

This document is intended for professional clients in accordance with MIFID  
N° 020 // 3 May 2021

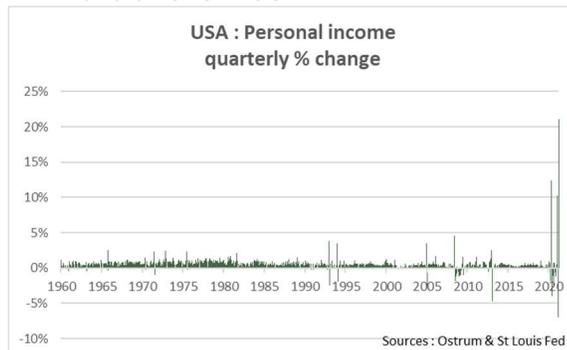
## ● Topic of the week: Commodities and megatrends

- The rebound in commodities since the Covid crisis is partly cyclical, but there are also a number of “megatrends” that have changed the game.
- Green energy, China’s place, US energy independence, investments in renewable energy, changes in eating habits are all factors.
- While all of these commodities appear to have reacted identically since March 2020, the underlying fundamental trends are very different.

## ● Market review: A Reagan moment for Biden?

- Fed: monetary status quo
- Biden presents the American Families Plan worth \$1.8T
- Yields up, credit spreads broadly stable
- Upbeat quarterly earnings season

## ● Chart of the week



The increase in personal income in the United States is impressive, 21.1% over the first quarter compared to the previous one.

This figure is of course linked to the Biden recovery plan and shows that the American recovery effort is very important. Private consumption growth over the first quarter was 10.7% on an annualized quarterly basis. The increase in income suggests even stronger consumption figures for the second quarter.

## ● Figure of the week

# 10k

Source: Ostrum AM

\$10,000 per ton of copper, the limit was briefly exceeded last week. This is the first time since 2011. The pressure on metals remains strong.



**Stéphane Déo**  
Head of markets strategy



**Axel Botte**  
Global strategist



**Zouhoure Bousbih**  
Emerging countries strategist



**Aline Goupil-Raguénès**  
Developed countries strategist

• Topic of the week

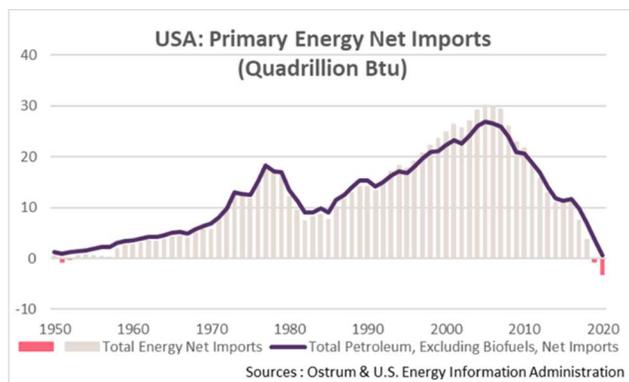
# Commodities and megatrends

Since the worst of the crisis in March last year the price of raw materials has rebounded very quickly: oil, metals but also food. Although a significant part of this rebound is cyclical with the exit from the crisis, there are also a number of “megatrends” that have changed the game for these commodities. Instead, we focus on these long-term trends: renewable energy and energy independence of the United States in the case of oil, role of China and green investments for metals, changes in food behavior. These determinants are major components of price developments.

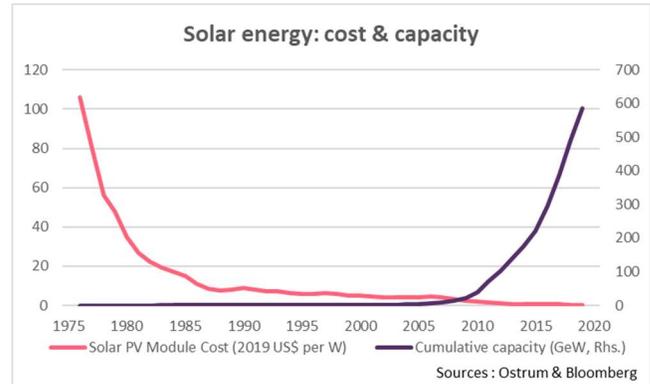
## Oil

Giving honor where honor is due, let us begin, let us begin with oil. Before going into the details of the current economic situation, it is necessary to point out two megatrends which have structurally changed the oil market since the beginning of the century

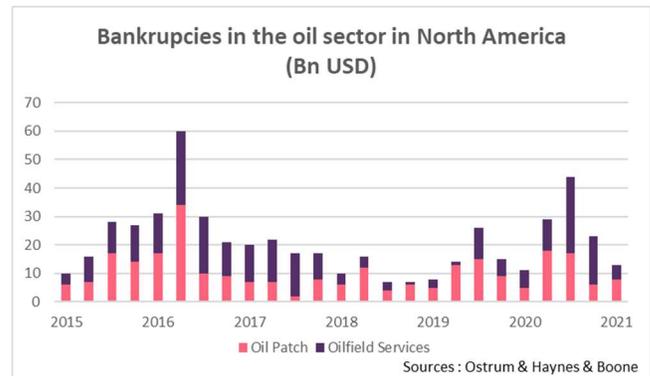
On one hand, the United States has gone from being the world’s leading importer to an energy balance. They were even, as shown in the graph below net energy exporter last year, even though the adjustment of the external balance of the last two decades is almost exclusively linked to the balance of hydrocarbons.



