutrition & Care segments and was considerably below analyst consensus in the Agricultural Solutions segment, mainly due to negative currency effects.” We view positive results seen in the Materials, Chemicals and Industrial Solution segments as a positive read-through for peers in these segments, such as Dow.
- [Braskem chooses Port of Rotterdam for bioplastics storage](#)
- [DOMO to exclusively produce and commercialize TECHNYL](#)
- [Equipolymers improves Viridis PET grade, now made with 30% recycled feedstock](#)
- [FMC cuts fourth-quarter results guidance.](#) We note that part of the guidance cut is due to supply-chain issues.
- **[Ganfeng sees lithium supplies tightening](#)**
- [Johnson Matthey builds up catalyst-coated membranes capacity at UK site](#)
- [Kemira to close sodium chlorate production line at site in Finland](#)
- [LANXESS offers new flame-retardant thermoplastic composite materials with a polyamide 6 matrix](#)
- [Highly Innovative Fuels \(HIF\), a Chilean firms, signs MOU with Mabanaft for green-methanol-to-fuel project](#)
- **[Olin plans to shutter Freeport trichloroethylene, anhydrous HCl.](#)** Also, see release in [LINK](#).
- **[OMV to expand steam cracker, petchems units in Burghausen, Germany](#)**
- [Orbia appoints new CEO](#)
- [Oriental Aromatics announces year-end 2020 preliminary results](#)
- [Trammo to cooperate with a Dutch engineering firm on green ammonia projects](#)
- **[Yanbu National Petrochemical Co. \(Yansab\) announces interim 2020 YTD results](#)**

o **Energy/Upstream:**

- [Bakken Midstream Mulling Ethane-Natural Gas Power Plant](#)
- [Bakken Midstream to supply ethane to US baseload power plant](#)
- [Biden set to rejoin Paris climate accord, impose curbs on US oil industry](#)
- [China's 2020 refinery output rises 3% to record; gas output up nearly 10%](#)
- [China drew on crude oil inventories in December, unlikely to become a trend](#)
- [Crude demand lower on Q1 lockdowns, OPEC+ gains depend on US producers](#)
- [EIA forecasts less power generation from natural gas because of rising fuel costs](#)
- [Energy Transfer loads first ethane supertanker at Texas export terminal](#)
- [Equinor awarded 17 new production licenses on the Norwegian continental shelf](#)
- [Global refinery throughput expected to rebound in 2021: IEA](#)
- **[First VLEC shipment leaves Orbit facility for Satellite cracker in China](#)**
- [The largest single shipment of ethane heads to China after loading at US export facility](#)
- [Halliburton points to oil industry recovery after profit beat](#)
- [Let's Get It Started, Encore Edition - The 2021 Outlook For Permian Oil and Gas Markets](#)

- [Levitating - Western Canada's Crude Oil Supplies to Reach Record Highs in 2021](#)
- [Oil above \\$56 on US stimulus hopes ahead of Biden inauguration](#)
- [Oil gains on stimulus optimism ahead of Biden inauguration](#)
- [Oil companies, aid groups, plan to press Biden to allow Venezuela fuel swaps](#)
- [Oil From The North Country, Part 2 - As More Canadian Crude Flows South, A Push To Expand Pipes](#)
- [Perfect Storms: Container and LNG shipping herald new year with all-time highs](#)
- [Petroperu to wrap up modernization of Talara refinery](#)
- [Rising oil prices test US producers' willpower](#)
- [Trinidad to relaunch tender for mothballed refinery](#)
- [UAE squares Opec commitments, capacity growth plans](#)
- [US crude oil inventory draws expected to extend amid steady exports](#)
- [East-bound naphtha to rise in Jan, Feb](#)
- [Asian naphtha market shows signs of recovery](#)
- [European naphtha robust into 2021](#)
- [Asian ethylene sector braces for new supply](#) – a boost for naphtha demand in the region
- [US-Asia naphtha arbitrage volume hits 9-month high for January loadings](#)