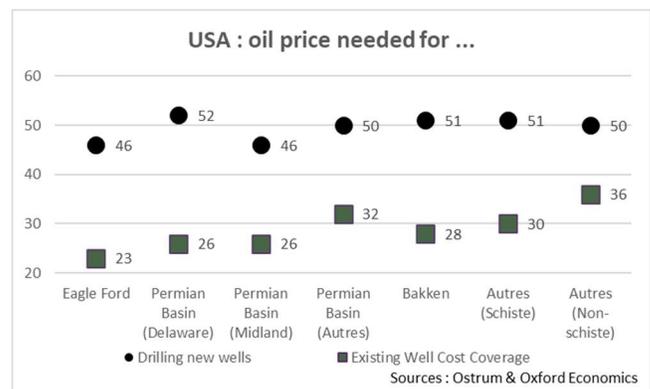
The second megatrend is the collapse of the cost of producing renewable energy. This very rapid drop in costs means that solar energy is now profitable if oil prices exceed \$60. So there is a long-term pullback force to that level. Or, in other words, a very strong incentive to solar energy, as soon as oil prices exceed \$60.



However, this context needs to be nuanced because the cyclical aspects are also very important. To return to the United States, significant production capacities were destroyed. The law firm of Haynes and Boone keeps track of bankruptcies in the oil patch, and as the chart below shows, 2020 was a tough year.



But here too we must keep in mind that capacity investment becomes profitable in the United States when the price of crude exceeds \$50. And we have seen in recent months the drilling activity recover quickly. Admittedly the Biden administration is much less lax than that of Trump, but here too the argument is that a sustainable price above \$60 leads to additional energy supply, and therefore limits the potential for increase beyond.



At the same time, OPEC seems to be managing its production quotas efficiently. If the capacity is estimated at 34.5 million barrels a day, the production is rather around 25 mbj. This is partly due to Saudi Arabia but also to some

countries that have experienced production problems.



In the medium term, however, the market seems to be converging towards our analysis: the price of oil cannot remain sustainably above \$60. The future contract on the Brent at 60 months (5 years is the longest that exists) tended

to move with the spot price during the decade 2000-2010 as shown in the chart below. Since 2016 this is no longer the case, this contract remains very close to \$ 60 regardless of the movements of the spot. The market is therefore assuming that the market will return to a level of equilibrium close to \$60.

Finally, we must also mention the significant trend for major oil companies to invest in renewable energies. The energy transition is inevitable, customers and authorities are pushing in this direction and the profitability of traditional operations is deteriorating. There is therefore a major effort in several dimensions:

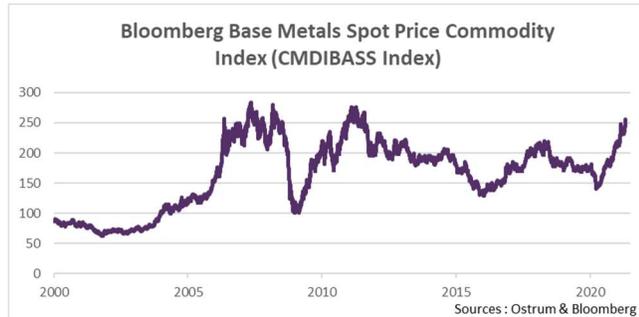
- Improvement of energy efficiency
- Reduction of energy consumption in production.
- Capture the growth prospects in the low carbon sector.

	Scope 1+2 Targets & Ambitions	Full-Cycle Emissions Targets & Ambitions	Renewables Targets & Ambitions	Renewables Capex Targets & Ambitions
<b>BP</b>	Net zero on BP's operational emissions by 2050 or sooner.	On BP's own upstream volumes, net zero absolute emissions by 2050 or sooner. On BP's marketed products, reduce intensity by 50% by 2050 or sooner.	5 GW of equity capacity via Lightsource by 2023 (gross target 10GW, BP 50% equity); plus 1GW current capacity ex-Lightsource.	Previous: ~3% of total (2019-21) - \$0.5bn p.a. 2020 low-carbon capex maintained.
<b>ENI</b>	Net Zero on upstream emissions by 2030. Net Zero on Eni Group's emissions by 2040.	Absolute terms: emissions reduction of 30% by 2035, 80% by 2050. Cut Intensity 15% by 2035, 55% by 2050	Equity capacity for renewables: 3 GW by 2023, 5 GW by 2025, ~15 GW by 2030, >25 GW by 2035, >55 GW by 2050	Previous: ~12% of total (up to 2023) on Transition Themes incl. renewables - €4bn. Prev. €3bn (of which €4bn renewables, 7% assuming €4bn). 2020 total capex cut €3bn, 2021 cut €5-3bn.
<b>Equinor</b>	Carbon Neutral globally by 2030 (Equinor Operated). Norway: 40% absolute reduction in operated onshore & offshore emissions by 2030, 70% by 2040, Net Zero by 2050.	Cut full-cycle emissions intensity at least 50% by 2050, on own production	4-6GW renewables equity capacity 2026, 12-16GW by 2036. Focus is Offshore Wind.	Previous: Gross Basis (50/50 proj. fin. and cash): \$0.5-1bn 2020/21, \$2-3bn 2022/23. ~7% and ~20% of total respectively (4% and 10% on respectively cash basis). 2020: \$8.5bn capex total. 2021: potential \$10bn.
<b>GALP</b>	All electricity used in Portuguese operations to be from renewables by 2021.	No Scope 3 target.	3.3 GW gross capacity by 2023, 10 GW gross capacity by 2030. Iberian Solar focus, but could look at other types.	Previous: 10-15% of total future capex (2020-22), implied €10-165m p.a. at midpoint of total guidance. Capex & Opex cuts of >€500m; 90% capex, previous range €1-12bn.
<b>OMV</b>	Reduce carbon intensity of operations by 19% by 2025 (vs 2010). Achieved 22% cut by 2019, new targets to be set for 2025.	Cut emissions from product portfolio by 4% by 2025 (vs 2010 level). Achieved in 2019, new targets to be set for 2025	No targets	Up to €500m total into 'innovative energy solutions' by 2025. Not renewables. N.B. Borealis stake increasing to 75%
<b>Repsol</b>	No specific targets. NB. Intensity metric is Full-Cycle	3% cut to full-cycle intensity by 2020 (vs 2016). 10% cut by 2025, 20% by 2030, 40% by 2040, Net Zero 2050. All apply to upstream emissions. NB. Emissions boundaries used.	Low carbon power generation: 7.5 GW (Equity) by 2025 - up to 5.2 GW implied renewables (currently 2.3GW CCGT/Cogen).	Previous: 18% of total (2020) - €0.7bn. 2020: 10% of capex cut from Commercial & Renewables Segment (€0.1bn).
<b>Shell</b>	Net Zero on products manufactured by Shell by 2050 'at the latest'.	Cut Net Carbon Footprint 2-3% by 2021 (vs 2016), 3-4% by 2022, 30% by 2035, and 65% by 2050.	5 GW operational capacity by 2025. No preference for generation type. Are involved in several Offshore Wind projects.	Previous: ~8% of total (2021-25) - \$2-3bn p.a. 2020: \$1.25bn (25% of 2020 capex cut from Integrated Gas & New Energies.
<b>Total</b>	Net Zero on operational emissions by 2050 or sooner.	Reduce carbon intensity of products by 15% by 2030, 35% by 2040, 60% by 2050 or sooner. Net-Zero in Europe by 2050 or sooner (upstream production and products).	25 GW operational capacity 2025. Total indicates 50% farm downs (implied 12.5 GW equity). Various generation types. Also holds ~2GW CCGT (2019).	Previous: ~10% of total (2020), \$1.2-2bn p.a. Low carbon capex for 2020 maintained \$1.5-2bn: ~10-14% of 2020 net investments. Indicated increasing to 20% by end of decade.

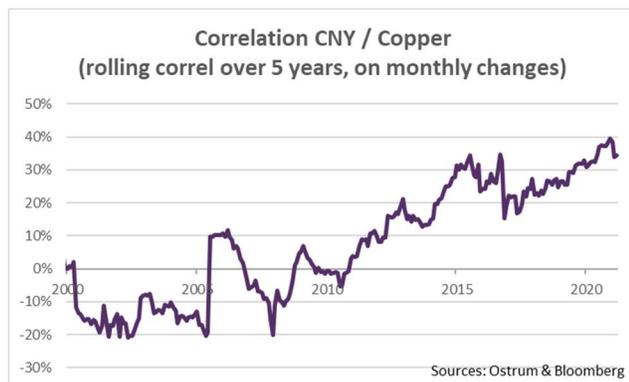
Source : Crédit Suisse

## Metals

The Bloomberg Metals Index after hitting a low during the covid episode rebounded very strongly, gained 82% from its March 2020 lows and is now on track to its all-time highs. Much of this rebound is cyclical; the exit from the crisis explains the correction of the index. However, these cyclical aspects do not explain the violence of the rebound nor the high level reached by the index. As in the case of oil, there are several megatrends to be noted.



First point is the place of China which now absorbs about half of the world's copper production each year. The graph below shows this evolution, copper prices and Yuan are increasingly correlated. If the Chinese economy was negligible in the commodity market two decades ago, we see that it is one of the fundamental elements of price formation.