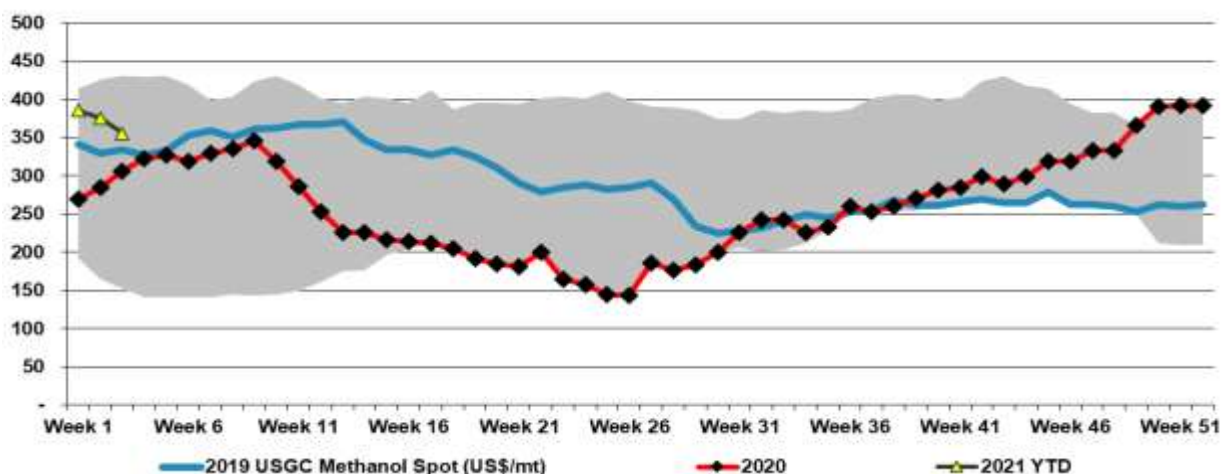
Exhibit #2: Ex-US naphtha values have recently risen with crude oil values and improved demand due to Asia ethylene cracker restarts, while US ethane demand is also improving as a result of favored light-cracking, higher USGC cracker run-rates, and broadening market pulls. See news of the US ethane tanker loadings at the Orbit facility above. All in, Ex-US naphtha values have remained at a similar level relative to US ethane seen in late 4Q20 but lower YoY.



Source: Bloomberg, C-MACC Analysis, January 2021

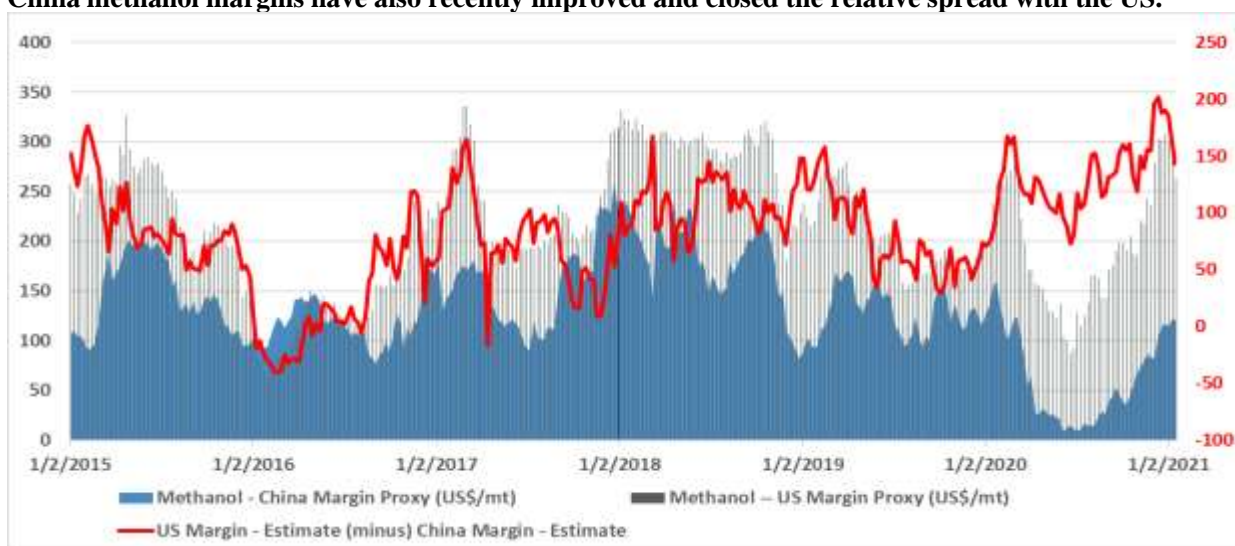
- **Supply Chain & Commodity Chemicals:**
 - [China Spot Paraformaldehyde sees tighter conditions, higher prices](#)
 - [ECHA adds two substances to the SVHC candidate list](#)
 - [India's GNAL delays commissioning of new caustic soda line to August](#)
 - [China Lithium Hydroxide Market reflect support as prices modestly rise](#)
 - [Singapore's 2020 chemical fixed asset investments fall; overall FAI grows](#)
 - [Singapore petrochemical exports snap 27-month decline; up 11.5% in Dec](#)
 - [UK chemicals face continued disruption from post-Brexit paperwork, container shortages](#)
 - We continue to flag [China spot LDPE](#), [HDPE](#), [LLDPE](#), [PP](#), [PVC](#), and [PET](#) prices daily.
 - [China methanol prices \[LINK\]](#) reflect support WoW, and acetic acid spot values are rebounding [[LINK](#)].