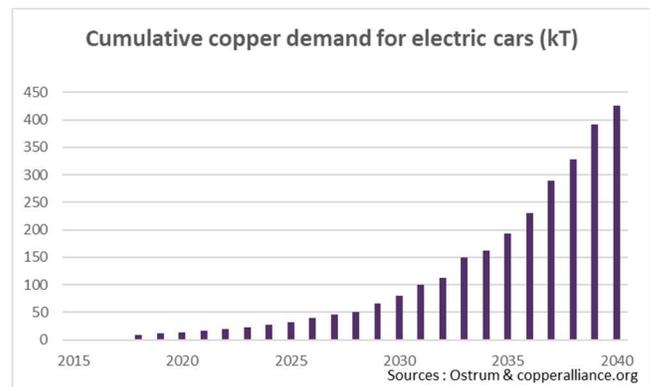
The other important point is green investment, which is very high in metals. Metals Important for Future Technologies (MIFTs) are the metals that are essential for green investment. The main ones are copper, nickel, zinc, aluminum, cobalt, lead and iron. But the list is broader as shown in the following table:

	Power applications			Automotive	Other		
	Wind	Solar	Energy storage		Electric vehicles	Electric motors	Carbon capture
Aluminium	X	X	X		X	X	X
Chromium	X					X	X
Cobalt			X	X		X	
Copper	X	X		X	X	X	X
Lead	X	X					X
Lithium				X			
Molybdenum	X	X				X	X
Neodyme (rare hearth)	X			X			
Nickel	X	X	X	X		X	X
Silver		X		X			X
Steel	X						
Zinc		X					X

Source: World Bank

The demand for copper is particularly boosted by this trend, it fits into the design of the vast majority of new technologies. The sole use for electric vehicles is expected to explode over the next decade.

Of course, the same trend will apply to electricity generation, batteries, energy storage, distribution and transmission systems, etc.



On the other hand, it is much more difficult for production to follow. It takes about five to seven years between the decision to start a copper mine and the first production. The decline in the quality of new minerals discovered and the increase in costs add to the difficulties. Investment in mining is therefore very pro-cyclical and high prices and positive price estimates are needed to make such a decision.

If the example of copper becomes emblematic of the energy transition, the pressure on commodity prices should remain important in a much more general way:

**NICKEL:** key for energy storage. Environmental risk to production, no major risk to supply but production costs likely to increase.

**LITHIUM:** key for energy storage. Under development. Chemical process required before use.

**ALUMINIUM:** price pressure due to high production-related energy costs and Chinese competition. Lightweight metal, key for transport.

**COBALT:** so far, almost the monopoly of the Democratic Republic of Congo, which accounts for 60% of world production. Glencore is a key player in the DRC.

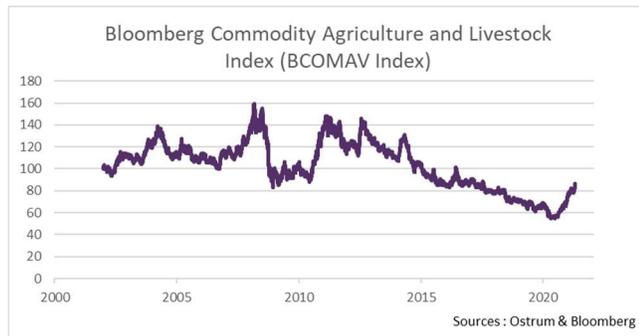
**RARE EARTHS:** so far, China dominates the market (55% of production).

**COPPER:** lower grades, increased costs, sustained demand in TM. Like nickel, copper can also be produced with by-products (cobalt, gold, silver, molybdenum). As a result, average real costs of production may be lower than the average cost of \$5,000/t while market prices are currently above \$9,000/t.

Ostrum AM follows 9 of the top 20 copper producers (9 of the top 13 players). ESG problem caused by other metals/products produced by these companies.

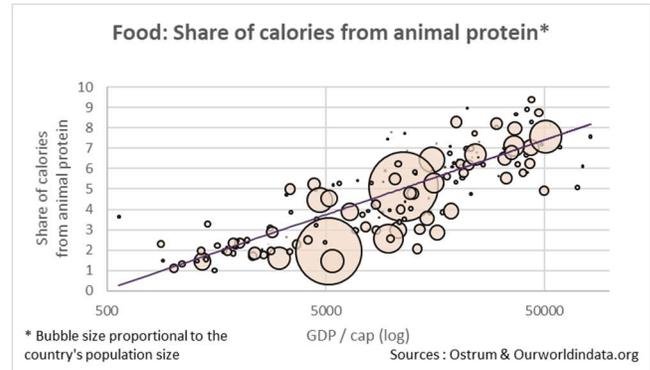
## Food

In the case of food, too, there has been a very sharp rebound in prices since last March, almost 60%. This rebound is widely shared by all food products. Even if, in this case, the absolute level remains moderate especially in comparison with metals.



Here too structural changes are to be noted. Of course, the increase in the world's population creates a parallel increase in food demand. But this population growth has a tendency to decrease, China for example should know the effects of the policy "one child per couple" and see its population begin to decrease from the second half of the current decade.

On the other hand, there is a strong trend towards an increase in the proportion of animal protein in the diet. The chart below shows this trend, which is particularly strong in China.



The problem is that the consumption of protein is much demanding in resources for production. However, we do not necessarily always realize the size of the difference: to produce a kilo of vegetable protein, we need about 18 times less agricultural area, 10 times less water, 12 times less fertilizer, 10 times less pesticides than to produce a kilo of protein from a cow. The reason is simple, you have to produce a lot of plants to feed a cow. As one economist put it: "A third of what you put in a cow to feed it comes out as dung. Having a third of its return on investment in the form of manure does not seem very attractive".