Exhibit #3: US methanol spot values have declined during the past three weeks amid increased supply



Source: Bloomberg, Nexant, C-MACC, January 2021

Exhibit #4: US methanol margins reflect levels seen at the start of 2020 and well above the 2019 and 2020 averages. China methanol margins have also recently improved and closed the relative spread with the US.



Source: Bloomberg, Nexant, C-MACC, January 2021

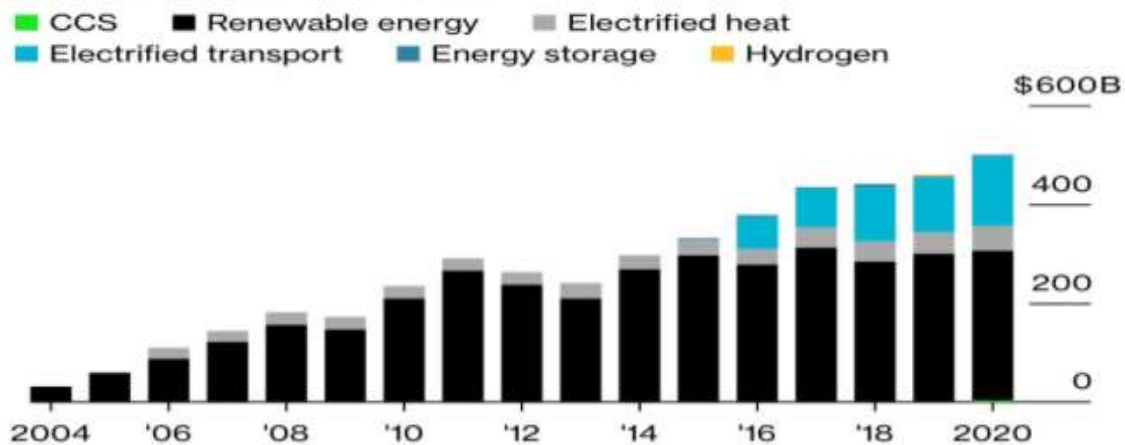
○ **Sustainability, Clean Energy, Recycling & ESG:**

- [Biden's return to Paris pact just a first step on US climate action](#)
- [Big Oil Takes Moves Slowly to Cut Transition Risk](#)
- [Blue ammonia to comprise the bulk of hydrogen transportation due to lower costs](#)
- [Both low-, zero-carbon hydrogen needed to reduce greenhouse gas emissions](#)
- [Carbon capture is vital to meeting climate goals; scientists tell green critics](#)
- [Carbon pricing's disappointing effect on the pace of technological change](#)
- [Chevron Is Investing In A Sustainable Future With Blue Planet Systems](#)
- [China's Huaneng plans major clean energy expansion](#)
- [China's top coal province is defying Xi Jinping's climate pledge](#)
- [Clearing the Air: Yes, Batteries Are Ready To Power Long-Range Freight Trucks](#)
- [Decarbonizing aluminum will require a united front](#)
- [Despite challenges, Biden climate policies could advance in the US, overseas: experts](#)
- [DOE Looks to Stimulate US Energy Tech, Including for Carbon Capture, with New Funding](#)
- [Employers Can Expect ESG Guidance From New Administration](#)
- [Environment groups question UK's carbon capture push](#)

- [Environmental, Social and Governance Reporting under Biden Administration](#)
- [EU battery recycling could be profitable by 2025](#)
- [PODCAST: EU Taxonomy – What does it take for an investment to be green?](#)
- [Experts Say Carbon Capture Holds the Key to Meeting Climate Goals](#)
- [General Motors forges ahead toward a future of Zero Crashes, Zero Emissions, and Zero Congestion at CES 2021](#)
- [Governments need to send a more robust carbon price signal](#)
- [Green bond issuance surges in 2020](#)
- [Has ESG Investing Become the Mainstream?](#)
- [How carbon capture technology can add to the emissions problem](#)
- [Hyundai Steel bumps up its first ESG bond offering on the explosive demand](#)
- [Innovative natural gas project gaining investors](#)
- [Japan's carbon neutrality goal could be more of a bane than a boom for banks](#)
- [National Carbon Capture Center at Wilsonville achieves milestone with 'first fire' of natural gas testing system](#)
- [New Regulation Provides Clarity for Carbon Capture](#)
- [Sustainable \(or ESG\) investing: Are we on the same page?](#)
- [TC Energy decarbonization response to Keystone setback unlikely to sway ESG investors](#)
- [The seven sins of ESG management](#)
- [Too Many Companies Are Banking on Carbon Capture to Reach Net Zero](#)
- [Final Regulations on Carbon Capture Credits Released by Treasury](#)
- [World's Biggest Offshore Wind Producer Moves into Hydrogen](#)
- [UAE targets carbon-capture hydrogen to reduce greenhouse emissions](#)
- [UK plastic recycling 'could more than triple by 2030.'](#)
- [US refiners hone carbon footprint plans, with a focus on renewables](#)
- [US EPA grants three biofuel waivers to refiners before Trump leaves office](#)
- [Zero-emission trucks: 100-fold increase needed in EU fleet, new data shows](#)

Exhibit #5: Another record for Green energy investment in the year 2020. Also, see [LINK](#).