The table below provides some additional figures. From an economic efficiency point of view animal consumption is a heresy, from a gustatory point of view it is of course something else:

Water use to produce 1kg of:	
Apples: 700 litres	
Soybean: 2,145 litres	
Beef: 15,400 litres	
NB: a family of 4 in the United States uses 1,500 liters of water per day to produce its food. A shower uses 9 liters per minute.	
Energy use to produce 1kg of:	
Peaches: 344 Kj	
Beans: 2,861 Kj	
Fines: 4,646 Kj	
Beef: 7,880 Kj	
An average American household uses 104,000 Kj of electricity per day.	
Source: Hamerschlag et Venkat, 2011	

The increase in purchasing power in a number of emerging countries, which goes hand in hand with a more protein-rich diet, particularly in China, is therefore a pressure on natural resources which is at least as important as the simple growth of the world's population.

## Conclusion

The recent rebound in commodities has been impressive. Not only because of its strength, but also because of its extent: oil, metals, food, and even wood whose prices have exploded. There is of course an undeniable cyclical aspect to this development. After a price collapse at the beginning of last year the rebound is partly a normalization of prices and a catch-up while production cannot adjust as fast as demand.

But beyond these purely cyclical aspects, there are more fundamental changes in these markets. In the case of oil, this amounts to capping the price of oil, which is difficult to see exceed \$60 in a sustainable way. It also means that part of the hydrocarbon reserves will never be profitable, the famous stranded assets. This is the amount of carbon that will remain in the soil. For metals the structural increase in demand will have to push mining towards more difficult resources to exploit, and thus towards a steady-state price

that should remain higher. Finally, in the case of food resources, the distortion of consumption while emerging countries are consuming more and more animal proteins, imposes more constraints on natural resources, water, cultivated area, energy, etc.

While all these commodities seem to have reacted identically since March 2020, the underlying fundamental trends are therefore very different.

**Anne Pumir, credit analyst**  
**Bruno Farvacque, credit analyst**  
**Stéphane Déo, strategist**

• **Market review**

## A Reagan moment for Biden?

### Fed status quo, Biden presents \$ 1.8 trillion American Families Plan, European banks outperform amid rebound in bond yields

The Fed continues to see the glass half full dismissing near-term inflationary risks. In fact, Fed monetary policy will remain constrained by future public borrowing needs. Cyclical budget support is now supplemented by two multi-year federal programs aimed at a profound overhaul of the role of the federal government. The change in public policy draws comparisons with that of Ronald Reagan's Presidency in 1981. The Fed's accommodative stance nonetheless remains favorable to risky assets, as the earnings of the first quarter point to a clear recovery in profitability. Bond yields are rising on asset allocation flows. In turn, credit spreads are broadly unchanged. The dollar remains weak even if the rise in US rates tends to ease the selling pressure.

The US economy posted annualized growth of 6.4% in the first quarter. Strength in equipment and R&D spending is proof of business confidence. Robust household demand driven by vaccination and federal transfers generates external imbalances and exerts pressure on supply chains. Inventory drawdown and the deterioration in the trade balance thus subtracted 3.6pp to GDP between January and March. The rebuilding of inventories and a nascent recovery in Europe will add to domestic momentum in the coming months. Inflation fears have worsened amid component shortages and rising input prices. Labor costs also increased by 0.9% in the first quarter. These price pressures are spreading through the economy, no matter what the Federal Reserve says. The Fed remains subject to fiscal dominance in the face of Joe Biden's unprecedented budget proposals. In addition to the economic program of \$ 1;900 trillion voted in March, fiscal stimulus will be enhanced via two plans of 2250 billion dollars over 8 years and 1800 billion dollars over 10 years respectively aimed in particular at the transition imposed by climate change and improving access by households to health care and education. The thin Democratic majority in the House and, more importantly, in the Senate, will make it hard for the Biden Administration to push its agenda through Congress. Republicans will likely use the debt ceiling to restrict Joe Biden's ability to act this summer.

In addition, the increase in the tax burden on businesses is partly due to the extraterritoriality of the US tax authorities, and the increase in taxes on capital gains and income will primarily hit wealthy households in predominantly

democratic states. The adoption of these plans will not be smooth.

In Europe, economic data releases have been mixed. The April surveys turned out to be better than expected considering the latest lockdown measures. However, the euro area contracted by 0.6% in the first quarter despite a rebound in France (+ 0.4%). Inflation is back to 1.6% on a year-over-year basis.

As regards financial markets, T-note yields rose by 8bp over the past week. Treasury bond auctions early on last week were met with poor final investor demand. However, the buybacks of short positions by leveraged fund accounts continued, limiting upward pressure on bond yields. The Fed's status quo also effectively mitigated the impact of the announcement of the \$ 1.8 trillion American Families Plan. The 10-year T-note yield is trading around 1.65% with no noticeable curve movement.