Global spending on the energy transition is driven by renewables and transport



Source: BloombergNEF, Adezenoso.com, C-MACC, January 2021

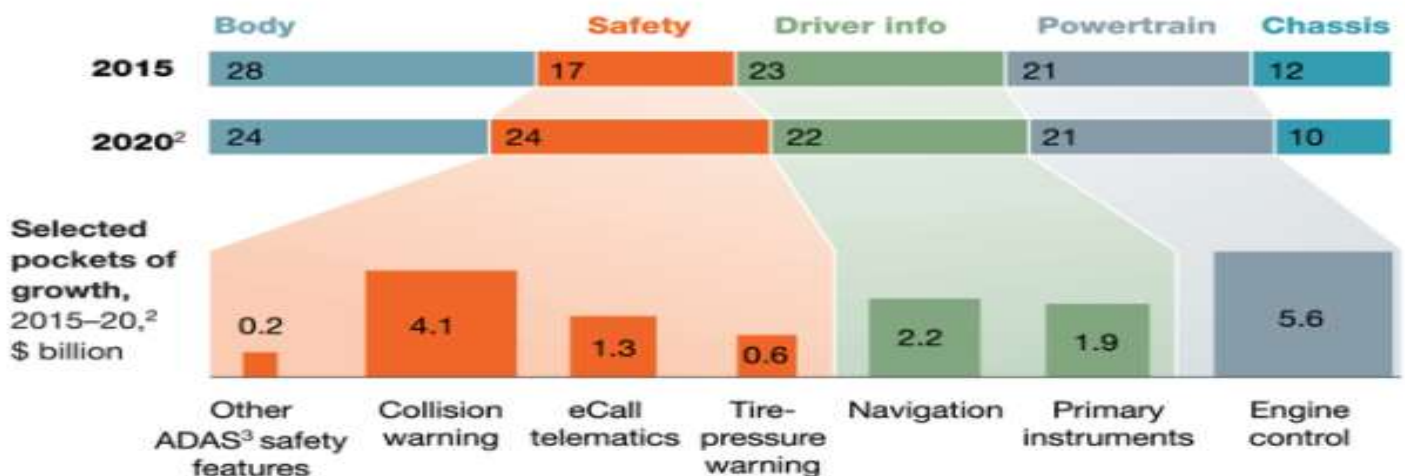
o **Other Industry & Downstream:**

- ['Act big' now to save the economy, worry about debt later, Yellen says in Treasury testimony](#)
- [Audi aims to sell one million cars in China in 2023](#)
- [Biden plans to reverse Trump policies during first days in office](#)
- [China's 2020 GDP rises by 2.3% after 6.5% expansion in Q4](#)
- [Cyclone Lucas to hit Western Australia iron ore region](#)
- [Dollar eases as risk tolerance rises on US stimulus outlook](#)
- [EU firms blame Brexit for delivery chaos as shoppers hit with extra fees](#)

- [Fastenal Company Reports 2020 Annual and Fourth Quarter Earnings](#)
- [Foreigners poured money into China as the world struggled with the coronavirus pandemic](#)
- [From Jeep to Maserati, Stellantis to roll out ten new EV models in 2021](#)
- [Iran says the ball is in US' court to resolve nuclear issue](#)
- [It is 'optimistic but realistic' if the Fed tapers in late 2021](#)
- [Malaysia central bank keeps accommodative monetary stance amid new lockdown](#)
- [Mercedes unveils electric compact SUV in bid to outdo Tesla](#)
- [Mexico 'flirting' with Ford after US carmaker bails on Brazil](#)
- [Paccar, Aurora to Develop Self-Driving Big Rigs](#)
- [Paccar's push for a self-driving truck gets a boost from Silicon Valley partnership](#)
- [Pricey US stock valuations put burden on earnings to keep rally going](#)
- [Procter & Gamble F2Q21 earnings top expectations, led by higher cleaning product and grooming tool demand](#)
- [Romanian BRM exchange mulling ECJ lawsuit against regulator amid claims of EU Treaty breach](#)
- [Ukraine storage operator to offer new products as it seeks another bumper year](#)
- [ASML, a global supplier to the semiconductor industry, beats estimates, grapples with chip supply shortage. Also, see LINK and its 4Q report in LINK.](#)
- [Auto Production Disrupted By Chip Shortages: A Dream Car May Be Hard To Find](#)
- [Semiconductor shortage hampers vehicle manufacturing – could get worse](#)
- [A Microchip Might Be Why the New Car You Want Is Hard to Locate \(caranddriver.com\)](#)
- [Ford India, Mahindra & Mahindra hit by semiconductor shortage](#)
- [Poor Planning Led to Carmakers' Massive Semiconductor Shortage](#)
- [Semiconductor shortage will hit auto industry well into 2021](#)
- [The Semiconductor Shortage Has Come for the Auto Industry](#)
- [Volkswagen says China car sales, production hit by chip supply shortage](#)
- [China auto industry recovery faces challenges from Europe chip shortage | ICIS](#)
- [Chip shortage threatens global auto sector, demand for chemicals and polymers](#)

Exhibit #6: We highlight the exhibit below to show automotive-semiconductor demand by core segment – see the full report in [LINK](#) – and to accompany the news items above, Exhibit #7 and further detail on this industry in the McKinsey report [Mobility trends: What's ahead for automotive semiconductors](#)

Automotive-semiconductor demand by core segment, % of total¹



¹Figures may not sum to 100%, because of rounding.

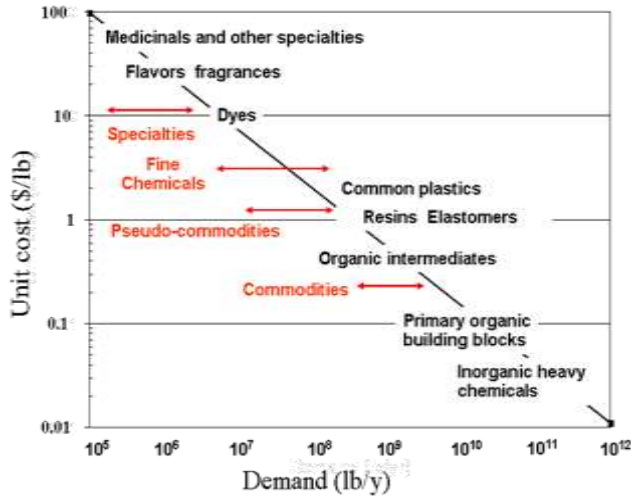
²2020 is estimated.