In the euro zone, sovereign debt issuance continues to weigh on bond markets. Bund yields went up towards - 0.20%, which led to a modest widening of 3bp in peripheral bond spreads. The other segments of the euro area credit market weathered the rise in interest rates. Euro investment grade credit tightened by 1bp to 84bp vs. Bunds. The primary market slowed somewhat, especially in non-financials space. Financial bond issuance reached € 100 billion in 2021, in line with the same period in 2020. There is some spread tightening in the BBB and high beta (hybrid) sectors. On the other hand, CDS indices are flat through April at 50bp despite some hedging flows. As for high yield, spreads narrowed by 17bp in April. The primary market remains very active in speculative-grade markets. Issuance already amount to 45 billion in 2021 (26 billion € net) against 103 billion € in the year 2020. A market theme betting on rising stars is developing as the market integrates the prospects for rating upgrades as the recovery unfolds. The BB ratings have significant potential to catch up with the BBB-rated bonds. On the other hand, the compression of B spreads vs. BB seems to be running out of steam. Finally, like the iTraxx IG, the Crossover index has been trading in a narrow 35p range since November.

The corporate earnings season brings its fair share of positive surprises. Almost two-thirds of S&P 500 companies have published first-quarter earnings and 86% of them beat the consensus. Annual growth stands at 52% with aggregate turnover up 11%. Consumer discretionary, commodities and financials posted outstanding numbers. In Europe, three-quarters of publications have surprised on the upside. Bank stocks (+ 7% last week) are benefiting from the rebound in rates to the detriment of cyclicals, which seem to have fully price in the recovery.

**Axel Botte**  
Global strategist

## ● Main market indicators

<b>G4 Government Bonds</b>	<b>03-May-21</b>	<b>-1wk (bp)</b>	<b>-1m (bp)</b>	<b>YTD (bp)</b>
EUR Bunds 2y	-0.69 %	+0	+2	+1
EUR Bunds 10y	-0.20%	+5	+12	+37
<b>EUR Bunds 2s10s</b>	<b>48 bp</b>	<b>+5</b>	<b>+10</b>	<b>+35</b>
USD Treasuries 2y	0.16 %	-1	-3	+4
USD Treasuries 10y	1.61 %	+4	-11	+70
<b>USD Treasuries 2s10s</b>	<b>145 bp</b>	<b>+5</b>	<b>-8</b>	<b>+66</b>
GBP Gilt 10y	0.84 %	+10	+2	+65
JPY JGB 10y	0.1 %	+2	-3	+8
<b>€ Sovereign Spreads (10y)</b>	<b>03-May-21</b>	<b>-1wk (bp)</b>	<b>-1m (bp)</b>	<b>YTD (bp)</b>
France	35 bp	+2	+11	+12
Italy	108 bp	+3	+12	-3
Spain	66 bp	+1	+2	+4
<b>Inflation Break-evens (10y)</b>	<b>03-May-21</b>	<b>-1wk (bp)</b>	<b>-1m (bp)</b>	<b>YTD (bp)</b>
EUR OATi (9y)	136 bp	+5	+10	-
USD TIPS	242 bp	+6	+5	+43
GBP Gilt Index-Linked	350 bp	+4	-4	+50
<b>EUR Credit Indices</b>	<b>03-May-21</b>	<b>-1wk (bp)</b>	<b>-1m (bp)</b>	<b>YTD (bp)</b>
EUR Corporate Credit OAS	84 bp	-1	-7	-8
EUR Agencies OAS	39 bp	+0	+0	-2
EUR Securitized - Covered OAS	31 bp	0	+0	-2
EUR Pan-European High Yield OAS	297 bp	-8	-18	-61
<b>EUR/USD CDS Indices 5y</b>	<b>03-May-21</b>	<b>-1wk (bp)</b>	<b>-1m (bp)</b>	<b>YTD (bp)</b>
iTraxx IG	50 bp	-1	0	+2
iTraxx Crossover	249 bp	-1	+4	+7
CDX IG	50 bp	-1	0	+0
CDX High Yield	286 bp	-5	-10	-8
<b>Emerging Markets</b>	<b>03-May-21</b>	<b>-1wk (bp)</b>	<b>-1m (bp)</b>	<b>YTD (bp)</b>
JPM EMBI Global Div. Spread	339 bp	0	-20	-12
<b>Currencies</b>	<b>03-May-21</b>	<b>-1wk (%)</b>	<b>-1m (%)</b>	<b>YTD (%)</b>
EUR/USD	\$1.206	-0.26	+2.05	-1.37
GBP/USD	\$1.391	+0.17	+0.06	+1.9
USD/JPY	¥109.09	-0.88	+0.93	-5.31
<b>Commodity Futures</b>	<b>03-May-21</b>	<b>-1wk (\$)</b>	<b>-1m (\$)</b>	<b>YTD (\$)</b>
Crude Brent	\$67.3	\$2.2	\$2.8	\$15.8
Gold	\$1 792.8	\$13.9	\$64.6	-\$101.6
<b>Equity Market Indices</b>	<b>03-May-21</b>	<b>-1wk (%)</b>	<b>-1m (%)</b>	<b>YTD (%)</b>
S&P 500	4 200	0.29	4.47	11.81
EuroStoxx 50	4 000	-0.51	1.38	12.60
CAC 40	6 308	0.52	3.36	13.63
Nikkei 225	28 813	-1.29	-3.49	4.99
Shanghai Composite	3 447	-0.79	-1.08	-0.75
VIX - Implied Volatility Index	18.26	3.51	5.37	-19.74

Source: Bloomberg, Ostrum Asset Management

## Additional notes

### Ostrum Asset Management

Asset management company regulated by AMF under n° GP-18000014 – Limited company with a share capital of 48 518 602 €. Trade register n°525 192 753 Paris – VAT : FR 93 525 192 753 – Registered Office: 43, avenue Pierre Mendès-France, 75013 Paris – [www.ostrum.com](http://www.ostrum.com)

This document is intended for professional, in accordance with MIFID. It may not be used for any purpose other than that for which it was conceived and may not be copied, distributed or communicated to third parties, in part or in whole, without the prior written authorization of Ostrum Asset Management.