³Other advanced-driver-assistance systems include safety features other than those mentioned in the chart above, such as parking assistance or drowsiness monitoring.

Source: McKinsey, Intrinx, C-MACC, January 2021

Flow Charts & Ancillary Data

Ex. 8 Specialty versus commodity



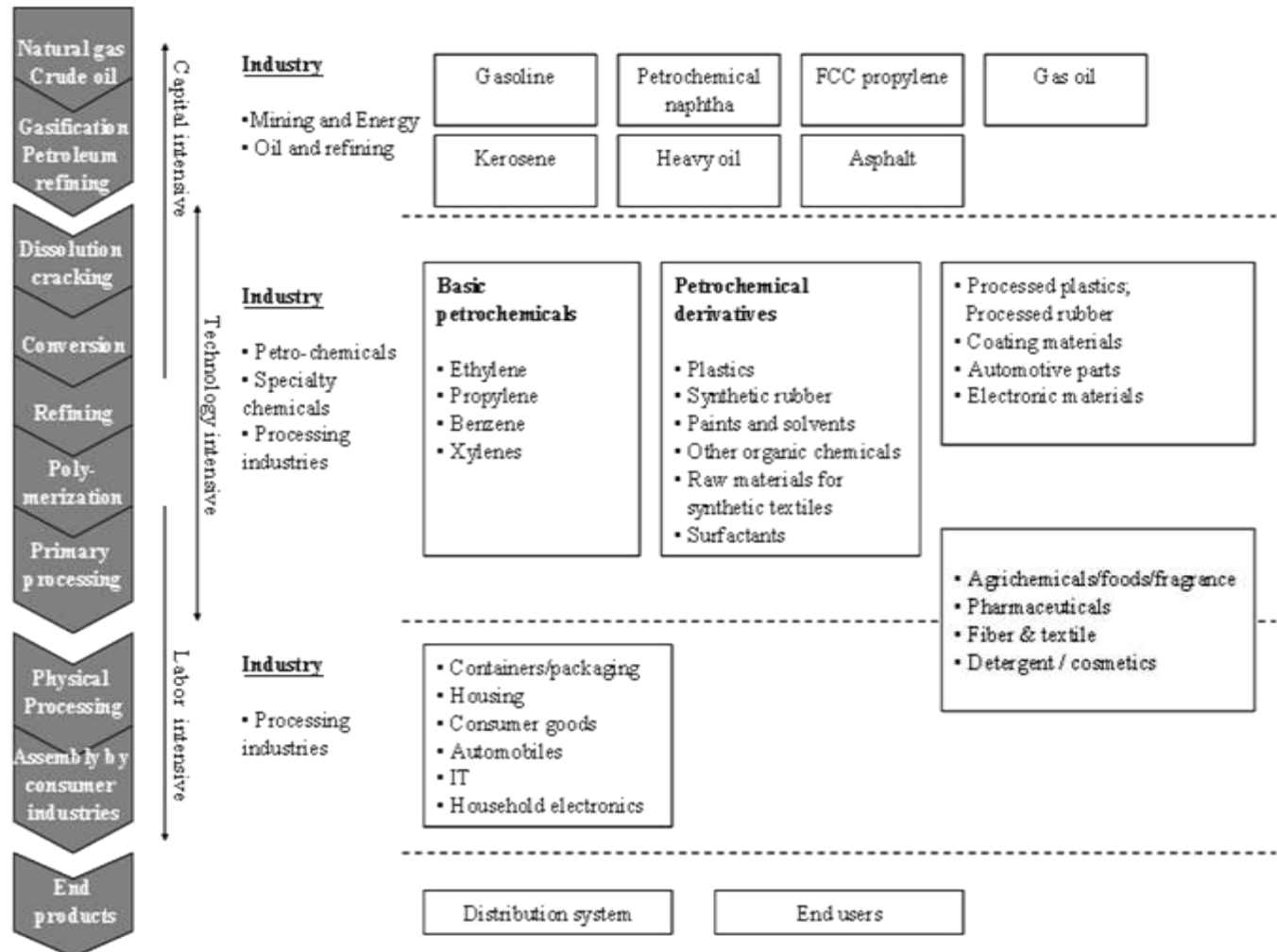
Source: SRI consulting, C-MACC, January 2021