None of the information contained in this document should be interpreted as having any contractual value. This document is produced purely for the purposes of providing indicative information. This document consists of a presentation created and prepared by Ostrum Asset Management based on sources it considers to be reliable.

Ostrum Asset Management reserves the right to modify the information presented in this document at any time without notice, which under no circumstances constitutes a commitment from Ostrum Asset Management.

The analyses and opinions referenced herein represent the subjective views of the author(s) as referenced, are as of the date shown and are subject to change without prior notice. There can be no assurance that developments will transpire as may be forecasted in this material. This simulation was carried out for indicative purposes, on the basis of hypothetical investments, and does not constitute a contractual agreement from the part of Ostrum Asset Management.

Ostrum Asset Management will not be held responsible for any decision taken or not taken on the basis of the information contained in this document, nor in the use that a third party might make of the information. Figures mentioned refer to previous years. Past performance does not guarantee future results. Any reference to a ranking, a rating or an award provides no guarantee for future performance and is not constant over time. Reference to a ranking and/or an award does not indicate the future performance of the UCITS/AIF or the fund manager.

Under Ostrum Asset Management's social responsibility policy, and in accordance with the treaties signed by the French government, the funds directly managed by Ostrum Asset Management do not invest in any company that manufactures, sells or stocks anti-personnel mines and cluster bombs.

Final version dated 03/05/2021

### Natixis Investment Managers

This material has been provided for information purposes only to investment service providers or other Professional Clients, Qualified or Institutional Investors and, when required by local regulation, only at their written request. This material must not be used with Retail Investors.

**In the E.U.** (outside of the UK and France): Provided by Natixis Investment Managers S.A. or one of its branch offices listed below. Natixis Investment Managers S.A. is a Luxembourg management company that is authorized by the Commission de Surveillance du Secteur Financier and is incorporated under Luxembourg laws and registered under n. B 115843. Registered office of Natixis Investment Managers S.A.: 2, rue Jean Monnet, L-2180 Luxembourg, Grand Duchy of Luxembourg. Italy: Natixis Investment Managers S.A., Succursale Italiana (Bank of Italy Register of Italian Asset Management Companies no 23458.3). Registered office: Via San Clemente 1, 20122 Milan, Italy. Germany: Natixis Investment Managers S.A., Zweigniederlassung Deutschland (Registration number: HRB 88541). Registered office: Im Trutz Frankfurt 55, Westend Carrée, 7. Floor, Frankfurt am Main 60322, Germany. Netherlands: Natixis Investment Managers, Nederlands (Registration number 50774670). Registered office: Stadsplateau 7, 3521AZ Utrecht, the Netherlands. Sweden: Natixis Investment Managers, Nordics Filial (Registration number 516405-9601 - Swedish Companies Registration Office). Registered office: Kungsgatan 48 5tr, Stockholm 111 35, Sweden. Spain: Natixis Investment Managers, Sucursal en España. Serrano n°90, 6th Floor, 28006, Madrid, Spain. Belgium: Natixis Investment Managers S.A., Belgian Branch, Louizalaan 120 Avenue Louise, 1000 Brussel/Bruxelles, Belgium.

**In France**: Provided by Natixis Investment Managers International – a portfolio management company authorized by the Autorité des Marchés Financiers (French Financial Markets Authority - AMF) under no. GP 90-009, and a public limited company (société anonyme) registered in the Paris Trade and Companies Register under no. 329 450 738. Registered office: 43 avenue Pierre Mendès France, 75013 Paris.

**In Switzerland**: Provided for information purposes only by Natixis Investment Managers, Switzerland Sàrl, Rue du Vieux Collège 10, 1204 Geneva, Switzerland or its representative office in Zurich, Schweizergasse 6, 8001 Zürich.

**In the British Isles**: Provided by Natixis Investment Managers UK Limited which is authorised and regulated by the UK Financial Conduct Authority (register no. 190258) - registered office: Natixis Investment Managers UK Limited, One Carter Lane, London, EC4V 5ER. When permitted, the distribution of this material is intended to be made to persons as described as follows: in the United Kingdom: this material is intended to be communicated to and/or directed at investment professionals and professional investors only; in Ireland: this material is intended to be communicated to and/or directed at professional investors only; in Guernsey: this material is intended to be communicated to and/or directed at only financial services providers which hold a license from the Guernsey Financial Services Commission; in Jersey: this material is intended to be communicated to and/or directed at professional investors only; in the Isle of Man: this material is intended to be communicated to and/or directed at only financial services providers which hold a license from the Isle of Man Financial Services Authority or insurers authorised under section 8 of the Insurance Act 2008.

**In the DIFC**: Provided in and from the DIFC financial district by Natixis Investment Managers Middle East (DIFC Branch) which is regulated by the DFSA. Related financial products or services are only available to persons who have sufficient financial experience and understanding to participate in financial markets within the DIFC, and qualify as Professional Clients or Market Counterparties as defined by the DFSA. No other Person should act upon this material. Registered office: Unit L10-02, Level 10, ICD Brookfield Place,

DIFC, PO Box 506752, Dubai, United Arab Emirates

**In Japan:** Provided by Natixis Investment Managers Japan Co., Ltd., Registration No.: Director-General of the Kanto Local Financial Bureau (kinsho) No. 425. Content of Business: The Company conducts discretionary asset management business and investment advisory and agency business as a Financial Instruments Business Operator. Registered address: 1-4-5, Roppongi, Minato-ku, Tokyo.

**In Taiwan:** Provided by Natixis Investment Managers Securities Investment Consulting (Taipei) Co., Ltd., a Securities Investment Consulting Enterprise regulated by the Financial Supervisory Commission of the R.O.C. Registered address: 34F., No. 68, Sec. 5, Zhongxiao East Road, Xinyi Dist., Taipei City 11065, Taiwan (R.O.C.), license number 2020 FSC SICE No. 025, Tel. +886 2 8789 2788.

**In Singapore:** Provided by Natixis Investment Managers Singapore Limited (company registration no. 199801044D) to distributors and institutional investors for informational purposes only.

**In Hong Kong:** Provided by Natixis Investment Managers Hong Kong Limited to institutional/ corporate professional investors only.

**In Australia:** Provided by Natixis Investment Managers Australia Pty Limited (ABN 60 088 786 289) (AFSL No. 246830) and is intended for the general information of financial advisers and wholesale clients only .

**In New Zealand:** This document is intended for the general information of New Zealand wholesale investors only and does not constitute financial advice. This is not a regulated offer for the purposes of the Financial Markets Conduct Act 2013 (FMCA) and is only available to New Zealand investors who have certified that they meet the requirements in the FMCA for wholesale investors. Natixis Investment Managers Australia Pty Limited is not a registered financial service provider in New Zealand.

**In Latin America:** Provided by Natixis Investment Managers S.A.

**In Uruguay:** Provided by Natixis Investment Managers Uruguay S.A., a duly registered investment advisor, authorised and supervised by the Central Bank of Uruguay. Office: San Lucar 1491, Montevideo, Uruguay, CP 11500. The sale or offer of any units of a fund qualifies as a private placement pursuant to section 2 of Uruguayan law 18,627.

**In Colombia:** Provided by Natixis Investment Managers S.A. Oficina de Representación (Colombia) to professional clients for informational purposes only as permitted under Decree 2555 of 2010. Any products, services or investments referred to herein are rendered exclusively outside of Colombia. This material does not constitute a public offering in Colombia and is addressed to less than 100 specifically identified investors.

**In Mexico** Provided by Natixis IM Mexico, S. de R.L. de C.V., which is not a regulated financial entity, securities intermediary, or an investment manager in terms of the Mexican Securities Market Law (Ley del Mercado de Valores) and is not registered with the Comisión Nacional Bancaria y de Valores (CNBV) or any other Mexican authority. Any products, services or investments referred to herein that require authorization or license are rendered exclusively outside of Mexico. While shares of certain ETFs may be listed in the Sistema Internacional de Cotizaciones (SIC), such listing does not represent a public offering of securities in Mexico, and therefore the accuracy of this information has not been confirmed by the CNBV. Natixis Investment Managers is an entity organized under the laws of France and is not authorized by or registered with the CNBV or any other Mexican authority. Any reference contained herein to "Investment Managers" is made to Natixis Investment Managers and/or any of its investment management subsidiaries, which are also not authorized by or registered with the CNBV or any other Mexican authority.

The above referenced entities are business development units of Natixis Investment Managers, the holding company of a diverse line-up of specialised investment management and distribution entities worldwide. The investment management subsidiaries of Natixis Investment Managers conduct any regulated activities only in and from the jurisdictions in which they are licensed or authorized. Their services and the products they manage are not available to all investors in all jurisdictions. It is the responsibility of each investment service provider to ensure that the offering or sale of fund shares or third party investment services to its clients complies with the relevant national law.

The provision of this material and/or reference to specific securities, sectors, or markets within this material does not constitute investment advice, or a recommendation or an offer to buy or to sell any security, or an offer of any regulated financial activity. Investors should consider the investment objectives, risks and expenses of any investment carefully before investing. The analyses, opinions, and certain of the investment themes and processes referenced herein represent the views of the portfolio manager(s) as of the date indicated. These, as well as the portfolio holdings and characteristics shown, are subject to change. There can be no assurance that developments will transpire as may be forecasted in this material. Past performance information presented is not indicative of future performance.

Although Natixis Investment Managers believes the information provided in this material to be reliable, including that from third party sources, it does not guarantee the accuracy, adequacy, or completeness of such information. This material may not be distributed, published, or reproduced, in whole or in part.

All amounts shown are expressed in USD unless otherwise indicated.



[www.ostrum.com](http://www.ostrum.com)