Ex. 9 Chemical industry characteristics

	BULK CHEMICALS	FINE CHEMICALS	SPECIALTY CHEMICALS
Product life cycle	Long	Moderate	Short/moderate
# of products	00's	000's	0000's
Product volumes	>10,000t/y	<10,000t/y	highly variable
Product prices	<5US\$/kg	>5US\$/kg	>10US\$/kg
Product differentiation	none	very low	high
Value added	low	high	high
Capital intensity	high	moderate	moderate/low
R&D focus	process improvement	process development	application/product
KEY SUCCESS FACTORS			
• cost	✓ ✓ ✓	✓ ✓	✓
• technical service	-	✓ ✓ ✓	✓ ✓ ✓
• links with customer	-	✓ ✓	✓ ✓ ✓

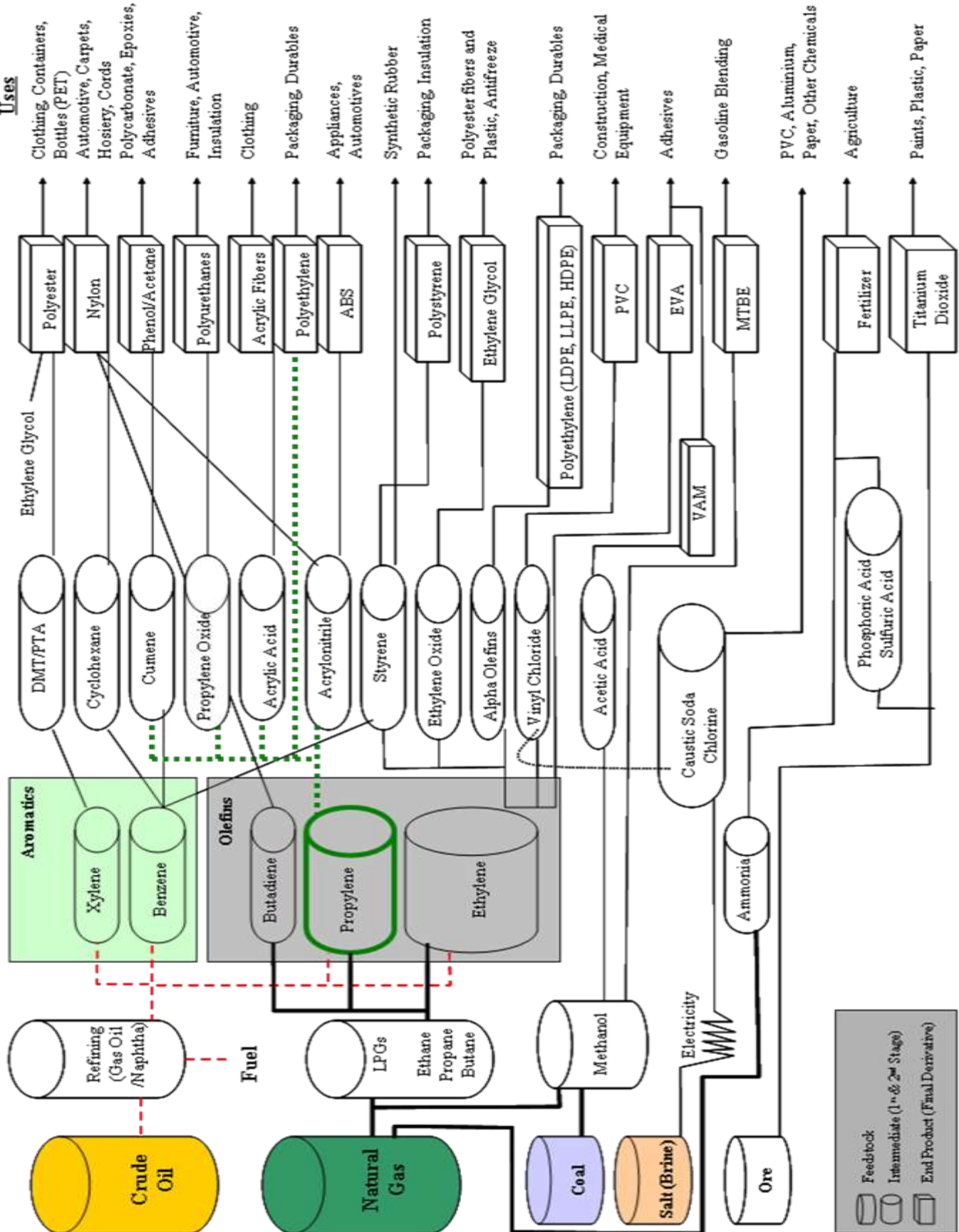
Source: C-MACC, January 2021

Ex. 10 Chemical industry and its upstream and downstream industries



Source: C-MACC, January 2021

Ex. 11 Petrochemical Industry Production Flow – a look at the commodities and their end use



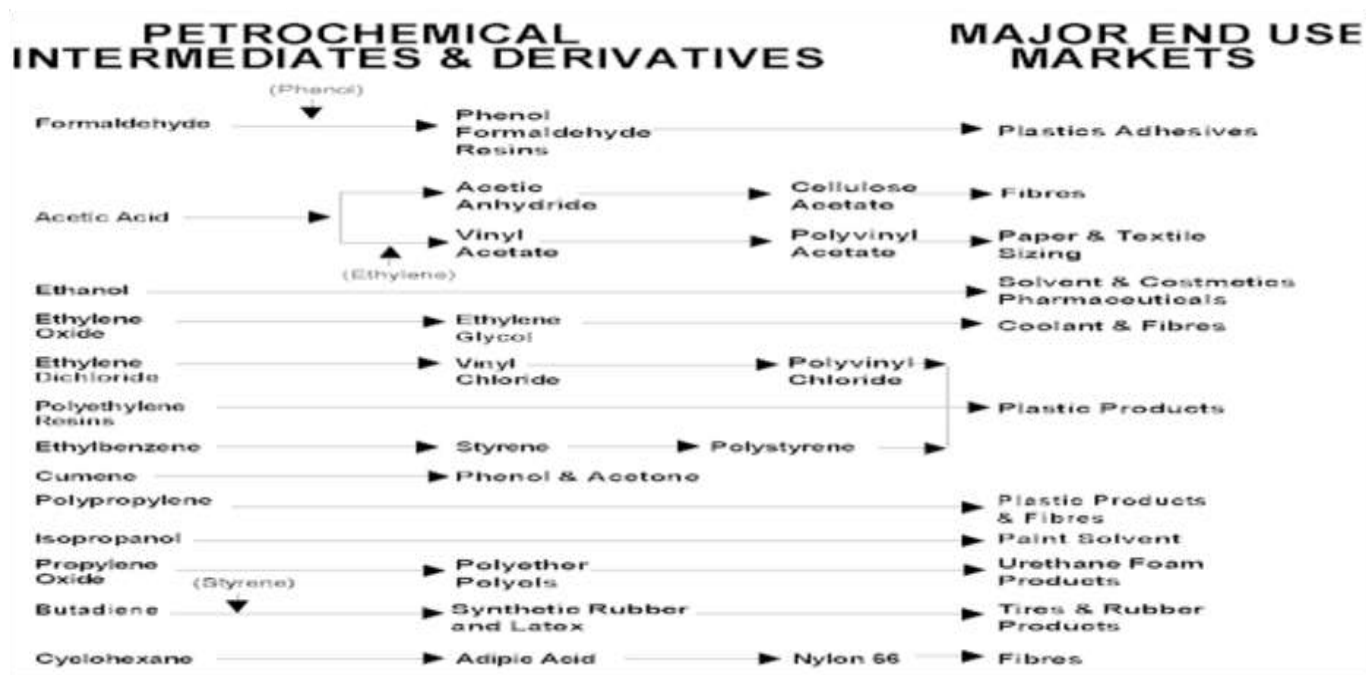
Source: C-MACC, January 2021

Ex. 12 The conversion of petrochemicals to primary intermediates/derivatives



Source: C-MACC, January 2021

Ex. 13 Intermediates & derivative conversion to end markets



Source: C-MACC, January 2021

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